

Wildlife is Our Oil:  
Conservation, Livelihoods and NGOs  
in the Tarangire Ecosystem, Tanzania

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## **Abstract**

The Tarangire ecosystem of northern Tanzania is proclaimed a site of global biodiversity significance. The economic value of wildlife in Tarangire and Lake Manyara National Parks is substantial and growing. Maintaining the health of these parks is important to Tanzania's overall tourism industry and macroeconomic health. A considerable proportion of Tarangire's wildlife leaves the park for approximately six months a year, migrating onto village lands under the jurisdiction of local communities. Of particular importance are grazing and calving areas in the Simanjiro Plains. Conservation of the ecosystem's migratory wildlife populations largely depends on maintaining these habitats on communally owned lands. However, populations of most large mammal species have declined by over fifty percent in the last decade. The progressive conversion of pastoral rangelands to agriculture is believed to be a major contributing factor to this decline. Community-based conservation (CBC) interventions in the Tarangire ecosystem aim to increase the combined economic returns from wildlife and pastoral livestock production in order to reduce incentives for non-wildlife compatible agricultural land-use change. Increased State investment in CBC, continued growth in photographic and hunting tourism revenues, and large infusions of funding from international conservation organisations suggest that substantial potential exists for CBC to play a significant role in poverty reduction and biodiversity conservation. This thesis examines the fortunes of CBC in the Tarangire ecosystem. It uses a household survey conducted in a village earning substantial wildlife tourism revenues to show that wildlife benefits are concentrated in the hands of the elite, and have limited livelihood or conservation impacts. By documenting the root causes of local resistance to conservation, this thesis explains the failures of new conservation strategies in Tanzania.

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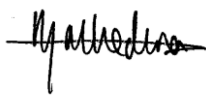
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This thesis is dedicated to my parents.

## Thesis Certification

I, Hassanali Thomas Sachedina (named as Hasssanali Thomas Sachedina as the author of this thesis) declare that this thesis submitted in partial fulfilment of the requirements for the award of Doctor of Philosophy in Geography and the Environment, University of Oxford, is wholly my own work unless otherwise referenced or acknowledged. This document has not been submitted for qualifications at any other academic institution.

Hassanali Thomas Sachedina



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## List of Acronyms

<b>AU</b>	Adult Unit
<b>AGOA</b>	African Growth and Opportunity Act
<b>ANCT</b>	Africa Nature Conservation Trust
<b>AWF</b>	African Wildlife Foundation
<b>AWLF</b>	African Wildlife Leadership Foundation
<b>AREMA</b>	Arusha Regional Miners Association
<b>BMR</b>	Basic Metabolic Rates
<b>BBB</b>	Better Business Bureau
<b>BINGO</b>	Big International Non-governmental Organisation
<b>CIA</b>	Central Intelligence Agency
<b>CEO</b>	Chief Executive Officer
<b>CPW</b>	Chief Park Warden
<b>CSO</b>	Civil Society Organisation
<b>CAMPFIRE</b>	Communal Areas Management Programme for Indigenous Resources
<b>CAHW</b>	Community Animal Health Worker
<b>CCS</b>	Community Conservation Service
<b>CBC</b>	Community-based conservation
<b>CBNRM</b>	Community-based natural resource management
<b>CBT</b>	Community-based tourism
<b>CI</b>	Conservation International
<b>CITES</b>	Convention on International Trade in Endangered Species of Wild Flora and Fauna
<b>CBS</b>	Corbett Bishop Safaris
<b>DoW</b>	Director of Wildlife
<b>DC</b>	District Commissioner
<b>DED</b>	District Executive Director
<b>DGO</b>	District Game Officer
<b>DNRO</b>	District Natural Resources Officer
<b>DC</b>	District of Columbia
<b>DVO</b>	District Veterinary Officer
<b>DEO</b>	Divisional Executive Officer
<b>EASTCO</b>	East African Safari and Touring Company
<b>ECF</b>	East Coast Fever
<b>ENR</b>	Environment and Natural Resources
<b>FFI</b>	Fauna and Flora International
<b>FY</b>	Financial Year
<b>FMS</b>	Flying Medical Service
<b>FR</b>	Forest Reserve
<b>FZS</b>	Frankfurt Zoological Society
<b>GCA</b>	Game Controlled Area
<b>GR</b>	Game Reserve
<b>GEF</b>	Global Environment Facility

<b>GoT</b>	Government of Tanzania
<b>GDP</b>	Gross Domestic Product
<b>HH</b>	Household Head
<b>HIV/AIDS</b>	Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome
<b>HWC</b>	Human-wildlife conflict
<b>OIKOS</b>	Instituto Oikos
<b>ILRI</b>	International Livestock Research Institute
<b>MAA</b>	Inyuat-e-Maa
<b>KWS</b>	Kenya Wildlife Service
<b>LWF</b>	Laikipia Wildlife Forum
<b>LMNP</b>	Lake Manyara National Park
<b>LUP</b>	Land Use Plan
<b>LFO</b>	Livestock Field Officer
<b>MLRDP</b>	Maasai Livestock and Range Development Project
<b>MCF</b>	Malignant Catarrhal Fever
<b>MBOMIPA</b>	Matumizi Bora ya Malihai Idodi na Pawaga
<b>MP</b>	Member of Parliament
<b>MCA</b>	Mererani Controlled Area
<b>MNRT</b>	Ministry of Natural Resources and Tourism
<b>MKUKUTA</b>	Mkakati Wa Kukuza Uchumi na Pupunguza Umaskini Tanzania
<b>MGR</b>	Mkungunero Game Reserve
<b>NP</b>	National Park
<b>NARCO</b>	National Ranching Corporation
<b>NRO</b>	Natural Resources Officer
<b>NICRA</b>	Negotiated Indirect Cost Rate Agreement
<b>NCA</b>	Ngorongoro Conservation Area
<b>NCAA</b>	Ngorongoro Conservation Area Authority
<b>NGO</b>	Non-governmental organisation
<b>OTC</b>	Ol Tukai Conservancy
<b>OA</b>	Open Area
<b>O&amp;OD</b>	Opportunities and Obstacles to Development
<b>OBC</b>	Ortello Business Corporation
<b>PORI</b>	Partnership Options for Resource Use Innovations
<b>PAWM</b>	Planning and Assessment for Wildlife Management
<b>PI</b>	Priority Intervention
<b>PH</b>	Professional Hunter
<b>PA</b>	Protected Area
<b>RAE</b>	Reference Adult Equivalent
<b>KUMB. NA.</b>	Reference Number (Kiswahili)
<b>RAS</b>	Regional Administrative Secretary.
<b>RC</b>	Regional Commissioner
<b>RGO</b>	Regional Game Officer
<b>RR</b>	Repeat-round survey
<b>SCA</b>	Simanjiro Conservation Area

<b>SDC</b>	Simanjiro District Council
<b>SWF</b>	Simanjiro Wildlife Forum
<b>STAMICO</b>	State Mining Corporation
<b>SOT</b>	Strategic Objective Team
<b>SCIP</b>	Support for Community Initiated Projects
<b>SRF</b>	Systematic Reconnaissance Flight
<b>TWC</b>	Tanganyika Wilderness Camps
<b>TBGS</b>	Tanzania Big Game Safaris
<b>TCS</b>	Tanzania Conservation Safaris
<b>TAHOA</b>	Tanzania Hunting Operators Association
<b>TLCT</b>	Tanzania Land Conservation Trust
<b>TANAPA</b>	Tanzania National Parks
<b>TNRF</b>	Tanzania Natural Resources Forum
<b>TPDF</b>	Tanzania People's Defence Force
<b>TPTS</b>	Tanzania Photographic Tours and Safaris
<b>TZS</b>	Tanzania Shilling
<b>Tshs</b>	Tanzania Shillings
<b>TAWICO</b>	Tanzania Wildlife Corporation
<b>TNP</b>	Tarangire National Park
<b>TME</b>	Tarangire-Manyara ecosystem
<b>TNC</b>	The Nature Conservancy
<b>TBD</b>	Tick-borne Disease
<b>TALA</b>	Tourism Agents Licensing Authority
<b>TLU</b>	Tropical Livestock Units
<b>UAE</b>	United Arab Emirates
<b>URT</b>	United Republic of Tanzania
<b>USAID</b>	United States Agency for International Development
<b>US\$</b>	United States Dollar
<b>USG</b>	United States government
<b>VP</b>	Vice President
<b>VEO</b>	Village Executive Officer
<b>VNRMA</b>	Village Natural Resource Management Area
<b>WEO</b>	Ward Executive Officer
<b>WCA</b>	Wildlife Conservation Act
<b>WCS</b>	Wildlife Conservation Society
<b>WD</b>	Wildlife Division
<b>WMA</b>	Wildlife Management Area
<b>WWF</b>	Worldwide Fund for Nature

## Prologue

### Three Wildlife Tales

#### **Trial by Fire: Village Experiences with Tanzanian Wildlife Policy**

“He shouldn’t be hunting there—this is village land and he’s on the park boundary,” remarked Mzee Sanare, the Chairman of Naitolia Village in Monduli District, Tanzania. We bumped slowly off-road across a heavily rutted plain. “These hunters are supposed to report to the village office before they hunt here.” We watched as the vehicle slowly stalked a herd of wildebeest along the Tarangire National Park (TNP) boundary. The Chairman directed me to drive towards the vehicle so that he could question the men. As we approached, several men dismounted from the vehicle, from which the blood of a dead wildebeest dripped freely into the dust. A well-dressed Tanzanian resident hunter strode towards us and confused us for a hunting party. He asked if we knew where ‘Mbuyuni’ village was, and could we tell him where he could shoot an eland. There was no village named ‘Mbuyuni’ close by. His behaviour and attitudes were typical of most hunters I had met. District or central government allocated them the right to hunt in state-owned wildlife in ‘Game Controlled Areas’ or ‘Open Areas’—superficial wildlife management constructs which fall on communally-owned village land. Thus, hunters were less likely to be concerned with whose land it was. Surveys documented that the number of eland—and oryx, hartebeest, and most other large mammals in the landscape—had declined precipitously in the preceding decade, and unmonitored resident hunting, such as that being practiced in Naitolia that morning, was believed to

be one of the major causes of decline (Kibebe 2005, Sachedina 2003, Singleton and Capper 2004, TNRF 2005b). The hunter's license only had one wildebeest on it, yet they seemed to be stalking more wildebeest while we approached. Were they planning to poach?

It was November 2003 and I was visiting several villages, including Naitolia, looking for potential research sites. I had met the Chairman at his *boma* (fenced homestead).<sup>1</sup> He had allowed me to visit his village and in return had asked that I transport him and several village councillors to a photographic tourism camp within Naitolia. They needed to mediate a conflict between the village and a tourism operator: warriors had barricaded the camp, taken staff hostage and threatened to burn it down imminently if late payments owed to the village were not settled. Allegedly, the Australian-owned East African Safari and Touring Company (EASTCO) had failed to honour its legal agreement with Naitolia. It was while we were on our way to that camp that we encountered the resident hunter.

The situation with the hunter had the potential to become as unpleasant as the village conflict. He had contravened several regulations: he was prohibited to hunt within two kilometres of the park boundary;<sup>2</sup> he was not in the area specified on his license; and he had not reported to the village office to inform them he was hunting. The Chairman challenged the hunter: why had he not reported to the village office? The encounter rapidly turned confrontational, made all the more tense with the presence of rifles and machetes nearby. The hunter responded aggressively—as a Tanzanian he had the right to hunt wherever he wished. He produced a letter that seemed to be photocopied and waved it vigorously in front of the Chairman's face. He claimed that the Minister of

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<sup>1</sup> Throughout this thesis, terms in italics are Kiswahili except where noted.

<sup>2</sup> Part IV (Miscellaneous Regulations), 16 – 1 (h), page 9 of the Wildlife Conservation Act, 1974 (No. 12 of 1974): Tourist Hunting Regulations of 2000 (GN 306) prohibits hunting within two kilometres of a national park (buffer zone) or Ngorongoro Conservation Area.

Natural Resources and Tourism had personally signed the letter permitting him to hunt, therefore implying that in challenging him the villagers challenged the legitimacy of the State. The villagers were aware that violent consequences resulted when the State intervened in wildlife matters. It is likely that the letter was not what the hunter said it was as he was unwilling to let the villagers read it.

I felt the vulnerability and powerlessness of the Chairman as I watched that wealthy and (possibly) powerful man invoking the State while loudly ridiculing village authority. Stunned and unsure of what to do, the Chairman and his aides retreated and asked me to drive them away. The hunter entered his vehicle and continued stalking the wildebeest. The villagers, who had been so full of pride earlier that morning, had had their dignity taken away. After driving to the tourism camp in silence, skirting tree branch road barricades, we encountered the warriors in a stand-off with wide-eyed camp staff in the kitchen compound. The camp was untouched, the clients evacuated and the owner had still not arrived. Ironically, the camp belonged to a company which had received substantial funding from the Global Environment Facility (GEF) to construct a lodge in partnership with villagers in the Tarangire ecosystem (also known as the 'Maasai Steppe') as a community development and conservation strategy.<sup>3</sup> The EASTCO website stated that:

“What makes this whole project unique is that revenue goes directly into the local community and members of these same communities are being employed by tourism-based services within the area...Naitolia Camp and

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<sup>3</sup>

<http://www.ifc.org/IFCExt/spiwebsite1.nsf/b7a881f3733a2d0785256a550073ff0f/9a91c2232675a27c85256dbb0069ca0a?OpenDocument> accessed 8 August 2007.



Boundary Hill Lodge were constructed with the active participation of the villages and represent a new era in community co-operation.”<sup>4</sup>

This vignette illustrates in part the dynamics of local interactions with the wildlife industry and the discursive formation of disempowerment. In the space of a morning, villagers in Naitolia had to deal with two different sets of powerful external actors over land tenure and wildlife management rights within their village. The Chairman and his aides lacked knowledge about the hunting regulations. ‘Community-based’<sup>5</sup> photographic tourism outside of national parks operates in a murky, extra-legal environment, often in opposition to the hunting industry, making villages vulnerable to exploitation by the private sector despite villagers’ best efforts to benefit from wildlife. Thus, villagers resorted to what Scott (1985) refers to as “Weapons of the Weak”: blockades and threats of arson in an attempt to regain some form of control over village lands. The events described were dramatic, but as I came to experience, conflicts between communities, hunters and the photographic sector were quite a regular occurrence and such disputes are reflective of much broader institutional conflicts and policy debates facing community-based conservation (CBC) in Tanzania.

### **The Carrot and the Stick: NGOs, the State, and Community-based Conservation**

In 2004, I attended a meeting in the shade of a large tree in Ol Tukai village close to Tarangire National Park in the Kwakuchinja Corridor, Monduli District. The meeting of approximately thirty people included Maasai and Waarusha leaders from Ol Tukai and

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<sup>4</sup> From <http://www.tarangireconservation.com/index.htm> accessed 8 August 2007.

<sup>5</sup> Although many photographic tourism projects claim to be community-based in northern Tanzania, many do not include significant local community participation or benefits, hence the quotation marks.

neighbouring villages, staff from Monduli and Babati District Councils, and international conservation NGO representatives (Figure 1).

The meeting was called by African Wildlife Foundation (AWF), an American international conservation NGO, for a project funded by UK-based Fauna and Flora International (FFI).<sup>6</sup> These two organizations collectively earned revenues upwards of US\$ 40 million per year in the name of conservation. AWF needed funds for its programs and FFI sought to extend its influence in Tanzania, where its roots as an organization had begun (cf. Adams 2004, Neumann 1998). Thus, FFI agreed to fund AWF's work in Tanzania to forge a wildlife corridor between TNP and Manyara Ranch, a 44,000 acre land unit acquired by AWF in 2000.

**Figure 1: KEEP Planning Meeting, Ol Tukai village, 2004<sup>7</sup>**



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<sup>6</sup> Termed the 'Kwakuchinja Easements for the Environment through Partnership' (KEEP) project.

<sup>7</sup> Photographs in this thesis © Hassan Sachedina, except where noted.

Since its inception, local peoples have contested the existence of Manyara Ranch. They claimed that its grazing areas should be turned over to pastoralists who inhabited the area before the ranch was appropriated by the colonial administration for European settlers, then the Tanzanian State for commercial ranching and seed bean farming. The proposed corridor was more contentious as this fell on community lands and would involve zoning an area free of agriculture and settlements, potentially alienating village land. Pastoralists were understandably suspicious of the project as a result of their long history of losing land to conservation in northern Tanzania, and to TNP in particular. AWF, for its part, had invested millions of dollars into Manyara Ranch and wanted to ensure that it did not become ecologically isolated from TNP. The meeting was called to convince the FFI donors that there was resounding local support for the project. AWF arranged for transport and granted generous *per diem* expenses to villagers and district staff to incentivize their attendance and to show support for the proposed project at the meeting.<sup>8</sup> The project, which I had helped to design while an employee of AWF, was ill-executed. Up until that stage, it had been poorly planned and was not participatory.<sup>9</sup> The meeting was a staged attempt to create an artificial representation of local support, so as to ensure that the donor kept funds rolling in.

The meeting was conducted in Kiswahili, which the FFI representative could not understand. At this meeting, several villagers expressed concern with the project and some objected to their village's involvement (see Goldman 2006). The Monduli District Game Officer (DGO) purposefully informed community leaders from the villages of Ol Tukai, Mswakini Chini, Mswakini Juu and Minjingu that they would be prudent to

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<sup>8</sup> *Per diem* allowances are given to a traveller to cover expenses such as lodging, meals, and entertainment in connection with the performance of service duties for a company.

<sup>9</sup> The politics, socio-economics and history of the area had not been carefully considered, nor the implications to local livelihoods and land tenure security of an agriculture-free area. Chapter 3 and 9 discusses more about AWF's view of communities as fund-raising commodities, not partners.

participate in the KEEP project. He threatened that the draft Wildlife Conservation Act gave the government the power to designate wildlife corridors in areas of strategic value to the State.<sup>10</sup> If community members did not agree to KEEP now, he added, the State could impose a corridor on village land unilaterally in the future, but fortunately now there were foreign donors to ensure that villagers received some form of compensation. Villagers silenced their challenges with the invocation of the power of the State. This illustrates the ‘carrot and stick’ nature of the mainstream community-based conservation approach in Tanzania as executed by state agencies and large foreign conservation NGOs. NGOs mobilized the financial incentives, imposed their particular vision of ‘community’ conservation, and paid powerful government officers to implement these projects. The FFI representative was informed that the meeting reconfirmed village support for the project.

Following the meeting, the group toured the several villages in the proposed KEEP project area which overlapped with the Burunge Wildlife Management Area (WMA) in Babati District.<sup>11</sup> WMAs are multi-village communal ‘conservancies’ in which a variety of community-based natural resource enterprises, including wildlife utilization, will be permitted (URT 1998b). WMAs are fraught with difficulties, which Burunge well illustrates. AWF was named by the Tanzanian Government as the lead NGO facilitator for Burunge WMA. Various accounts report significant internal conflicts within the WMA, with two villages—Minjingu and Vilima Vitatu—claiming they never accepted a WMA (Igoe and Croucher 2007, Nelson et al. 2006). Igoe and Croucher report that the Babati DGO was responsible for evictions of families while establishing the Burunge

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<sup>10</sup> The DGO was likely referring to Part VII of the draft Revised Wildlife Act (2004), 35 (1), page 24 which states: “The Minister may by order publish in the gazette designate wildlife corridors, dispersal areas, buffer zones and migratory routes”.

<sup>11</sup> In 2003, the government of Tanzania approved the Wildlife Management Area (WMA) regulations under Section 84 of the Wildlife Conservation Act of 1974.

WMA; that beacons marking 'Village Natural Resource Management Areas' were placed without Village Assembly agreement; and that the DGO had bribed village leaders (Igoe and Croucher 2007). AWF did not get directly involved in the unsavoury business of displacements, but was aware of them and continued to work closely with, and fund the work of DGOs who delivered AWF's vision of conservation on communal land.

The Minjingu Village Chairman expressed to me that the beaconing of the WMA had not occurred with the full support of the villagers, but that it had become advantageous to some. As the WMA bordered Tarangire, recent immigrants to Minjingu were allocated land adjacent to the WMA (and park) so that their farms served as a buffer between wildlife and the farms of longer established villagers. It also concerned the Chairman that Minjingu might lose a lucrative photographic tourism revenue stream from Tarangire River Camp located on its land but within the WMA, in an area contested by a tourist hunting company (Figure 2).

I heard rumours from village leaders and government officials that the Minjingu Chairman was corrupt, hence the lack of transparency surrounding tourism in the village and his criticism of the WMA. Corruption was regularly cited by opponents and proponents of CBC as a primary constraint. Corruption became ingrained in Tanzanian daily life (Heilman et al. 2000, Kironde 2006, URT 1996a), throughout all levels of government (Burgis et al. 2007, Kaufmann et al. 2006, Kelsall 2002). It was particularly prevalent in the wildlife sector, which presented numerous opportunities for rent-seeking behaviour and rapaciousness due to its high value and nontransparent management. Corruption thrived in these kinds of institutional and political economic variables. Corruption in the tourist hunting sector allegedly involved the highest ranks of

government, resulting in powerful incentives within the State to undermine CBC and overlook massive wildlife declines which institutional mismanagement engenders.

**Figure 2: View from Tarangire River Camp's lounge, overlooking Minjingu village**



AWF also facilitated the Enduimet WMA in Longido District in which Sinya village is located. Villagers there complained of attempts by the DGO to ‘force’ them to accede to the WMA, facilitated by AWF. Resistance to the WMA led to the defacement of several WMA beacons and local level calls for the withdrawal of villages from the WMA (Nelson *et al.* 2006: 22). Endowed with a rich wildlife resource from Kenya’s Amboseli NP and the quintessential safari marketing image of Mt. Kilimanjaro as a backdrop, the area was coveted by photographic tourism operators.

Tanganyika Wilderness Camps (TWC) established a luxury photographic tourism camp in Sinya, generating approximately US\$ 26,000 per year for the village (Nelson *et al.* 2006). TWC also owned the aforementioned Tarangire River Camp. Both Sinya and

Minjingu villages overlapped with tourist hunting blocks allocated to Northern Hunting Enterprises Ltd.<sup>12</sup> Northern Hunting sued TWC for violating its use rights in village lands allocated through the central government. The lawsuit set a dangerous precedent for other community-based tourism operations in hunting blocks (TNRF 2005a). TWC subsequently ceased operations in both villages, jeopardizing lucrative streams of wildlife-based revenues to the villages.

The Tanzania Wildlife Division (WD), which gains most of its revenue from tourist hunting, supported Northern Hunting's bid to evict TWC from the two blocks. The WD had in fact tried to prosecute TWC for violating the Tourist Hunting Regulations (URT 2002b). After the WD failed to dislodge TWC, Northern Hunting lodged a civil suit (F. Nelson, *pers. comm.*, 2008). Villagers felt disempowered, losing control of their revenue source and land tenure which seemingly contradicted the goals of the WMA framework and Wildlife Policy (1998). Villagers protested by harassing a Northern Hunting party on village land, threatening them with spears. Ironically, the client was an American hunter named Robert Royall, who also happened to be Ambassador of the US to Tanzania.<sup>13</sup> He oversaw the Embassy through which AWF had accessed millions of dollars for conservation work in Tanzania, including the implementation of WMAs. The matter was reported in the local press and nearly caused an international incident.

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<sup>12</sup> Northern Hunting was owned by a TANAPA Board member, Sheni Lalji, at the time of the court case. A major name in the Warioba Report on Corruption (URT 1996a), he was convicted of tax evasion. Allegedly, he sabotaged the Ngarambe-Tapika WMA and built several houses for the Minister of Natural Resources and Tourism, in addition to other high profile political kickbacks. Nicknamed the 'Mitumba King', he reportedly made his fortune importing second-hand clothes into Tanzania before diversifying into wildlife tourism.

<sup>13</sup> <http://www.whitehouse.gov/news/releases/2001/07/20010711-7.html> accessed 8 August 2007.

### Congress, American Billionaires, and Africa's 'Last Edens'

“Dr. Mike Fay, a world-renowned explorer and conservationist...spoke to Members of Congress and their spouses about his vision of international aid in the 21st Century. Dr. Fay argued that International aid to Africa needs to be based, in part, on sustainable development and natural resource management... Exporting natural resource management in the end, Fay argues, is equally important as exporting liberty, democracy, or capitalism.”

—Excerpt from the website of the International Conservation Caucus<sup>14</sup>

American ecologist J. Michael Fay succinctly sums up why natural resource management is important to American political and economic interests: it is a potential means to conflict resolution, enhanced security, democratization and capitalism in Africa.<sup>15</sup> More than just a tool for biodiversity conservation, natural resource management in Africa is perceived as a potent and valuable foreign policy tool in US pursuits of geo-strategic interests.

Famous for completing a trek through central Africa in 1999-2000 called the ‘Megatransect’, Fay is also credited with catalyzing the President of Gabon, Omar Bongo, to establish 13 new national parks in Gabon (Quammen 2003). Fay, it is argued, is an active participant in post-colonial fantasies of white explorers saving Africa (Garland 2006), like other Western biologists who lay claim to the role of authoritative intermediaries between the African wilderness and Western consumers of the imagery

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<sup>14</sup> <http://www.royce.house.gov/internationalconservation/events.htm> accessed 3 August 2007.

<sup>15</sup> For additional information about the role of Fay in influencing U.S. Foreign Policy in Africa see Garland (2006: 7-17).



and discourse of African wilderness (Bonner 1993). Fay's adeptness for self-promotion and celebrity ensures that his profile comes to mind when Americans think of African wilderness. However, the greatest differentiating factor, I believe, between him and his fellow 'charismatic mega-biologists' profiting from Africa is his distinct ability to hone in on, and influence, a leading source of money and power currently available in the world: the US Government. In this way, Fay is as much a politician or 'missionary of democracy'<sup>16</sup> as a conservationist, whose arrival often marks the imminent involvement of various wings of the US administration.<sup>17</sup>

In July 2004, a team of four US congressmen toured protected areas in northern Tanzania. The trip was arranged by Conservation International and AWF and attended by senior managers from these organizations. The aim of the mission was explained to me by a professional political lobbyist accompanying the trip: "These trips are designed to ignite the interest of the congressmen, inspire them, influence them and then hopefully focus them in key ways in which they can help". It was the second congressional trip to northern Tanzania that AWF hosted in 2004. What was of such interest that these different congressmen travelled to Tanzania's protected areas?

The congressmen formed part of the 'International Conservation Caucus' (ICC) of the US House of Representatives. The ICC was founded in September 2003 by Representatives Clay Shaw (R-FL), John Tanner (D-TN), Ed Royce (R-CA), and Tom Udall (D-NM) with a stated "...commitment to helping the United States lead public and private international partnerships that provide stewardship of natural resources for

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<sup>16</sup> A term used to describe U.S. Peace Corps volunteers, of which Fay was one in Central Africa.

<sup>17</sup> At a public talk in Arusha in 2004 while promoting his less publicized 'MegaFlyover', Fay spoke of the expedition's goal to raise US\$ 200 million from the U.S. administration for conservation in Africa. Few conservationists can convincingly aspire to this sort of influence. More recently, he has been involved in bringing Sudan to the public eye (<http://news.nationalgeographic.com/news/2007/06/070611-sudan-animals.html>), a country with a long history of contention with American political interests.

habitat and bio-diversity protection, poverty reduction, economic development and regional security”.<sup>18</sup> The ICC’s Charter further elucidated the values of conservation as a tool to support US interests, as well as the conviction of exporting American visions of conservation:

“(A) Conservation is an American value, imprinted on the national character by Teddy Roosevelt and others, and attested to by the tens of millions of Americans who fish, hunt, or otherwise enjoy the outdoors...

(C) Supporting the conservation efforts of developing countries is in keeping with America’s role as a global leader and benefits US citizens by fostering a more stable, prosperous, healthy, peaceful and inspirational world.”<sup>19</sup>

A letter used to introduce the ICC emphasized the opportunity afforded through conservation to export US values overseas: “The US has a long and proud history of conserving its natural heritage, which includes the creation of the world’s first national park system. Initiatives such as the Congo Basin Forest Partnership (CBFP)...reflect the fact that the US has the interest, expertise and commitment to address conservation challenges worldwide”.<sup>20</sup> There was no mention in the introductory letter of the goal of poverty alleviation, or to the sovereignty of African governments in setting their conservation priorities. The CBFP referred to a US\$ 53 million pledge by US Secretary of State Colin Powell to the Congo Basin following Fay’s ‘Megatransect’ (Quammen 2003).<sup>21</sup> Fay’s own Wildlife Conservation Society (WCS) lobbied the US government

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<sup>18</sup> <http://www.royce.house.gov/internationalconservation/about.htm> accessed 3 August 2007.

<sup>19</sup> <http://www.royce.house.gov/internationalconservation/about.htm> accessed 3 August 2007.

<sup>20</sup> Letter from Ed Royce, Clay Shaw, John Tanner, and Tom Udall, 15 September 2003 entitled “International Conservation Caucus Launched!” available from

<http://www.royce.house.gov/internationalconservation/about.htm> accessed 10 August 2007.

<sup>21</sup> Full name of the act is: Congo Basin Forest Partnership Act (CBFP) [H.R. 2264].

that “These Central African landscapes represent our ‘last Edens’”.<sup>22</sup> Funding through the CBFP represented a windfall for American Big International NGOs (termed ‘BINGOS’) like WCS.<sup>23</sup>

I accompanied the congressional delegation to Ngorongoro Conservation Area (NCA), a multiple-use conservation area and perhaps Tanzania’s most famous wildlife-based tourist destination. The safari was designed to educate and influence the congressmen. However, I was surprised at how tightly controlled and choreographed it was. Two white Kenyans guided the congressmen and their spouses, while three Washington-based lobbyists and NGO managers served as primary guides. Interaction with local peoples was practically non-existent save for some mingling with Maasai dancers at a “Cultural *Boma*”, funded by the United States Agency for International Development (USAID) and organised by AWF (Figure 3).

At NCA the congressmen were treated to game drives and stayed at the crater’s most exclusive lodge<sup>24</sup> before travelling on to the Serengeti. The costs of the congressional safari were underwritten by US hedge fund billionaire, Paul Tudor Jones. Tudor Jones is a key investor and philanthropist with conservation estates in Zimbabwe, Zambia and South Africa, and most recently invested US\$ 25 million in Grumeti and Ikorongo Game Reserves—a large segment of land contiguous with the globally renowned Serengeti at which he is building several exclusive resorts (Igoe 2007, Joel 2005, Poole 2006).<sup>25</sup>

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<sup>22</sup> [http://web.conservation.org/xp/news/press\\_releases/2004/020604.xml](http://web.conservation.org/xp/news/press_releases/2004/020604.xml) accessed 10 August 2007.

<sup>23</sup> The BINGOs consist of The Nature Conservancy (TNC), Conservation International (CI), World Wide Fund for Nature (WWF), Wildlife Conservation Society (WCS) and AWF.

<sup>24</sup> Owned, in large part, by relatives of J. Paul Getty, billionaire founder of Getty Oil in the U.S.

<sup>25</sup> Igoe and Croucher (2007) describe this as the ‘privatisation’ of conservation in Tanzania.

Figure 3: The congressmen visiting Esilalei Cultural Boma, Monduli District



What do these links between congressmen, American billionaires and Tanzanian conservation mean? For one, it illustrates that there is a significant and important link between African conservation and foreign funding and State interests, which is largely mediated by a small number of large BINGOs. For example, in 2004, ICC founder Clay Shaw, sponsored the ‘Great Cats and Rare Canids Act of 2004’ that proposed US government financial support for predator conservation projects worldwide. The bill did not pass, but it raised a great deal of awareness about the issue (McCarthy and Dorfman 2004).

### **Weaving the Strands**

Combined, these stories illustrate a vital feature of conservation problems on East African rangelands. There are violent and dramatic fights taking place regarding who gets to control and use the land and resources’ economic values, which are being played

out at all levels of government and society. The key point which these vignettes illustrate is the conflicting nature of external wildlife-related claimants to occupy the community's physical environment. Any investigation of conservation here has to examine what these fights are over and what their consequences are for the participants. But more than that, they also demonstrate the power and importance of *representing* these rangelands. These vignettes demonstrate the general lack of local African presence, prominence and power typical of many representations. They also point to a gulf between many representations and affairs on the ground. This schism is complicated by the ease with which partial representations of those affairs can be communicated and sustained.

In this thesis, I explore how flows of global capital to the Tanzanian wildlife industry and international conservation NGOs impacted African people, wildlife conservation and the production of imagery about African environments. Even sustained research faces difficulties in unearthing different versions of what is going on at ground level. This thesis cannot claim to purvey 'the truth'; it just scrapes deeper into the murky affairs and politics surrounding the Tanzanian wildlife sector. But the questions that arise from these impacts enable me to focus my research on some of the structural inequalities that I witnessed in the wildlife conservation sector. By directly addressing the failings of the Tanzanian wildlife sector, I hope to contribute to a new dialogue regarding inequality and facilitate an examination of how to better integrate African biodiversity conservation and poverty alleviation.

## Chapter One

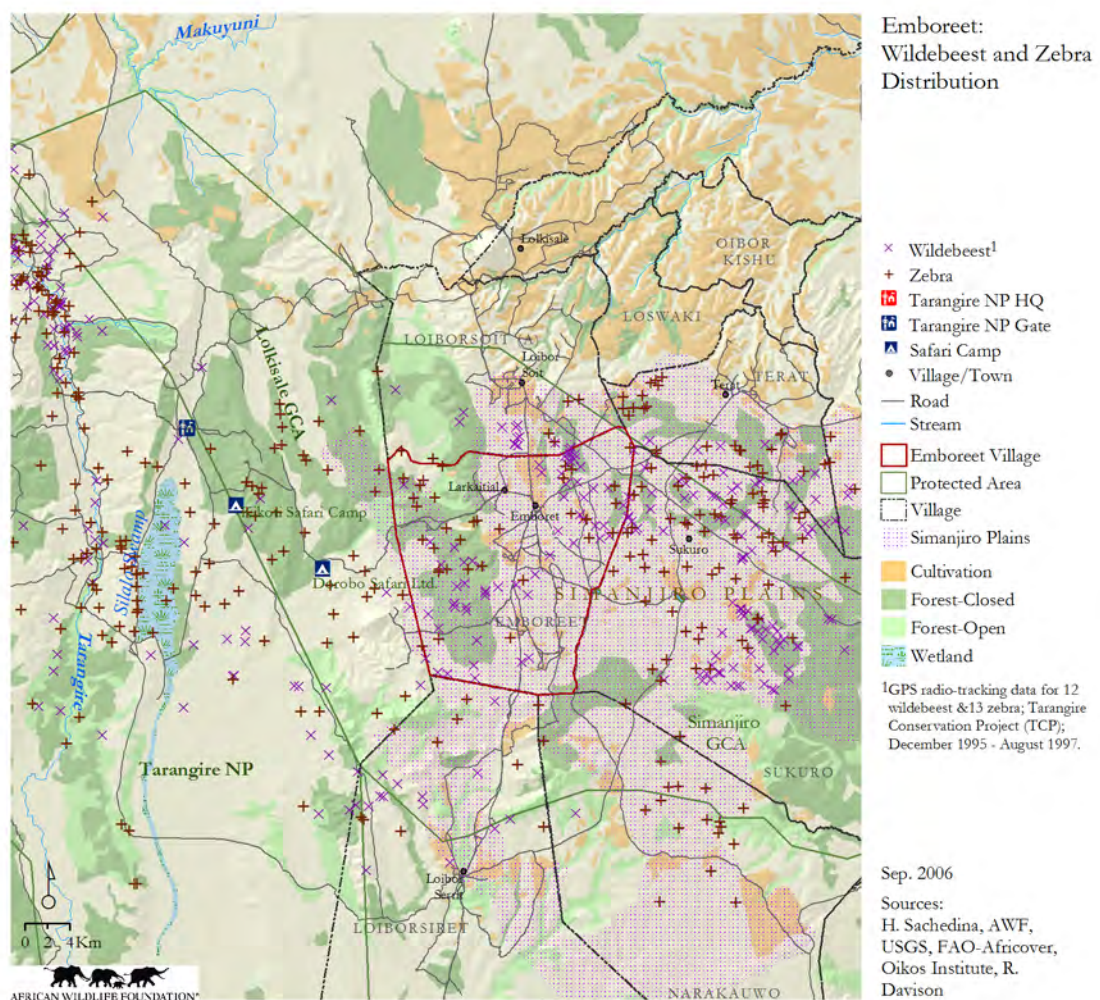
### Introduction

For millennia, pastoralists have shared landscapes with wildlife throughout Africa (Homewood and Rodgers 1991, Little et al. 1999, Pilgram et al. 1990). Throughout the 20<sup>th</sup> century, this co-existence has been in decline as conservation policy excluded people and livestock from protected areas, and demographic growth and expanding agriculture excluded wildlife use (Ellis and Swift 1988, Homewood et al. 2001, Little et al. 2001, Ottichilo et al. 2001, Pagiola et al. 1998, Serneels et al. 2001, Western and Gichohi 1993). The decline of African pastoralists is widely acknowledged (Anderson and Broch-Due 1999b, Brockington 2000, Fratkin et al. 1999, Galaty 1994, Heald 1999, Hogg 1992, Homewood and Rodgers 1991, Homewood et al. 2001, Kituyi 1990, Little et al. 2001, Rutten 1992, Spear and Waller 1993, Thompson and Homewood 2002). Many pastoral systems across the globe, including those of Maasai pastoralists in Tanzania, are under unprecedented pressure to diversify livestock-based economies (Fratkin 1993, Fratkin et al. 1999, Little et al. 2001).

In East Africa, an estimated 70 percent of wildlife populations are dispersed outside protected areas (PAs) on land which overlaps with pastoralism (Western and Gichohi 1993). The presence of unfenced and uncultivated rangelands adjacent to PAs increases the total range of resources available to wildlife and enhances long-term survival as predicted by island bio-geographic theory (Western and Ssemakula 1981). The Tarangire-Manyara ecosystem (also referred to as the 'Maasai Steppe') of northern Tanzania exemplifies this. It is renowned for its large-scale seasonal migration of large, grazing

ungulates (Kahurananga 1979, 1981, Lamprey 1963a, 1964). Of particular importance are grazing and calving areas in the Simanjiro Plains, where thousands of wildebeest (*Connochaetes taurinus*), zebra (*Equus burchelli*) and elephant (*Loxodonta africana*) congregate during the wet season (Figure 1.1). Conservation of the ecosystem's migratory wildlife populations largely depends on maintaining these habitats on communally owned lands (Borner 1982, Borner 1985, Kahurananga 1997, TCP 1998).

Figure 1.1: Wildlife distribution in TNP and in the Simanjiro Plains (Source: AWF)



The progressive conversion of pastoral rangelands to large-scale farming and permanent subsistence agriculture are contributing to the insularisation of Tarangire National Park

(NP) (Borner 1985, EcoSystems Ltd. 1980a, Kahurananga 1981, 1997, Kajuni et al. 1988, Lamprey 1964, Peterson 1978, TCP 1998). Continued isolation of Tarangire NP<sup>1</sup> is likely to result in increased wildlife declines in the ecosystem (TCP 1998, Voeten 1999), which could threaten tourism revenues. Despite the continued increase in photographic and hunting tourism revenues, poverty levels in pastoral communities have increased, wildlife populations continue to decline, and rates of land use change to agriculture are increasing at substantial rates.

A number of interventions in the Maasai Steppe aim to increase the combined economic returns from wildlife and pastoral livestock production in order to reduce incentives for non-wildlife compatible agricultural land-use change. I will collectively call these initiatives community-based conservation (CBC). They are part of a more general change in practices and thinking about conservation in Africa (Alexander and MacGregor 2000, Anderson and Grove 1987, Hulme and Murphree 2001, Murphree 1993). The objectives of CBC are four-fold: (1) to ensure that adequate land and local support is secured for wildlife conservation; (2) to contribute to poverty alleviation (Adams and Hulme 2001, Hackel 1999, Hulme and Murphree 2001, Murphree 1993, Western et al. 1994, Wright 1993); (3) to engender institutional and behavioural changes towards wildlife (Murphree 1993, 1996, Western et al. 1994, Wright 1993); and (4) to enhance peoples' perceptions towards wildlife conservation.

There is widespread debate concerning whether CBC will be able to deliver on these multiple fronts (Adams and McShane 1992, Barrow and Fabricius 2002, Borini-Feyerabend et al. 2002, Hackel 1999, Igoe 1999, Inamdar and Cobb 1998, Kiley-Worthington 1997, Neumann 1998, Rodgers et al. 2002, Rutten 2002). The majority of

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<sup>1</sup> I refer to Tarangire NP interchangeably as 'Tarangire'. This is not to be confused with 'Tarangire ecosystem' which I use to refer to Tarangire NP and districts surrounding it.



CBC projects in East Africa are relatively recent, and studies have yet to demonstrate the economic and ecological impacts of CBC in pastoral communities (Caro 1999). The success of CBC depends upon its acceptance by rural peoples, but few studies have examined what affects the adoption of CBC in the face of multiple economic diversification options. This thesis explores the role of CBC in pastoral livelihood diversification. This requires a critical engagement with four different bodies of literature: first, I discuss the CBC literature; second, I examine pastoral livelihoods; third, I analyze pastoralism and States; and finally, I investigate conservation Non-governmental Organisations (NGOs) and their accountability.

### **The Community-based Conservation Debate**

Community-based conservation has become what many claim is a “new conservation” unfolding across Africa (Hulme and Murphree 2001). It seeks to stretch conservation efforts *out* beyond PAs, and bring communities *into* conservation initiatives through benefit sharing and participatory planning (Ghimire and Pimbert 1997, Hackel 1999, Hulme and Murphree 2001). Ecological benefits are projected because of the extension of areas conserved and individual behavioural changes which foster wildlife conservation.

CBC is an evolving set of economic, social, and institutional tools which seek to limit activities detrimental to wildlife, while providing economic returns to communities that balance the costs of living with wildlife (Adams and Hulme 2001, Hackel 1999, Hulme and Murphree 2001, Western et al. 1994). CBC can be characterized as rural, participatory and utilitarian compared with the top-down and protectionist approaches of fortress conservation (Western 2001). It is important to recognize that within the all-encompassing discourse of CBC exists a wide diversity of different kinds of projects

ranging from education and outreach, to collaborative management and community-based natural resource management.

Many CBC schemes seek to provide economic returns to communities in order to influence land use behaviours that are wildlife compatible (Adams and Hulme 2001, Hackel 1999, Hulme and Murphree 2001, Metcalfe 1994, Murphree 1993, Warner 2000, Western et al. 1994). The key hypothesis is that economic incentives generated from wildlife utilization will engender increased local community support for conservation (Emerton and Mfunda 1999, IIED 1994, Metcalfe 1994, Murphree 1993, Sikoyo et al. 2001b, Warner 2000). CBC initiatives attempt to find 'win-win' scenarios in which wildlife generates economic and social benefit flows while maintaining wildlife populations at desirable levels. For example, Ololosokwan village, next to Serengeti NP in Tanzania, earns approximately US\$ 65,000 per year from photographic tourism operations on village land (Nelson 2004, Nelson and Ole Makko 2005). Experiences with Zimbabwe's influential Communal Areas Management Plan for Indigenous Resources (CAMPFIRE) program (Alexander and MacGregor 2000, Bond 2001, Jones and Murphree 2004, Metcalfe 1994, Murombedzi 1991, 1999, 2001, Patel 1998), arguably provided a model for CBC in Africa and beyond. While key problems of CAMPFIRE included revenue distribution and race relations between rural villagers and white hunting operators, select villages were substantially and positively impacted by wildlife revenues (Murphree 2001, 2005).

However, the trade-offs between conservation and development mean that only a small subset of development opportunities exist that really achieve environmental, economic, and social sustainability (Inamdar et al. 1999). The economic effectiveness of CBC schemes which compensate rural people for trade-offs, such as the loss of access to

resources in return for wildlife utilization revenues, is questioned in the literature (IIED 1994, Metcalfe 1995, Rutten 2002, Warner 2000). There is also little evidence to show that upgrading the conservation status of an area through CBC unequivocally results in an increase in wildlife populations (Caro 1999, Hackel 1999, Salafsky 1994).

CBC evolved in response to:

1. The increased conversion of wildlife habitat and a realization that people will likely continue to settle and cultivate as a primary response to population growth and the need for land in Africa (Cumming 1993, Newmark 1996, Norton-Griffiths 1995).
2. Political and economic awareness that conservation would be compromised without incorporating the support of people living adjacent to PAs and their livelihood needs (Ghimire and Pimbert 1997, Hackel 1999).
3. A changing scientific paradigm in which island bio-geographic theory highlighted potential biodiversity loss in isolated parks, and a move away from the notion that ecosystems are not simple and closed systems, but rather interconnected through complex processes (Western 2001).
4. Protectionist approaches becoming unpopular due to the high costs of managing PAs versus their relative low economic returns to local people compared with alternative human-settled land uses coupled with the opportunity costs of PAs (Norton-Griffiths and Southey 1995).

The narrative of CBC has become so widely adopted that it is now a defining and central thrust of global conservation policy (Adams and Hulme 2001). However, if rural people accept CBC because of its economic benefits, they may reject it in future if a better

economic alternative is presented. The priorities of rural Africans, and the economic choices they are forced to make, often lead to actions which are not compatible with wildlife conservation (Mortimer and Tiffen 1995). Rural people manoeuvre within often narrow socio-economic constraints, and CBC programs risk restricting people's economic choices further (Berry 1993, Hackel 1990, Zinyama 1995). Development policies that restrict people's response to changing circumstances are characterized as 'forced primitivism' (Goodland 1982). Western (2001) asserts that a fallacy of CBC is that wildlife will be conserved through purely free-market economics (Western 2001). However, areas where CBC has the greatest opportunity for success are those rich in wildlife where agricultural alternatives are problematic due to aridity or poor soils (Getz et al. 1999, Gwashure et al. 2001). This raises doubts as to the practicality of CBC in the Tarangire ecosystem,<sup>2</sup> where rainfall may be adequate to support agricultural land use intensification.

CBC is widely considered an obvious improvement over past 'fortress conservation' practices because of its inclusive philosophy. However, critiques of CBC centre on the level to which CBC really is participatory versus externally conceived (Adams and Hulme 2001, Hackel 1999, Igoe 1999), and the challenge of articulating the precise role of biodiversity conservation in alleviating poverty (Adams et al. 2004, Agrawal and Redford 2006, Roe and Elliott 2004, Sanderson and Redford 2003, 2004). The literature questions the effectiveness of biodiversity conservation initiatives to alleviate poverty or to promote social development (Brockington 2002, Brockington and Schmidt-Soltau 2003, Brockington et al. 2006, Cernea and Schmidt-Soltau 2003, 2006, McShane 2003, West et al. 2006).

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<sup>2</sup> The 'Tarangire ecosystem' refers to Tarangire NP and the districts which surround it. It is considered as a part of the wider Maasai Steppe.

CBC interventions are criticised for their lack of real empowerment and participation, uneven distribution of benefit among societies and the fact that they only work when they incorporate people into capitalist economic systems. Just as preservationist approaches distribute fortune and misfortune unequally within society, so also does conservation by rural people. CBC merely introduces a different set of inequities than PAs (Thompson and Homewood 2002). It also introduces a different set of interactions with capitalism and market forces. This thesis seeks first to examine who the winners and losers of CBC are; and second, to consider how the distributions are shaped by local people, State policy, and trans-national conservation organisations.

The potential for CBC to conserve biodiversity and alleviate poverty in Tanzania is significant. Tourism represented 25 percent of export earnings in Tanzania in 2002 and 17.5 percent of Gross Domestic Product (GDP) in 2006. Tourism earnings amounted to US\$ 862 million in 2006, an increase of 16 percent from 2004 (US\$ 746 million).<sup>3</sup> Visitor numbers also increased to 644,000 tourists in 2006 compared to 583,000 in 2004 (a 10.5 percent increase). A key point about tourism in Tanzania is that it is primarily wildlife-based, focussed around the 'northern circuit' with a coastal tourism component and growing wildlife tourism in southern Tanzania. Tanzania's 14 NPs generated US\$ 51.7 million in 2006 from 657,000 foreign and local visitors (Figure 1.2).

The majority of tourism receipts are generated from photographic tourism. However, an important component of Tanzania's wildlife industry is tourist hunting. In 2006, Tanzania earned US\$ 13 million from wildlife hunting, up from US\$ 9.9 million in 2004, (an increase of 32 percent).<sup>4</sup> Tourist hunting generates significantly high economic

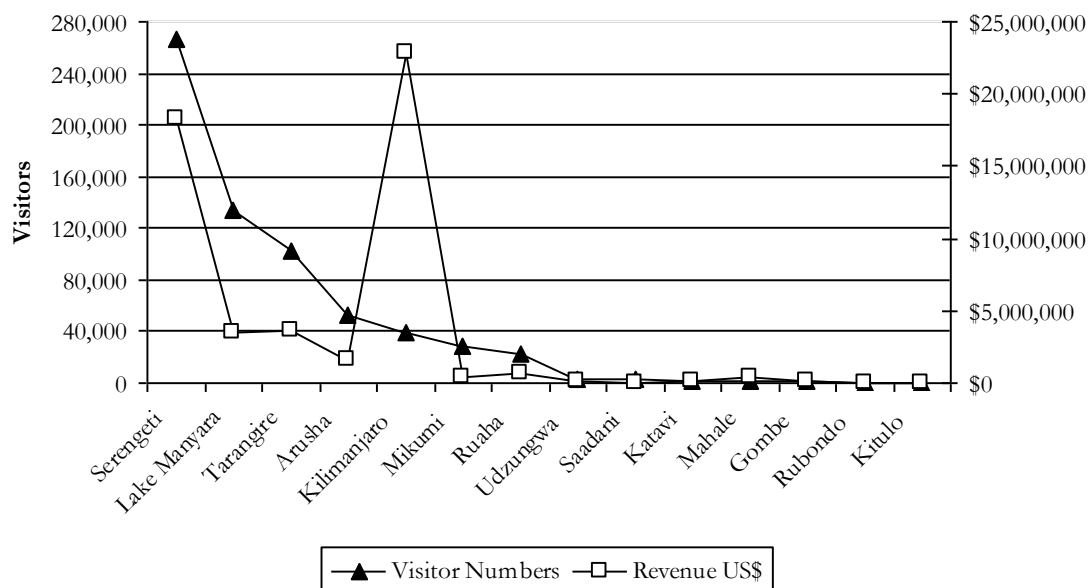
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<sup>3</sup> <http://www.tanzania.go.tz/economicsurveyf.html> accessed 7 January 2008.

<sup>4</sup> <http://www.tanzania.go.tz/economicsurveyf.html> accessed 12 October 2007.

returns per client (Baldus and Cauldwell 2004, Lindsey et al. 2006, Lindsey et al. 2007, URT 1995d). Noteworthy successes have occurred in southern Africa, where sport hunting has supported devolvement of management rights and increased local livelihoods (Barnett and Patterson 2005: iii, Bond et al. 2004, Murphree 2001). A substantial portion of tourist hunting blocks (concessions) are located on village land in Tanzania. This suggests that tourist hunting has the potential to contribute meaningfully to local livelihoods.

**Figure 1.2: Number of tourists and resident visitors to National Parks in 2006 (Source: TANAPA)<sup>5</sup>**



Villages in Tanzania were established by the Local Government (District Authorities) Act, 1982. Villages had legal title to a defined land area over which the Village Assembly and elected Village Council had rights and responsibilities in determining how land and resources were managed. However, in spite of the fact that hunting occupies the same space as villages, local governments are not involved in the management of sport hunting (URT 2006a: 14), nor significantly share in its economic returns (Nelson 2007, Nelson et

<sup>5</sup> <http://www.tanzania.go.tz/economicsurveyf.html> accessed 7 January 2008. Generally, visitor numbers correlate to revenue generated. Kilimanjaro NP is an anomaly. It charged higher daily fees and the climb lasted, on average, 5-6 days, resulting in higher revenue.

al. 2007, Sachedina 2003). Complicating this situation is the fact that other forms of wildlife utilisation, such as photographic tourism, are banned in villages which overlap with tourist hunting blocks (URT 2002b). Nevertheless, several villages have circumvented government control and engaged in contracts directly with photographic tourism operators (Nelson 2004). Community-based tourism (CBT), when contained within overall CBC strategies, has the potential to generate significant economic returns from small pockets of land (Murphree 2001: 177) and has shown considerable promise in Tanzania in generating substantial revenues at a village level (Nelson 2004, 2007).

### **Pastoral Livelihood Diversification**

If CBC hopes to alter livelihoods in ways which are beneficial to conservation, it is important to examine theories and accounts of pastoral livelihood change in East Africa. Here, there is a rich literature. The popular and romanticized notions of the Maasai embodying a distinct way of life apart from the cultivating peoples of East Africa are misleading (Hodgson 2001). Throughout history, the Maasai have demonstrated close and dynamic links of trade, intermarriage, social structure, and shared cultivation with a number of other Maa and non-Maa speaking groups who primarily depend upon farming rather than herding.<sup>6</sup> Maasai resilience to disease, land alienation, and the ravages of political economic forces can be attributed to the close economic and social ties the Maasai share with agricultural peoples.

Pastoralism developed as a specialized livelihood strategy several millennia ago. The earliest remains of domestic livestock in East Africa date back to approximately 3,500 years ago (Homewood and Rodgers 1991, Little et al. 1999, Pilgram et al. 1990). The

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<sup>6</sup> Maa is the language of the Maasai but also spoken by the Parakuyo and Waarusha, and Kenyan ethnic groups such as the Il Chamus (Njemps), Samburu, Ilkurrman and Wandorobo.

Maasai pastoral tradition is believed to have originated in northern Kenya. Broadly speaking, the name 'Maasai' means speaker of the language Maa (Ole Saitoti and Beckwith 1991). Early evidence suggests that the expansion of Maa speakers began near the south end of Lake Turkana in Kenya. Historians suggest that Maasai expansion may have occurred in two stages: 1) at least three hundred years ago, Maa speakers moved southwards towards Lake Nakuru, displacing or assimilating other populations; and 2) in the 18<sup>th</sup> century the second stage of expansion marked the movement of Maa-speaking groups from the Nakuru-Naivasha area southwest towards the Loita, Mara and Serengeti areas, and southeast towards Ngong and the Athi and Kaputiei Plains (Homewood and Rodgers 1991, Sutton 1993).

The second phase of expansion cemented Maasai identity, expressed in language and culture, such as dietary restrictions and age-set organisation (Sutton 1993). Control over the Rift Valley and adjacent plains was achieved during the '*Iloikop Wars*';<sup>7</sup> widespread internecine warfare with other Maa-speaking groups for strategic water and pasture resources (Galaty 1993a, Sutton 1993). By the 19<sup>th</sup> century, the Maasai dominated a swathe of land from the Laikipia Plains in north-central Kenya through Ngorongoro to central Tanzania. Several Maa-speaking people lived on the periphery of what came to be called 'Maasailand', such as the Arusha and Il Parakuyo in east and southern Tanzania, and the Samburu in northern Kenya (Homewood and Rodgers 1991, Ole Saitoti and Beckwith 1991).

One popular notion of the Maasai stereotypes them as a distinctly unique ethnic group with a separate origin to the cultivating peoples of East Africa. Feted by explorers and authors as a handsome and warlike people (Blixen 1937, Hemingway 1963, Thesiger 1993,

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<sup>7</sup> *Iloikop* refers to a series of struggles over stock and grazing between the Maasai and the Iloikop. It ended in the 1870s with the defeat and dispersal of the Laikipiak Maasai.



Thomson 1887), the image of the unchanged pastoralist living in harmony with the environment is still promoted as an enduring icon of tourism marketing and conservation organisations' fundraising literature. Recurring themes and images on postcards and coffee table books in Arusha and Nairobi, 'nature' television shows for Western audiences, conservation organisation and tourism company websites, and the newspaper and magazine articles which review community-based tourism lodges, foster images of wildlife and traditional pastoralists, situating these people, as it were, within nature.

The Maasai continue to emerge as a synthesis of different political, social and economic influences. Contemporary Maasai society is divided into numerous autonomous political sections, with the four major alliances—Kisongo, Loitai, Kaputiei and Purko—derived from periods of subdivision and expansion from within the Maasai nuclear region. The Kisongo, who are the predominant section in Simanjiro District, were the first to emerge from the Maasai core. They moved to the west of Mount Meru, near Arusha (Galaty 1993a). The Maasai share strong common ancestral elements and movement between groups whose subsistence depends primarily on farming or hunting; the Arusha, Dorobo and Illumbwa are inextricably tied to the Maasai pastoralist system (Homewood and Rodgers 1991).

Throughout the 19<sup>th</sup> century, a series of upheavals such as human and livestock epidemics, internecine wars and political dynamics contributed to the decline in pastoralism (Brockington 2000, Ellis and Swift 1988, Fratkin and Wu 1997, Homewood and Rodgers 1991, Homewood et al. 2001, Pagiola et al. 1998, Serneels et al. 2001, Spear and Waller 1993, Waller 1979). Following the *Iloikop* Wars, the European colonization of Africa introduced pathogens which had cataclysmic effects on people with no prior exposure. Rinderpest swept in from Sudan, decimating 90 percent of cattle and many

wild ungulate populations in the 1890s (Homewood and Rodgers 1991, Waller 1976). A catastrophic epidemic of smallpox accompanied the rinderpest epidemic. These calamitous events were of such profound importance to the Maasai that they were collectively remembered as '*Emutai*', or 'complete destruction' (Homewood and Rodgers 1991).<sup>8</sup>

The alienation of pastoral lands by outside forces represented a reversal of the precolonial trends of pastoral expansion. The disruptions within Maasai society due to economic and social disintegration coincided with serious interest by British colonial authorities in the land of central Kenya. The expropriation of important grazing grounds around Lake Naivasha was proposed as early as 1899 (Waller 1976: 548). It culminated in 1904 and 1911, when large numbers of Maasai were forcibly moved to make way for settler farmers (Hughes 2006, Igoe and Brockington 1999).

Contemporary and recent livelihood diversification among East African pastoralists has been descriptively addressed in the literature (Barth 1964, Kituyi 1990, Little 1992, Zaal and Dietz 1999). Agricultural conversion of land is increasing amongst East African pastoralists (Little et al. 1999). Pastoralists conceptualized diversification as a form of risk management that seeks a household economic portfolio with low risk between activities (Bryceson et al. 2000). For example, almost 90 percent of Maasai households in the Serengeti and Tarangire ecosystems now cultivate crops (Little et al. 1999, O'Malley 2000, Owens and Stem 1999, Serneels et al. 2001).

In this study site, an added complication is the role of artisanal and large-scale mining.

Muir discussed the decline of the pastoral economy due, in part, to land alienation for

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<sup>8</sup> Simanjiro elders referred to this period as '*E-muta*'. Mol translates '*e-muta*' as: 'it is finished' or 'they are finished' (Mol 1977: 54).

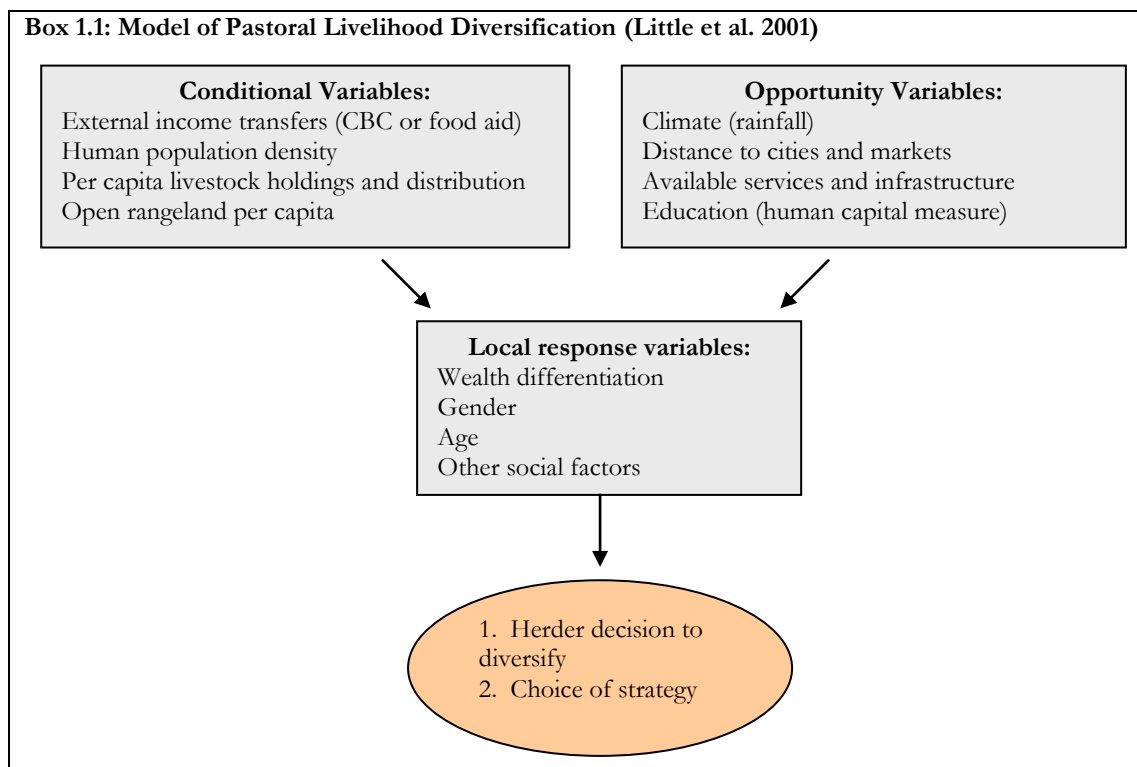
conservation and gemstone mining. Extreme poverty due to drought, crop failure and livestock disease is described as a driver for pastoral diversification into mining (Ibrahim and Ibrahim 1995, Ruppert and Schrufer 1995). Lama describes the negative social and environmental impacts rhodolite mining had in Loiborsoit village (Lama 1998). Igoe provided an account of the accelerated pressures on pastoral rangelands, resulting in more pastoral families turning to agriculture and mining (Igoe 2000).

The literature suggests that pastoral societies are becoming poorer as populations increase faster than livestock, and livestock become less productive due to increasing forage competition (Baxter 1994, Brockington 2002, Rutten 1992, Simpson and Sullivan 1984, Zaal and Dietz 1999). Equally, other factors such as land tenure and political economic processes are believed to contribute to agro-pastoral diversification (Borner 1985, Fratkin 1993, Fratkin and Wu 1997, Fratkin et al. 1999, Homewood et al. 2001, Little et al. 2001). Agro-pastoralism may be a coping strategy, but there is evidence, too, that rural income diversification can catalyze the process of rural economic differentiation (Little et al. 2001). Capital-rich diversifying households may manage to expand their portfolios and successfully accumulate.

However, the lack of a conceptual framework of diversification among African herders has resulted in contradictory bodies of literature about the potential role of diversification in risk management among pastoral herders (Little et al. 2001). As an example, cultivation is regarded by some researchers as a viable risk management strategy (Campbell 1984, O'Malley 2000, Smith 1998). Others view it as an unsustainable option that accentuates risk (Hogg 1987, 1988). Little *et al.* (2001) presented a preliminary model of pastoral diversification (Box 1.1). The authors suggested that this model is highly

localized and further theoretical development will require differentiation into three types of variables—conditional, opportunity and local response variables.

Pastoral diversification can be defined as the pursuit of any non-pastoral income-earning activity, including: (1) trading occupations; (2) wage employment; (3) retail shop activities; (4) rental property ownership; (5) sale of wild products (medicinal plants, charcoal); and (6) farming. The relationship between risk and diversification is not necessarily linear (Box 1.1) and may not be the major reason for pastoral diversification (Little et al. 2001). In this context, will CBC reduce, or increase Maasai exposure to risk and, secondly, at which scales will CBC affect the livelihood diversification of poorer or wealthier members of a community?



Substantial analytical work on the relationship between cultivation and livestock production has been conducted in agrarian regions of Africa (Boserup 1965, 1980, 1981, Bourn and Wint 1994, Mortimer and Tiffen 1995, Tiffen et al. 1994). Where arable farmers and pastoralists coexist, conditions are conducive for sustainable forms of mixed production (Bourn and Wint 1994). Further research illustrates a highly significant relationship between livestock biomass and land use intensity, suggesting that areas of cultivation and human habitation are the best predictors of livestock distribution (Bourn and Wint 1994, Coppolillo 2000). Where there is cultivation, there are markets, crop residues and fallow land, while livestock produce manure and draught power. These findings were consistent with the 'Boserup Hypothesis' which reflects the autonomous intensification of agricultural production through gradual integration of animal husbandry within local farming systems (Boserup 1965, 1980, 1981).

A limitation of the agrarian literature in contributing to an understanding of pastoral income diversification is that unlike 'crops', livestock is a source of capital and savings as well as a source of subsistence and income. Investment in livestock in rural economies can be a popular and productive investment strategy by households (Dercon and Krishnan 1996). This issue is complicated in cases when agro-pastoral diversification actually enhances the capital and savings function of livestock (Little et al. 2001). In effect, income diversification among pastoralists does not necessarily mean a reduced interest in livestock investments and production.

The key question, therefore, is to what extent is pastoral livelihood diversification a function of poverty, a result of investments by the wealthy, or an adaptation to changing opportunities, or other factors? If we are to understand what is driving land use change in the Tarangire ecosystem and what the prospects are for land use patterns which are

more compatible with wildlife needs, then we will have to examine what is causing people to convert pastures to farmland in these plains. My dissertation will empirically examine whether diversification into CBC or agriculture necessarily means a decline in the pastoral way of life. The findings of this research will contribute to a greater understanding of the intended and unintended consequences of agricultural transformation in pastoral systems.

### **Pastoralism and States**

“...protection of the environment is a matter of life and death...Some of the steps are painful...It is like administering an anti-malaria injection...it is painful but a must if the patient has to be cured.”

—President Jakaya Kikwete (quoted in Abdallah 2006)

Any CBC scheme in this region would have to contend with the problematic history of previous interactions between States and pastoralists. The arrival of European power in East Africa reversed years of pastoral expansion. British colonial authorities' interest in the land of central Kenya resulted in the alienation of important grazing grounds in 1904 and 1911 (Hughes 2006, Igoe and Brockington 1999, Lindsay 1987, Waller 1976: 548). Beyond the issue of competition for land, there were profound disagreements over what constituted good stock and land management.

The paradigm long held by many states is that pastoralism is a maladapted system of exploitation characterized by low productivity, overstocking, and rangeland degradation (Lamprey 1983, Mackenzie 1973). Colonial livestock policy focused on trying to make pastoralism more 'rational'. This meant converting Maasai pastoral economies, historically geared towards livestock subsistence, towards raising productivity of profit to

the State (Talle 1999: 108). This focused on land privatisation and demarcation and stock-rate control (Homewood 1995).

Pastoralists were historically excluded from protected areas based on the ecological argument that pastoralists were environmental stressors (Fratkin 1997, Homewood and Rodgers 1991, Prins 1992, Sindiga 1984). The theoretical explanation offered for some of these interventions was linked to Hardin's seminal "Tragedy of the Commons" thesis (Hardin 1968). A symmetry exists between Hardin's thesis and the fact that Maasai wealth is reflected in the size of cattle herds and families rather than material possessions, with a cultural tendency of the Maasai to maximize individual herds (Arhem 1981). The colonial argument that pastoralism was an inefficient mode of production continued to be perpetuated by the Tanzanian government (WWG 2004). Contemporary livestock and rangeland management policies in Tanzania, for example, call for restrictions on pastoral mobility which is widely acknowledged as being critical to effective pastoral rangeland management strategies (URT 2002a: 4-5, 7).

Drought and famine in the Sahel and East Africa in the 1970s and 1980s stimulated an increase in research into the future of pastoralism in arid and semi-arid rangelands (Ellis and Swift 1988, Homewood and Rodgers 1991). During this period, a number of internationally funded pastoral development projects were initiated that emphasized privatization of rangeland, commercial ranching and pastoral sedenterisation (Fratkin 1997). They have generally been motivated by Western perceptions of pastoral inefficiency and rangeland degradation control through the control of pastoral livestock numbers (Homewood and Rodgers 1991).

In the 1960s in Tanzania, the United States Agency for International Development (USAID) funded the Maasai Livestock and Range Development Project (MLRDP). The aim of the project was to initiate ranching associations which would be ecologically self-sufficient and owned by a group of Maasai families.<sup>9</sup> Tanzanian ranching associations were intended to maintain lower stocking rates to bring about ecological transition and economic integration into the national economy. The project resulted in large-scale uncontrolled immigration of both pastoralists and agriculturalists, and ultimately conflicted with Tanzania's villagisation (*Ujamaa*) process (Moris 1981). Scholars describe this phenomenon as the 'pastoralists dilemma' in which pastoralists see their land being treated as a free good and demand their privatized share of land before it disappears (Galaty 1993b). The 'pastoralist's dilemma' occurs when community control is undermined by State or private interests (Fratkin 1997).

Dahl and Hjort (1976) analyzed these interventions and stimulated a chain of ecological and management-oriented research (Dahl and Hjort 1976). A consensus exists in the literature that most range management development projects in Africa have had little beneficial, or even detrimental, impact in pastoral areas of Africa (Behnke and Scoones 1993, Little et al. 1999).

The counter argument is that pastoralist burning and grazing probably helped to shape the ecology of these ecosystems highly valued for their biodiversity (Homewood and Rodgers 1991). An alternative paradigm developed which illustrated that pastoral ecosystems are non-equilibrial, with dynamics affected more by abiotic than biotic factors, and are a relatively efficient form of arid land utilization (Ellis and Swift 1988, Mackenzie 1973). Opportunistic pastoral management was seen as an efficient form of rangeland

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<sup>9</sup> Similar to the Kenyan Group Ranch structure and funded to a tune of US\$ 23 million by USAID.



utilization (Behnke and Scoones 1993, Ellis and Swift 1988). Subsequent research explored an adaptation model termed ‘new range ecology’, emphasizing pastoralist land use rationality based on herd flexibility and mobility (Behnke and Scoones 1993). Proponents of new range ecology encourage development approaches which aim to strengthen traditional pastoral livestock management.

Conservation conflict described in this thesis—between pastoralists and the State—stems from deeper disagreements over productive methods of livestock keeping (Behnke and Kerven 1995, Behnke and Abel 1996, Behnke 2000). Some conservation agencies are caught between the long-dominant and officially popular thinking of pastoralism as a problem and promoting traditional pastoralism as a land use strategy optimal for wildlife conservation. Development solutions in pastoral areas have ranged between total abandonment of pastoralism, to encouraging former herders to plant crops and cereals and raise livestock in sedentary settings. At the other extreme are opposing views which advocate for restoring traditional pastoralism (Baxter 1993, Steen 1994).

In general, however, the apparent compatibility of wildlife and livestock makes pastoral land use an attractive option to conservationist and international donors (Bourn and Blench 1999, Homewood and Rodgers 1991). International conservation NGO and donor driven biodiversity conservation and poverty alleviation interventions in the Tarangire ecosystem are premised on the hypothesis that if the returns to pastoralism can be enhanced along with wildlife revenues, then the incentives to engage in non-wildlife compatible agricultural conversion will be significantly reduced.

Uncertainty exists as to whether the Maasai actually view sedenterisation and agricultural diversification as part of their long-term development strategy, or whether conservation

initiatives which strive to keep the Maasai pastoral are 'enforced primitivism' (Neumann 1997, 1998). Based on research conducted in the Serengeti ecosystem of Tanzania, analysts contend that development interventions that strive to maintain traditional lifestyles and limit diversification amongst pastoral communities may create a poverty spiral (Norton-Griffiths 1995).

The increasing privatization of pastoral rangelands seemingly contrasts with the participatory democratic empowerment processes encouraged by CBC for communities to make broad-scale decisions about land use and wildlife conservation. It is now land, not cattle, that is the most important resource in parts of Maasailand (Galaty 1992). In the Tarangire ecosystem, an informal privatization is well underway: unprecedented land subdivision and 'illegal' allocation has dramatically changed the ownership and land use of rangelands in just over a decade (Muir 1994, Otto et al. 1998). Scholars suggests that the greatest impediment to Maasai pastoralism in East Africa is the enclosure and privatization of grazing lands which exclude access to these resources (Fratkin 1997).

Maasai politics and institutions are directly relevant to conservation policies that rely on community participation. However, the Maasai traditional social structure does not readily lend itself to community-based programs (Western 1994). The failure of imposed CBC institutional frameworks, particularly where district councils are responsible, has been outlined in well-known CBC schemes in Amboseli, Kenya and CAMPFIRE in Zimbabwe (Metcalf 1994, Western 1994). Will the utilization of free-market enterprise tools to achieve conservation goals actually shape Maasai livelihood diversification in ways compatible with conservation? Is it fair for conservationists to assume that if provided with more economic options to diversify through wildlife and livestock herding,

that the Maasai will not want to join the mainstream of Tanzania's rapidly liberalizing free-market economy?

### **The NGO Accountability Debate**

Non-governmental Organisations (NGOs) are important in any examination of conservation or CBC in Africa because NGOs are the vehicle of so much money for, and thinking on, conservation practices in the continent. They have had this role since the foundations of the conservation movement (Adams 2004). It is important to examine their role in more detail.

Since the end of the Cold War in 1989, bilateral and multilateral donor agencies have pursued policies that give increased prominence to the roles of NGOs in the development of 'civil society' (Edwards and Hulme 1996a,b, Edwards and Sen 2000, Gibson et al. 2005). Many donors believe that NGOs can promote free-markets models of social-democracy, unrestricted flows of global capital, and movement away from State control of the economy. Within this discourse, NGOs are viewed by government agencies and the public as more efficient than government, especially in providing cost effective service to poor people, and are thus an important component of the 'development panacea' (Edwards and Hulme 1996a, Mercer 1999).

NGOs are also seen as a pivotal component of a healthy civil society and a counterbalance to State power through the promotion of pluralism, communication and participation. The increased prominence of NGOs in influencing public policy and providing checks on the legislative and executive branches of government has caused some to label the non-profit sector 'the fifth estate' (Eizenstat 2004).

However, the ability of NGOs to achieve these broad strategic goals has been questioned. How can NGOs scale up beyond a local level (Uvin et al. 2000)? How is NGO accountability weakened by dependence on official aid (Edwards and Hulme 1996a)? Can NGOs indeed nurture equality and empowering development amongst the poor (Mercer 1999)?

Tandon (1995) identifies three core accountabilities which NGOs need to meet:

1. To their values and mission;
2. To NGO performance in relation to the mission;
3. And to their role as civil society actors (Tandon 1995).

As such, NGOs, in theory, are values-based organisations. In order for NGOs to be effective as values-based organisations they need to be clear about their values, and put these values into practice. However, high levels of dependence on foreign aid have complicated the space for NGOs to engage in real values-based action due to the level of compromises required and perverse incentives. A perverse incentive by definition produces negative unintended consequences that contradict the interest of the incentive makers. Another limitation to NGOs engaging in values-based action is internal organisational values. Behind a screen of glossy progressive attitudes towards social change, an organisation can contain a multiplicity of ethical complexities.

The key to understanding the incentives embedded in international conservation NGOs is to examine collective-action situations through which money, political influence and structures of social power are mobilised and distributed. My research builds upon an

institutional view of development aid lucidly presented by Gibson, Andersson, Ostrom and Shivakumar (2005). While that excellent analysis addresses the theoretical foundations of development aid, this thesis specifically examines the political economy of the conservation process—from donor agencies, to transnational NGOs, governments and local peoples.

In theory, it is the constituents—in a conservation setting these are donors, members, the State, private sector and local people—to which NGOs are accountable. There are three issues that affect NGO grass-roots accountability: first, they are generally not required by law to provide their ‘beneficiaries’ (who have less power in the relationship) the necessary control for real accountability; second, the necessary accountability an NGO has to stakeholders such as government and donors can affect the integrity of the accountability relationship with grass-roots constituents; and lastly, broader institutional values and specific NGO ‘corporate’ culture can influence an NGO’s approach towards grass-roots accountability (Kilby 2006).

There are four collective active situations which are central to NGO accountability (Gibson et al. 2005). Perverse incentives can influence these collective-action situations and therefore affect the accountability of NGOs:

1. Perverse incentives may exist within donor agencies, as well as between these agencies and their contractors.
2. The role of NGOs as intermediary vehicles for the allocation of conservation capital and vision. The complicated set of local and international relationships within the environmental financing system can reduce incentives for grass-roots accountability.

3. Policy processes in target countries can create perverse incentives affecting NGO accountability. Such 'behaviourally territorial' processes can prevent civil servants from addressing economic, social or political constraints facing their citizens.
4. The role of individual citizens facing collective-action problems in day to day life. Individuals must engage in a variety of strategies at local levels to overcome perverse incentives that interfere with collective-action problems being solved.

NGO accountability is affected by their interpretation, which is both juridical and sociological. In juridical approaches, an emphasis is placed on the legal status of NGOs in the national context and their implications for policy. Despite several efforts, international support for a global NGO treaty has to date lacked the support of States; as a result, NGOs are obliged to accept national legislation. National laws on NGOs differ from country to country and the status of NGOs varies, too, whereby rights, duties, and legitimacy depend on respective national perspectives (Martens 2002).

From a sociological perspective, Lador-Lederer (1963: 60) states that "NGOs are non-governmental, non-profit-making, not-uninational" (cited in Martens 2002: 278). The non-profit attribute seeks to differentiate NGOs from multinational corporations, whose primary aim is the pursuit of profit. In contrast, NGOs are interested in advancing their designated objectives and universal claims in the service of shared ideals. However, international NGOs are in theory 'transnational organisations'; their work extends across national borders. More and more, this is the case as NGOs increasingly professionalise and progress from their roots as voluntary organisations in which people engaged for idealist purposes. NGOs also seek to influence governmental actors and to implement policies affecting their mission. Furthermore, NGOs must not be overly dependent on governments for financial or ideological support but scholars question independence of

NGOs from government agencies with increasing NGO dependence on government funding (Edwards and Hulme 1996b).

Incorporating juridical and sociological discourses, a definition proposed by Martens (2002: 282) is: “NGOs are formal (professionalized) independent societal organizations whose primary aim is to promote the common goals at the national or international level.” In this definition, NGOs are societal actors as they are private, member based institutions in which the inclusion of state, government representatives or institutions is, in theory, limited. NGOs promote public goods from which their members and the public gain. NGOs are independent as they largely fundraise from private mechanisms and are not under the control of government institutions in the case where funding originates from government agencies (Martens 2002).

My empirical analysis builds upon a framework elucidated by Tandon (1995) and refined by Kilby (2006). In this thesis, I analyse the workings of an international conservation organization—African Wildlife Foundation—as a case study of NGO accountability based on a composite of dimensions presented by Kilby (2006):

1. Grassroots accountability to pastoral constituency groups;
2. Accountability to patrons: donors and the State;
3. Accountability to values;
4. Erosion of values.

It is particularly useful to examine the role of conservation NGOs because they are perceived by some groups to be ideally placed to bridge conservation and livelihoods, given their proximity to their local constituencies in conservation landscapes and their positioning as conduits of international aid. Theoretically, empowerment results when

participation of marginalized communities is facilitated by NGOs in economic, social and political processes leading to improved access to government and resources (Kilby 2006). However, a number of recent critiques of conservation NGOs question whether this is the case (Bray and Anderson 2005, Bray 2006, Chapin 2004, Dowie 2005, 2006a, Ottaway and Stephens 2003a).

Conservation NGOs have long represented unproblematic good causes, combining the double benefit of channelling money to poor countries with defending nature, but this has been increasingly questioned. Criticism of conservation NGOs addresses that they occasionally support harsh and violent conservation policies (Bonner 1993, Brockington 2002, Igoe and Croucher 2007); that conservation NGOs have become too accountable to donors and governments (Chapin 2004); and the fact that they have poorly understood local people's needs (Igoe 2004, 2007).

Critiques also range from the conservation sector adopting too broad a set of interests and investment in institutional development (such as fundraising) which dilute funding available for conservation (Bruner et al. 2004), to investment in top-heavy expatriate staff and offices in the West and not enough in Africa (Scholfield and Brockington 2008), and to the risk of international NGOs displacing smaller ones (Duffy 2006, Rodriguez et al. 2007). In this thesis, I examine the accountability of an international conservation organisation working in the Tarangire ecosystem. I now provide a description of the study site.

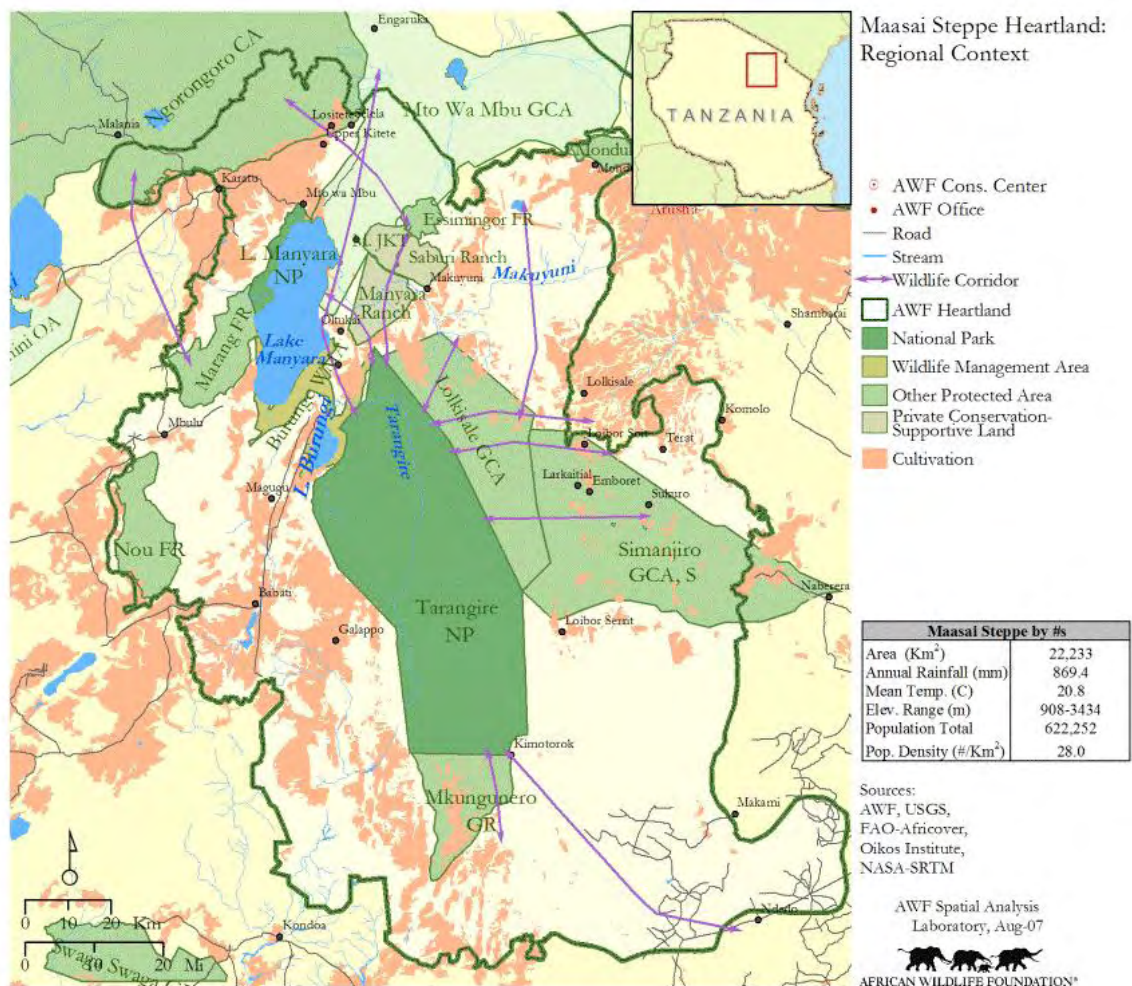


## Description of Site

The Tarangire ecosystem is considered to have global biodiversity value; it contains the second highest concentration of large migratory mammals on Earth, after the Serengeti-Mara ecosystem (Reid et al. 1998). The most diverse and complex grassland savannah ecosystem in the world extends through the Maasai Steppe (Coe et al. 1999, Olson et al. 2000). The ecosystem covers an area of approximately 22,200 km<sup>2</sup> in geographic scope. It includes two national parks, Tarangire National Park (TNP) and Lake Manyara National Park (LMNP), National Forest Reserves (Marang, Essimngor and Nou), Mkungunero Game Reserve (MGR) and the Northern Highland Forest in the Ngorongoro Conservation Area (NCA). For the purposes of this research, the western boundary of the Tarangire ecosystem follows the edge of the Rift Valley, along the 35° 45' meridian; the northern boundary along the 36° 35' meridian, and the eastern boundary along the 37° 00' meridian.

Within and adjacent to the Tarangire ecosystem are areas that have been internationally recognized and designated for their biological value. Lake Manyara NP was designated as a Biosphere Reserve in 1987, and neighbouring Ngorongoro Crater is a caldera designated by UNESCO in 1979 as a World Heritage Site. The parks constitute the core resource 'anchors' in the ecosystem (Figure 1.3). TNP is 2,850 km<sup>2</sup> and LMNP covers 330 km<sup>2</sup>. TNP is known for its large numbers of elephants, wildebeest and zebra, ancient baobab trees (*Adansonia digitata*) and rock pythons (*Python natalensis*). LMNP has an intact groundwater forest and the highest known density of elephants (1/km<sup>2</sup>) in Tanzania.

Figure 1.3: Situational analysis of the Tarangire ecosystem



The economic value of the wildlife industry in and surrounding the two parks may exceed US\$ 30 million per year.<sup>10</sup> They comprise part of Tanzania's 'northern circuit' around which 75 percent of international tourism to Tanzania is based (CSF and TANAPA 2004, Woien and Lama 1999). The 'northern circuit' includes TNP, LMNP, Serengeti NP, NCA, Kilimanjaro NP and, to a lesser extent, Arusha NP, the backbone of a tourism industry valued at US\$ 1.3 billion per year (Sumba et al. 2005: 3). Kilimanjaro, Serengeti and NCA have the highest visitation rates, followed by Tarangire and Lake Manyara. Revenues from Tarangire and Lake Manyara NPs subsidize several lesser performing parks and generate substantial amounts of foreign exchange, so these parks

<sup>10</sup> Both TNP and LMNP generate over US\$ 2 million each in direct revenue per year.

are of strategic national importance to the Tanzanian State (Otto et al. 1998). However, given the market value of the industry, tourism has yet to play a significant role in poverty reduction or supporting sustainable land use outcomes at a local level. Substantial potential exists, despite policy and other constraints, for harnessing the value of tourism at a local level through CBC mechanisms.

Although Tarangire serves as important dry season wildlife habitat, the park comprises only 2,850 km<sup>2</sup> out of roughly 22,000 km<sup>2</sup> in the overall ecosystem. For approximately six months a year, wildlife disperses into the Simanjiro Plains to the east of Tarangire on lands under the jurisdiction of Maasai pastoral communities. The plains are heavily utilized by zebra and wildebeest as they migrate between wet and dry season pastures, and are shared by pastoralists (Borner 1985, Kahurananga 1997). There are two primary ecological drivers for the migration. Tarangire NP's soils are phosphorus deficient (Voeten et al. 1999). The Simanjiro Plains are higher in phosphorus, an essential mineral needed by lactating wildlife. During the long rains, wildlife move onto the plains to calve for several months, then migrate back into the park during the dry season. The key reason for this is that Tarangire NP encompasses a significant portion of the Tarangire River, the main perennial water source in the ecosystem. Aerial survey data illustrates declines of over 50 percent of large mammal species in the Tarangire ecosystem over the past decade (Stoner et al. 2007, TCP 1998, TWCM 2000).

To the north of Tarangire NP is the Kwakuchinja Corridor in Monduli District, extending to NCA, Lake Natron, and Serengeti NP. The landscape contains a mosaic of different land uses, including rain-fed agriculture, pastoral rangelands, commercial agriculture, forest reserves, tourist hunting and photographic tourism. Commercial agricultural farms are concentrated in Simanjiro District growing primarily seed beans for export. Rainfall

in Babati, Monduli and Simanjiro Districts averages 650 mm per annum. The altitude varies between 950 metres to 2450 metres above sea level. Livestock husbandry is the predominant livelihood strategy in drier areas, but this zone can be considered transitional as agriculture and agro-pastoralism are prevalent in wetter areas.

Tanzania has three primary land categories: Village, General and Reserved land, which are governed by separate management institutions as part of the State. All these forms of land tenure are represented in the study site, and overlap with Maasai customary land tenure. However, all land in Tanzania is owned by the State, and held in trust by the President of Tanzania. Thus, land is not subject to absolute title, and 'titles' are given in the form of 99 year leases (Otto et al. 1998).

The Maasai are the predominant ethnic group in Simanjiro District (UNPF 1998). Pastoralists number approximately 350,000 people in the Maasai Steppe ecosystem. They own a livestock population of approximately one million indigenous *zebu* cattle (*Bos indicus*) and a mixture of small stock and equines (Homewood and Rodgers 1991, UNPF 1998). The Maasai are comprised of the Il Kisongo (Loitokitok) section. Over the past twenty years there has been significant in-migration of other ethnic groups into the region. Annual population growth in various areas of the Maasai Steppe is between 3.1 percent to 22.8 percent which has contributed to a modification in resource uses (ICP 1998). Relations between these groups fluctuate over time and according to resource needs (Igoe and Brockington 1999). Within the context of this social and economic fluidity, my research places particular emphasis on pastoral systems. However, geographical and socio-economic overlaps exist between different ethnic groups in the project area, as well as resource conflicts, which are examined in this thesis.

## **Research Aims**

My research extends previous work by adding a deeper theorization of Maasai livelihood diversification and rural transformation. My thesis builds upon previous research in Tanzania examining the livelihood impacts of wildlife-based enterprises (Ashley et al. 2000, Ashley et al. 2002, DfID 2002, Gwashure et al. 2001), and investigates how much of pastoral diversification is affected by relations with the State and NGOs. My research objectives were threefold:

- (1) To present a case study on household level pastoral income diversification from the Tarangire ecosystem;
- (2) To contribute to the literature in the novel field of gemstone mining impacts on pastoral livelihood change; and
- (3) To offer a description of the political economy of conservation NGOs and their practices, both local and global.

## **Research Questions**

My research question is:

*What is the impact of community-based conservation on poverty alleviation and wildlife conservation in the Tarangire ecosystem?*

This research question is influenced by three issues that I believe are central to pastoral land use change and rural diversification in Tanzania: pastoral livelihood diversification strategies, the political economy of wildlife and land, and the effects of conservation and

development interventions. Each of these issues presents a set of questions which must be addressed in order to fully understand the institutional and economic changes engendered by CBC in pastoral societies.

**1. What shaped the development of the contemporary agro-pastoral economy in Simanjiro District?**

- i. How do the history and politics shape land use conversion?
- ii. What are the drivers of cultivation?
- iii. What are the economics of agriculture?
- iv. What are the economics of the livestock economy?

**2. How does CBC affect pastoral livelihoods in the Tarangire ecosystem?**

- i. What is the wildlife and land policy environment affecting the uptake of CBC by local people?
- ii. What are the economics of wildlife?
- iii. What is the role of CBC in alleviating pastoral poverty?
- iv. How does CBC affect perceptions and behaviour of local people towards wildlife?

**3. What is the role of international conservation NGOs in poverty alleviation and biodiversity conservation in the Tarangire ecosystem?**

- i. What are the local and global forces shaping NGO values and accountability?
- ii. How do international conservation NGO relations with the State and donors affect their targeted beneficiaries?

- iii. What were the root causes of conflict between communities and conservation organisations in Simanjiro?

## **The Thesis Structure**

This work examines and analyses the complex interactions between pastoral livelihood diversification, Tanzanian wildlife policy and the political economy of conservation NGOs. In order to comprehend the pastoral livelihood diversification in recent years, it is necessary to place these events in their historical context. Following a description of the methods used in this thesis (Chapter 2), I describe the “Historical and Policy Perspectives of Pastoral Impoverishment” (Chapter 3). This chapter situates pastoralism in a historical context and discusses the process of wildlife policy formulation in the context of the national political and economic agenda.

I use this point of departure in an attempt to offer explanations, both factual and analytical, for the way in which pastoral livelihoods and land use have been shaped by different influences. “Wildlife is Our Oil” (Chapter 4) examines the role of community-based conservation (CBC) and community-based tourism (CBT) in pastoral livelihood strategies in Emboreet village, Simanjiro District. In “Livelihoods in Emboreet” (Chapter 5), I compare the relative importance of wildlife revenues with livelihood strategies such as livestock, agricultural, and gemstone mining at a household level. I deepen this exploration of Maasai livelihood diversification in “Brokers of the Birthstone: Tanzanite and Maasai Diversification” (Chapter 6) by addressing the influential role of the precious gemstone tanzanite in politics and livelihoods in Simanjiro. Having set the scene, “Plains of Ochre: The History of Land Use Change in Emboreet” (Chapter 7) describes how different economic drivers influence pastoral land

use in the Simanjiro Plains, particularly with regards to the role of conservation in agricultural conversion.

Following an analysis of how pastoral livelihoods are shaped by State wildlife and pastoral policies and the dynamics of pastoral livelihood diversification and land use change, I then turn to the role of the international conservation sector in affecting pastoral livelihoods and conservation outcomes. Chapter 8 entitled “Conservation Empire: A Case Study of African Wildlife Foundation” examines the global political economy of conservation organisations through the lens of a powerful organisation working in the Tarangire ecosystem. I then focus on an analysis of non-governmental organisational accountability on local people in the Tarangire ecosystem in Chapter 9, entitled “Social Justice and Accountability: AWF at a Village Level”. In the final chapter, I conclude with a synthesis of arguments presented herein and possible future implications for conservation and livelihoods in Tanzanian rangelands.



## Chapter Two

### Methods

In this chapter I outline the origins of this research and the personal and public dilemmas it posed. I then present the methods used: principally two surveys of household livelihoods—a single round, broad-scale survey and a repeat-round survey—as well as other activities. The goals of these methods were:

- a) an attempt to understand current pastoral livelihood strategies;
- b) to understand the area's conservation history;
- c) to understand the politics and drivers of land use change;
- d) to understand the role of conservation NGOs in Simanjiro.

### Introduction: Origins, Ethics and Dilemmas of Fieldwork

This is not the thesis I expected to write. Its final form is the product of a series of conflicts, both personal and public.

My fascination with pastoralists, wildlife, and African landscapes began early. My mother introduced me to the wonders of Kenya's protected areas (PAs) when I was a child. I grew up in an expatriate community in Kenya, where appreciation for conservation was part of this community's identity. Two books I read at the age of sixteen profoundly influenced me: *Rhino: At the Brink of Extinction* (Merz 1991) and *I Dreamed of Africa* (Gallmann 1992). Both describe two European women protecting the black rhino

(*Diceros bicornis*) from poaching in Kenya. Reading these accounts ignited an emotional connection to wildlife and wilderness in me and a maternal, nurturing, and moralistic sense of conservation.

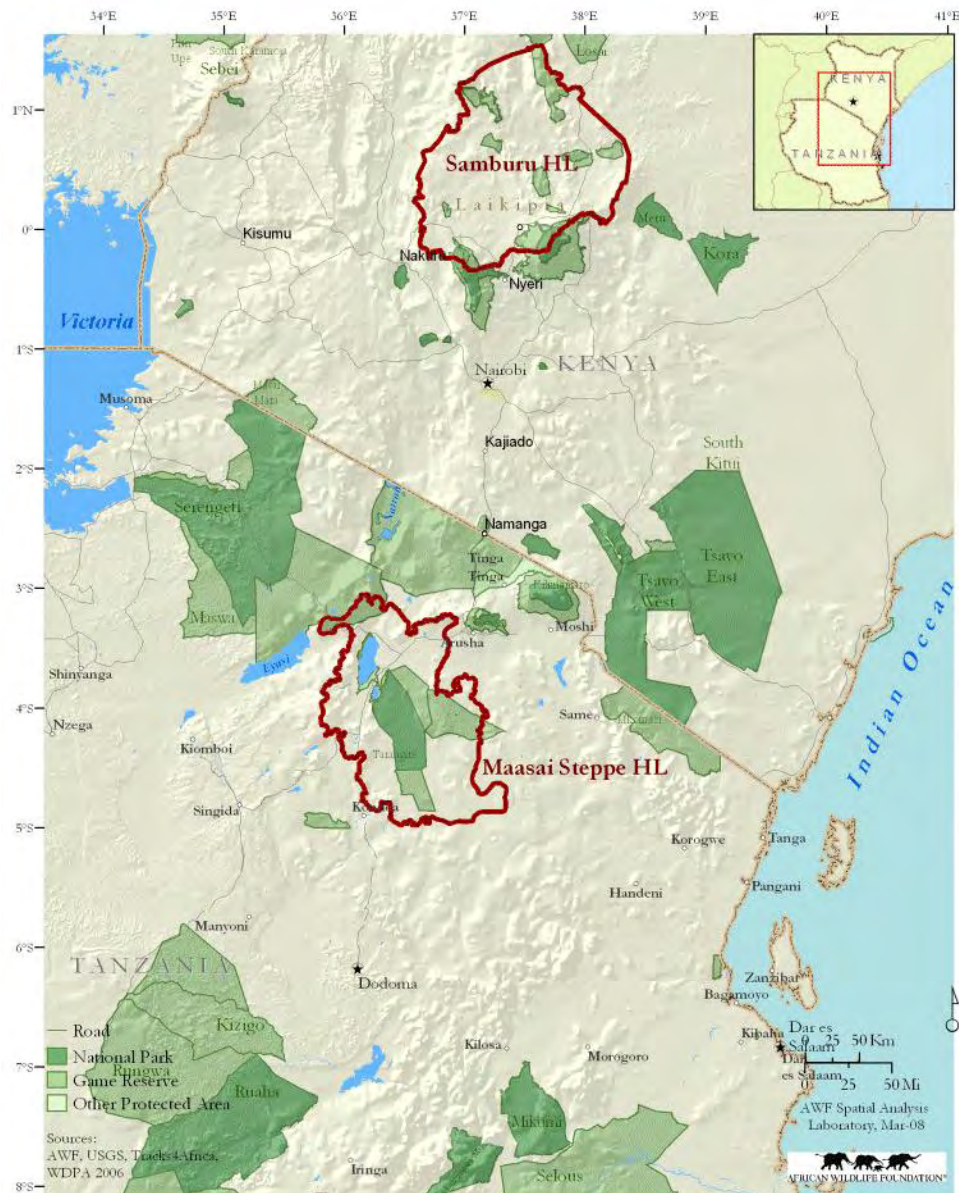
I wrote enthusiastic and impassioned letters to these authors and was invited to volunteer at their sanctuaries in Laikipia District, Kenya (Figure 2.1), at a time when the government was translocating its remaining wild rhinos into such fortified redoubts. For a teenager, fighting for the urgent and noble cause of saving the last rhinos in Kenya combined with the heady adventure of trucks and helicopters charging through the bush, was a dream come true. My initial understanding of conservation was forged in the protectionist rhetoric of saving rhino. I had a deep attachment to Kenya and believed I could make a contribution to Kenyan society through conservation.

Kenya's national rhino recovery strategy occurred while Dr Richard Leakey, the controversial and charismatic conservationist and politician, created the Kenya Wildlife Service (KWS).<sup>1</sup> He halted rampant poaching in Kenya's PAs. During his tenure, international donors pledged hundreds of millions of dollars in aid to KWS and the international image of Kenya's tourism industry regained its lustre (Bonner 1993, Douglas-Hamilton and Douglas-Hamilton 1992, Leakey and Morell 2001, Western 1997). I aspired to emulate Leakey's professionalism, integrity, and personal dedication. The rhetoric he popularized of a 'war' being waged to save wildlife profoundly influenced me. Things were quite simple then: it was wrong to buy ivory and rhino horn; killing the animals (and their protectors) was worse.

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<sup>1</sup> Leakey first served as KWS Director from 1989 to 1994. A range of literature critiqued the militarization of KWS, Leakey's celebrity, and his influence on Kenyan, and even international, wildlife policies (Dandy 2006, Little 1996, Western 1997).

Figure 2.1: Locations of Laikipia, Kenya and Selous and Tarangire, Tanzania



I pursued degrees in environmental subjects in the US and U.K. While abroad, I ravenously consumed popular literature to sustain my connection to Africa and its wildlife, reading expatriate scientists (Douglas-Hamilton and Douglas-Hamilton 1992, Grzimek and Grzimek 1960, Moss 1989, Owens and Owens 1984, Western 1997); explorers (Thesiger 1987, 1993); and travel writers (Beard 1978, Beard and Graham 1990, Hemingway 1963, 1965, Matthiessen 1972, 1992, Ruark 1955, 1962). Many of these

accounts hinged on heroic white people saving African wildlife from Africans, and ultimately Africa from itself.

In 1997, having completed my first degree, I returned to Africa where I spent several months tracking rhinos in northern Namibia with Save the Rhino Trust, a local NGO. In 1998, I was recruited to run the fledgling Sand Rivers Rhino Project in the remote Selous Game Reserve, Tanzania (Figure 2.1). I was twenty three. It was a trial by fire.

I first encountered the effects of impoverishment on villagers due to eviction in the Selous (Geisler and Sousa 2001, Yeager and Miller 1986) and subsequent resistance to conservation (Gillingham 1998). Friction between the Wildlife Division (WD) and villagers was such that by the late 1990s, rangers with whom I worked were afraid to stop our vehicles in some villages lest we were stoned. My certainties that violating park boundaries was poaching and deserved punishment were replaced by confusion, then distress.

My project and daily work was part of a more general privatization and paramilitarization of conservation in Africa that a number of authors have subsequently described and critiqued (Avant 2004, Clynes 2002, Ferguson 2006, Neumann 2001). I helped rangers' efforts to stop villagers entering the large and porous reserve and potentially threatening rhino and other wildlife. However, the bulk of people we encountered were poor subsistence fishermen—hardly the epitome of the ruthless and heavily-armed ivory or rhino poacher. But the law did not distinguish between subsistence fishermen and commercial ivory or rhino poachers: an intruder was a poacher. I felt deeply uncomfortable with this situation. No outreach efforts existed on the north-eastern boundary of the reserve and so I sought to establish them.

During this year, I helped raise US\$ 1 million from European donors, which transformed the Sand Rivers Rhino Project into the ecosystem-wide ‘Selous Rhino Trust’. But my efforts to use a few thousand dollars of that money to establish simple income-generating projects were extinguished by the WD. Reserve managers described these villagers as ‘poachers’; any engagement with them would compromise security. This approach seemed contradictory to the values of a universally beneficial conservation that I thought I knew. The idealism I had developed was dampened by the stark realities of conservation in the field.

My second professional experience was with the Laikipia Wildlife Forum (LWF) in Kenya in 2000-2001. I was hired by the African Wildlife Foundation (AWF).<sup>2</sup> My role was to professionalise this ‘association’ into a conservation ‘organization’ based on the relationships that I had developed with prominent ranchers in Laikipia. The LWF was founded by ranchers, descendants of the original European settler families—who were *given*, not sold land—freed up by the eviction of Mukogodo Maasai from the Laikipia Plateau (Hughes 2006, Lamprey and Reid 2004, Little 1998, Tignor 1972, Waller 1976, Waller 1984). Over the years, a number of these ranches were sold to billionaires, American movie stars and investment bankers; ownership of a ranch in Laikipia became an international status symbol.

Photographic tourism began to replace livestock ranching as a primary revenue stream for many ranches in the 1990s (Elliott and Mwangi 1997, Elliott and Mwangi 1998). At the same time, European ranchers were concerned that President Mugabe’s land redistribution in Zimbabwe might influence Kenyan land policies. Indeed, Kikuyu

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<sup>2</sup> AWF’s legitimacy in Laikipia was challenged by the LWF. Relations were strained prior to my arrival following AWF’s declaration of a landscape level program encompassing Laikipia. The LWF questioned AWF’s capacity to promote conservation on their private ranches. Tension exists to this day.

parliamentarians to the south of Laikipia began to openly campaign that European-owned ranches should be redistributed to local people.<sup>3</sup> In addition to being lucrative, wildlife conservation represented a political shield for the ranchers who branded Laikipia as valuable for conservation and thus significant to the state. They found advocates in international conservation organisations. They also sought to partner with local communities in conservation activities. This did not come about easily. Many prominent ranchers held entrenched colonial and racist attitudes. During this year, I raised over US\$ 400,000 for the LWF and helped turn it into a legitimate conservation organization with national influence. However, the irony of a few elite landowners using community conservation to allow their own livelihoods to prosper was not lost upon me.

For the next five years I worked for AWF as Senior Program Officer, fundraising from multi-lateral donors and professional foundations for projects in Kenya, Tanzania, Uganda, Rwanda, and the Democratic Republic of Congo. As the lead architect of proposals that raised approximately US\$ 11 million, I contributed to AWF's transformation. I believed in AWF's mission and I was grateful for the opportunity to work for an international NGO, which "as a space of freedom, separate from the state" (Mohan 2002) potentially represented independence from the ideological agendas which I had been exposed to in Laikipia and the Selous.

I began a PhD in order to better understand my calling while staying grounded in field-based realities. For four years, from 2002 to 2006, while pursuing my PhD, I worked initially full-time then part-time for AWF in Arusha on fundraising. I had to fund my

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<sup>3</sup> Pastoral resistance to the ranches mounted: during an intense drought in 2000, pastoralists invaded ranches in an attempt to find fodder for their stock.

studies and thought the experience would advance my career. I was also supported by the International Livestock Research Institute (ILRI), based in Kenya.<sup>4</sup>

My status at AWF was, at times, beneficial to my research; it broadened my understanding of Tanzanian conservation. I participated in conferences, workshops, and meetings that introduced me to national and international conservation actors. But it effectively meant I was working part-time on the PhD while I was ‘in the field’. As I explain below, AWF eventually became a field site in itself, but I was anxious that my work there compromised the time I wanted to spend in rural areas.

AWF’s CEO personally requested that I transfer from Kenya to Tanzania to undertake my PhD while supporting AWF in Arusha.<sup>5</sup> Staff whom I worked with knew that I was conducting research concurrently while working for AWF. AWF’s Tanzania Coordinator directed me to research the Maasai Steppe (Figure 2.1). I initially opposed this but it became apparent to me that to manage the competing demands of my PhD and AWF work it would be prudent to focus both activities on the same landscape. I was drawn to Simanjiro District because of its ecological value to Tarangire NP. I wanted to learn more about it so that I could help to conserve it after my PhD. I wanted to learn more about the root causes of conflicts between conservationists and local communities. I could have chosen a less acrimonious setting, but felt that I needed to understand why communities rejected conservation in Simanjiro.

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<sup>4</sup> As part of a project funded by the Belgian Directorate-General for International Cooperation called “*Reto-o-Reto - Better policy and management options for pastoral lands: Assessing trade-offs between poverty alleviation and wildlife conservation*”. The Reto-o-Reto project was implemented by ILRI as a cross-site project in five locations in Kenya and Tanzania using standardised methodologies.

<sup>5</sup> 1) E-mail, CEO to H. Sachedina, 12 January 2004: “I also know that you fully appreciate the privilege (*sic*) of being able to work on a Ph.D. concurrent with working which is not accommodated (*sic*) in every organization”; 2) E-mails, VP-Program Design to H. Sachedina, 19 & 26 January 2005, 11 April 2005; 3) E-mail from President to H. Sachedina, 16 June 2006; 4) E-mail, Program Director to CFO, 9 September 2005.

I initially intended to focus on pastoral livelihood diversification and the role of wildlife benefits in land use change. It soon became apparent, however, that I needed also to examine tanzanite mining. It also became apparent that I would have to address the accountability of international conservation NGOs in order to fully address issues related to poverty and biodiversity conservation. Working closely with pastoral communities resisting conservation, I became more critical of the approaches of conservation organizations. This situation presented me with particular ethical dilemmas related to my research.

When I started my doctoral research, I did not know that AWF and its actions would become part of this thesis, but I was regularly exposed to sensitive information regarding the accountability of AWF and the disempowerment of local people. I ended up finding out more than I wanted to—in many cases by accident—about AWF that compelled me to make profound personal, professional and ethical decisions about how to handle this information with integrity. My knowledge became a central part of my thesis, but including it could also be damaging to the AWF. Furthermore, I wanted a career in the conservation NGO sector, which would not tolerate whistle-blowers. My choice was to tell the story and resign, or to keep silent.

It was a painful time. The calling and ideals that had been forged so strongly in my youth were still powerful. To make matters worse, I was then offered a promotion to Technical Director (one of the highest ranking positions in AWF) at headquarters in Washington, DC on a lucrative salary. This was the opportunity I had been striving for.



In the end I decided it was a greater wrong to remain silent.<sup>6</sup> In 2006 I declined the promotion offer. For two years prior I shared my concerns with the most senior leaders about AWF's performance and accountability in Tanzania and its impacts on local peoples, which contradicted the organization's mission. But I did not feel my warnings were being acted upon sufficiently. Shortly thereafter I resigned from AWF. I believed my goal of facilitating a process of self-examination and discussion by conservation NGOs would be best served by writing this thesis.

I recognized, too, that this would raise questions about research without clearly specified, prior, informed consent (Berlin and Berlin 2003, Iacono 2006, Jorgensen 1971, Ramcharan 2006). Ethical issues involving NGOs and researchers elsewhere involved researchers making choices about the risks to the poor of academic exposure (Townsend and Townsend 2004). Another ethical issue is the risk to NGO funding from an academic critique (Townsend and Townsend 2004). Previous critiques of AWF had little effect on the organization or its supporters (Bonner 1993, Garland 2006, Goldman 2003, 2006, Igoe 2000, 2004, Igoe and Croucher 2007). In fact, AWF's budget continued to grow, which suggests that scientific publications minimally impact conservation organizations and donor thinking. Before I included more revealing aspects of AWF in my analysis, I reviewed confidentiality clauses in my employment contracts and the employee handbook. My contracts did not include such a clause and the handbook clause referred to current employees, not former employees (AWF 2004a: 10). In my accounts, I tried to be as objective as possible, but recognize that it was impossible to remain completely unbiased.

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<sup>6</sup> Jorgensen's view is "that we can publish the truth as we understand it, assuming that truth makes men freer or more autonomous..." (Jorgensen 1971: 331).

The public contests were played out in the villages around Tarangire. In the villages of Simanjiro District next to the park, the politics of land are intense. Responses to my research were fashioned by the perception and past experience that researchers and foreign NGOs posed a potential threat to livelihood security and land tenure rights (cf. Gray 1998, Katz *et al.* 2006).<sup>7</sup>

In Simanjiro, foreign researchers were viewed as agents of land alienation for conservation. People were suspicious that research was a precursor to eviction. These ideas were shaped by decades of dealings with international conservation NGOs, evictions from parks, attempts by the private sector and NGOs to excise village land for commercial or conservation purposes and the politicization of land and wildlife issues at all levels of local government. There were stories of AWF vehicles and staff threatened in the past with stoning by Simanjiro villagers. I knew my association with AWF exposed me to the risk of physical harm.

No ethnographer “may verbally deceive his informants, assume a masquerade or a disguised role, or conduct covert or clandestine research” (Jorgensen 1971: 329). How could I work for the AWF, and do my research, given such suspicion of my employer? I took care to compartmentalize my work at AWF: my fundraising work focused on areas of Monduli and Babati districts. In Simanjiro I was conducting my doctoral research, and not doing work for AWF, so I distanced myself from conservation interventions, AWF or otherwise. I shared the fact that I worked for AWF with key leaders and families and emphasised that I was in Simanjiro solely as a student. However, my association with AWF caused some resistance from some villagers. They explained their reluctant acceptance of me through a Kiswahili proverb: “*Afadhali shetani unayemjua kuliko*

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<sup>7</sup> Interview, PK, *Landisi*, Emboreet, 16 March 2005.

*malaika usiyemjua*,” translated as “Better the devil that you know compared with an angel who you do not know.”<sup>8</sup> They also sought to use me to lobby for their causes.

The research process was, and still is, politically contested. My data were subject to lobbying by the private sector, civil society, academics, and local interest groups in the Maasai Steppe. Villagers saw this research as an opportunity to influence government agencies to consolidate their land tenure claims and international donors who might provide development funds. Conservation NGOs saw the project as an opportunity to highlight the problems of pastoral land use. Given the political context of the research, it was necessary to evaluate statements and claims with the greatest possible care.

### **Selection of the Study Site**

To select a study site, I visited twelve villages in Simanjiro, Monduli, Loliondo, and Babati districts between August to October 2003. I looked for a site which:

1. Contained community-based tourism and tourist hunting operations;
2. Was predominately pastoral;
3. Had no cell phone coverage;<sup>9</sup>
4. Had road access, security, and was not far from Arusha;
5. Lacked researcher ‘fatigue’: Simanjiro had been the focus of significant previous conservation and development related research.<sup>10</sup>

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<sup>8</sup> Interview CT, *Seuri*, Emboreet, 29 January 2005. Terms in italics are Kiswahili except where noted.

<sup>9</sup> So that I could not be contacted by AWF while in the field. Cell phone coverage, however, began in my study site in July 2005.

<sup>10</sup> Jim Igoe (Sukuro), Lou Lama (Loiborsoit), Laly Lichtenfeld (Loiborserrit), Stacy Lynn (Sukuro), Amy Cooke (Loiborsoit), Jock Cunningham and Terence McCabe (multiple villages) and OIKOS. Individual researchers actively avoided Emboreet due to its reputation for contesting and resisting research.

Emboreet village, adjacent to Tarangire's eastern boundary, was significant to conservation as it contained a large part of the wildlife calving grounds of the Simanjiro Plains (TNRF 2005b). It was the only site in Simanjiro with community-based tourism (CBT) enterprises and, I learned later, one of the highest revenue-generating villages from wildlife in Tanzania, after Ololosokwan.<sup>11</sup> I was formally invited to conduct research in Emboreet village by the Village Executive Officer (VEO), Chairman, and Ward Executive Officer (WEO) in November 2003, after I visited as a guest of the Scottish NGO, VetAID.<sup>12</sup>

I initially was interested in a comparative, two village study, but the complexity and large size (381 km<sup>2</sup>) of Emboreet encouraged me to research a single site (Figure 2.2). Its sub-villages contained significant variety to provide opportunities for comparison. Given the sensitivities of my work, I focused on building relationships at one site. Fieldwork was conducted between July 2003 to June 2006, with 216 total days (7.2 months) spent within Simanjiro District. I conducted two livelihood surveys: a broad-scale survey (for ILRI) and a repeat-round survey (for my thesis). The broad-scale survey was conducted over a 14-month period (May 2004 to July 2005), followed by a 12-month repeat-round survey. This does not include time required for the pilot survey and archival research.

My part-time position at AWF meant I could spend five days in Emboreet at a time. I used my leave to carve two-week periods at Emboreet. The result was not the sustained

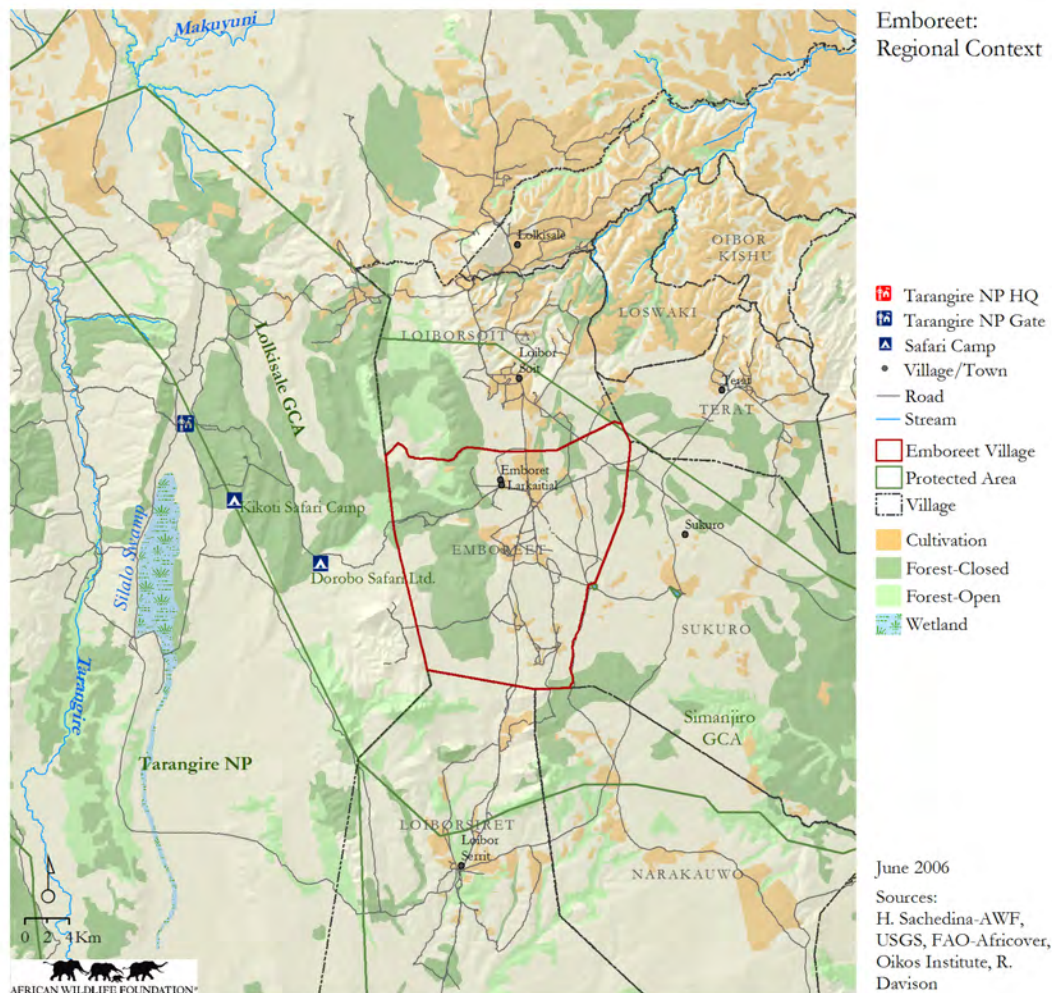
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<sup>11</sup> Ololosokwan earned approximately US\$ 55,000 per year (Nelson 2004, Nelson and Ole Makko 2005). I developed close links with the two photographic tourism operators in Emboreet. They took an interest in my research and supported it. This gave me confidence that I would gain access to wildlife revenue data. I was also able to gain limited access to two of three hunting companies.

<sup>12</sup> In contrast to conservation NGOs, livestock health NGOs had more legitimacy in Simanjiro.

period of absorption in one place that is traditional for ethnographers, but the longer duration of my research period provided other benefits.<sup>13</sup>

Figure 2.2: Location of Emboreet village in relation to TNP, Lolkisale GCA and villages



## Pilot Study

From November 2003 to March 2004 I conducted a pilot study in Emboreet. I carried out a series of semi-structured interviews and established relationships with key informants to gather village contextual information. The pilot study enabled me to

<sup>13</sup> I also travelled extensively in Tanzania during my fieldwork period (60,000 km by road), gaining exposure to conservation projects nationally. I employed two Emboreet villagers in Arusha so that I could continue my research by speaking with them while in town.

discuss the planned research activities, pre-test questionnaires, and establish a presence in the community.

I built a simple, unfenced campsite comprised of small tents, grass thatch and shallow pit latrines (Figure 2.3).<sup>14</sup> I placed the camp next to three *bomas* (fenced homestead built around a livestock enclosure; Maa: *enkang*) and within walking distance of the village centre. The open-plan camp attracted a daily stream of visitors. Visitors kept me informed and meant I could maintain relationships with people from different sub-villages. The camp was dismantled at the end of the research period; the materials reused by women building a *boma*.

**Figure 2.3: Research camp in Esilalei sub-village**



<sup>14</sup> Letter, VEO to H. Sachedina, Ref: KIJ/352/TAR/5/2/04, 2004. Situating the camp presented an interesting dynamic. Two men from different *bomas* claimed that they did not recognize the village administration; I must have bribed the VEO to obtain a site. They were worried that I would take the land away. The intensity with which people responded to the temporary campsite was illustrative of wider land conflicts, in which village elites were indeed allocating land in exchange for illicit payments. I declined accommodation in the *boma* of the former director of Inyuat-e-Maa, a controversial indigenous NGO with AWF links, as I did not want this association to potentially affect the research.

## The Household List

One of my first tasks was to draw up a list of households in the village so that I could take proper samples. Households are not straightforward units of analysis (Guyer 1980, Guyer 1981, King-Quizon 1978, Schofield 1974). Households and their internal patterns of distribution are not static. Households adapt to changing circumstances and come in and out of existence. Households are fluid—rarely fixed in space and time. They are problematic as discrete units of measurement (Guyer 1981, Messer 1983, Moock 1986).

There are some basic units which can be used to collect data about pastoral societies. A basic household (*kaya*) meant a man ('household head'), his wives and other dependants. Usually, households were grouped in a *boma* with several households sharing a common livestock enclosure (but different gates). Households sharing a *boma* are often closely related, such as brothers, or a father and his adult sons. Each woman manages her own 'sub-household' (Maa: *enkaji*), with men and women assuming different responsibilities in household activities (Brockington 1998).

But note the complications with these categories. First, the economies and prosperity of households within the same *boma*, and economies of sub-households within the same household, can be quite different (White 1980). Second, some women who were widows, separated or divorcées, were considered household heads. Third, as the junior warrior (Maa: *Ilkipon, Korianga*) age-set was close to graduation, a number had begun to marry.<sup>15</sup> Those who were married and running households independent of their fathers were included in the list. Unmarried *Korianga* were not included. Fourth, and conversely, there were several individuals from the senior warrior (Maa: *Ilkimunyak, Landisi*) and

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<sup>15</sup> The youngest age set was the *Ilkipon (Korianga)* who were followed in ascending seniority by the *Ilkimunyak (Landisi)*, followed by the *Ilkishumu (Makaa)*, *Seuri (1966→)*, *Nyangusi (1942→)* and individuals of the *Il Terito (1926→)*. The terms *Korianga*, *Landisi* and *Makaa* were age-set nicknames though predominately used throughout the research site.

older age-sets who were not married (mainly due to poverty). They were included in the survey as household heads (HH), although some were sheltered in other households as dependants. Fifth, there were a number of non-Maasai immigrants who moved into *bomas* as live-in casual labourers. However, I did not include immigrant labourers unless they had been granted villager status and were working their own farms. There was bias as some women, the poor, and non-Maasai immigrants were easily overlooked.

In Tanzania, the basic unit of administration is the village. Each village is divided into sub-villages (*kitongoji* singular). Emboreet village was divided into seven sub-villages: Esilalei, Laarkaitial, Lenaitunyo, Ingung, Meleleki, Kati Kati, and Emboreet.<sup>16</sup> Emboreet sub-village was significantly ethnically diverse. The remaining six sub-villages were predominately Maasai. I needed a full household head census for each sub-village. I started with village records (SDC 1995) and expanded them through visits and discussions. I conducted a preliminary wealth ranking exercise with the VEO and two community animal health workers (CAHWS).<sup>17</sup> The draft household head list and wealth ranking was then reviewed by each sub-village chairman; missing names were filled in and wealth rankings adjusted. The list was then cross-checked by focal groups in each sub-village to further corroborate the list and wealth ranking. Finally, the list was verified at each *boma*, where we confirmed the *boma* list and neighbouring ones. This list was constantly cross-checked during fieldwork to ensure it was as robust as possible and up to date (Appendix I). Table 2.1 illustrates the proportion of households by wealth ranking in each sub-village.

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<sup>16</sup> Emboreet sub-village is the main concentration of settlement and social services. Emboreet is also the name used for the village, ward and division (encompassing Loiborsoit village). Emboreet village is also referred to by the name 'Simanjiro' as people believed it to be the heart of Simanjiro District.

<sup>17</sup> The VEO was familiar with household wealth status as he was responsible for taxation and famine relief. CAHWS were familiar with household livestock holdings as they provided veterinary care to *bomas*.



This household list was tabulated in Microsoft Excel and became a primary data management tool for the research.<sup>18</sup> There were 437 households recorded in Emboreet. Of these, 48 percent of households were considered poor, compared with 23 percent wealthy and 29 percent middling.

**Table 2.1: Number of *bomas*, households and wealth ranking in each sub-village (the meaning of the categories is discussed below)**

<i>Kitongoji</i>	Number of <i>Bomas</i>	Number of households	Percent of Village	Wealth		
				No.	Percent	
Laarkaitai	11	42	10%	Wealthy	8	19%
				Middling	14	33%
				Poor	20	48%
Meleleki	16	85	19%	Wealthy	12	14%
				Middling	25	29%
				Poor	48	56%
Esilalei	14	47	11%	Wealthy	4	9%
				Middling	14	30%
				Poor	29	62%
Emboreet	92	106	24%	Wealthy	33	31%
				Middling	19	18%
				Poor	54	51%
Ingung	10	38	9%	Wealthy	6	16%
				Middling	12	32%
				Poor	20	53%
Kati Kati	5	39	9%	Wealthy	5	13%
				Middling	15	38%
				Poor	19	49%
Lenaitunyo	17	80	18%	Wealthy	34	43%
				Middling	28	35%
				Poor	18	23%
<b>Totals</b>	<b>165</b>	<b>437</b>	<b>100%</b>	<b>Wealthy</b>	<b>102</b>	<b>23%</b>
				<b>Middling</b>	<b>127</b>	<b>29%</b>
				<b>Poor</b>	<b>208</b>	<b>48%</b>

<sup>18</sup> It was impossible to keep the household list from the village administration. The VEO and Chairman used it as a tool to solicit contributions from villagers for a ward secondary school in 2004.

## The Wealth Ranking

Wealth ranking is a standard tool used all over the world (Bond and Mukherjee 2002, Devereux and Sharp 2006, Harpman et al. 2005, Hayati et al. 2006). It has attracted a lively methodological debate (Bevan and Joireman 1997, Bevan 2000, Campbell 2002, Mayoux and Chambers 2005). It was also hotly disputed in Emboreet. Ranking of the household list was not as simple a parsing of society as it might seem.

The problems revolved around the meaning of wealth and the stigma of poverty. The meaning and attribution of poverty is contested in many societies, pastoral or otherwise:

“Far from being a straightforward condition of deprivation and destitution that is easily defined empirically, poverty is in fact a contentious and complex construct which encapsulates a vast range of social and historical struggles and constantly evolving cultural values” (Broch-Due 1995 in Anderson and Broch-Due 1999: 9).

People resented being described as poor (*maskini*<sup>19</sup>) but the Maa term *meinati* was more dignified.<sup>20</sup> The village Chairman threatened to fine us for categorising him as ‘poor’. He mentioned he had a 1,000 acre farm, three sons at school, more than 100 goats, and was a Chairman. He said he had once chased off another researcher and could do the same to us. Apparently, though, he only had two cattle. Generally, wealthier people tended to underestimate their holdings while the poor sometimes exaggerated their assets, suggesting, in an idealized sense, how they see themselves (Broch-Due and

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<sup>19</sup> Also means ‘beggar’ and connotes contempt and wretchedness.

<sup>20</sup> ‘*Meinati*’ means someone who is dependent upon others. ILRI recommended this term following similar perception problems in Kenyan Maasai communities.

Anderson 1999, Fratkin 1994, Spear and Waller 1993). Misreporting had links to age-set: *Korianga* approaching *eunoto* began to marry.<sup>21</sup> Some *Korianga* overestimated their holdings to illustrate their independence from their fathers, or their prowess as farmers.<sup>22</sup>

In pastoral societies, wealth is traditionally reflected in the size of the herd and family rather than in material possessions (Arhem 1981). In this diversifying community, economic and cultural values of resources were changing. Everyone had a different perception of wealth; it was social negotiations that made wealth relevant.<sup>23</sup> In Emboreet, where Maasai households were diversifying into farming and mining and the population of non-Maasai was increasing, the wealth ranking exercise stimulated much discussion.<sup>24</sup> Material assets, status, and salaried employment were factored into wealth categories which now considered several factors, such as:

1. number of cattle
2. number of shoats<sup>25</sup>
3. number of wives
4. farm acreage
5. wage employment
6. number of educated children
7. leadership position

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<sup>21</sup> *Eunoto* refers to a festival celebrating the ascension of an age-group of warriors (Spencer 1988).

<sup>22</sup> Interview, TP, *Korianga*, Emboreet, 24 November 2004.

<sup>23</sup> Poor people in Maasai society have little status. Wealth defines someone's societal standing. Poor people were discouraged from speaking at public meetings and could not marry. The notion of poverty is associated with a lack of cattle, wives, and children and alludes to the earliest Maasai traditions regarding their origin. Poverty is associated with the 'Dorobo'—people closely associated with the earth, living in holes, farming and forced to hunt (Jacobs 1965).

<sup>24</sup> A village council meeting in 2004 debated whether the official definition of wealth should incorporate more than just livestock for mandatory household development levies (*mchango*). *Mchango* was levied according to perceived wealth. The council agreed that shops, *shambas* (farms) or jobs would be counted. Personal notes, Emboreet village council meeting, 23 May 2004.

<sup>25</sup> 'Shoats' refers to sheep and goats combined.

8. affiliation with wealthy households
9. material assets, such as vehicle or tractor

There were various combinations employed by villagers to interpret wealth: for example, someone who owned a tractor or over a hundred shoats and had a job but no cattle was considered wealthy. Wealth was also closely linked to status. Even in cases where someone was materially poor, their role as a village or government officer, or NGO or church leader, engendered prestige.

Cattle were still a primary component for pastoral wealth definitions but a diversified portfolio was a sign of wealth. There was a general perception that a man was poor if he had fewer than 10 cattle. An elder of the *Makaa* age-set verbalized this as: “*Meatta engibu tukul! Eatta tomon tu!*” (Maa: “I do not have any cattle at all! I only have ten!”).<sup>26</sup> General measures of livestock wealth described to me by a sub-village chairman are shown in table 2.2.

**Table 2.2: Maasai definition of wealth rankings according to livestock assets in Emboreet**

<b>Wealth Ranking</b>	<b>Cattle</b>	<b>Shoats</b>
Poor	0 to 9	0 to 70
Middling	10 to 50	70 to 100
Wealthy	51 upwards	100 upwards

<sup>26</sup> Interview, IM, Emboreet, 24 November 2004.

## The Broad-scale Survey

After grouping households into wealth categories, I then selected a random sample within each category in proportion to the category's size (Bernard 1995). Stratified sample selection was constrained by practical considerations. I could not survey household heads who were at the mines or those who objected to being surveyed. On other occasions, it proved advantageous to work with clusters of households within specific *bomas*.

I built upon previous research examining pastoral livelihood responses to conservation (Ashley et al. 2000, Ashley et al. 2002, Brockington 1998, DfID 2002, Gwashure et al. 2001, Thompson and Homewood 2002). I used the broad-scale questionnaire used by ILRI researchers in Kenya (ILRI 2002, Thompson 2002), modifying it to suit conditions in Tanzania. Household heads were interviewed only once in the broad-scale survey. The questionnaire collected qualitative and quantitative information (Table 2.3) on household income and expenditures and sought to understand the role of wildlife revenues in livelihood strategies (Appendix II).

**Table 2.3: Data sets collected in broad-scale survey**

Background information	Crop production and sales
Demography of household	Trends in household farming plots
Economic life history	Costs of agriculture
Livestock dynamics and production	Non-farming land tenure allocations
Livestock input costs such as dipping expenses	Off-farm income sources
Material asset wealth	Wildlife and tourism perceptions

The problem of the broad-scale survey was the inappropriate recall intervals used. Questions related to livestock dynamics, expenditures and farming asked for details over the previous year. I had to use this as it was the period used in other ILRI sites but it

proved unsatisfactory. However, this survey allowed me to gain a general understanding of villagers' livelihoods prior to the repeat-round survey.

The survey visited 226 households. It was representative of the village as a whole, not of each sub-village individually, but each sub-village was well represented (Table 2.4).

**Table 2.4: Intended broad-scale sample versus actual sample (number of households)<sup>27</sup>**

<b>Kitongoji</b>	<b>Wealth Ranking</b>	<b>Intended Sample</b>	<b>Sub-total</b>	<b>Actual Sample</b>	<b>Total Surveyed</b>
Laarkaitial	Wealthy	4	22	7	26
	Middling	7		10	
	Poor	10		9	
Meleleki	Wealthy	6	44	7	37
	Middling	13		11	
	Poor	25		19	
Esilalei	Wealthy	2	24	2	28
	Middling	7		10	
	Poor	15		16	
Emboreet	Wealthy	17	55	18	61
	Middling	10		11	
	Poor	28		32	
Ingung	Wealthy	3	20	3	16
	Middling	6		5	
	Poor	10		8	
Kati Kati	Wealthy	3	20	4	20
	Middling	8		7	
	Poor	10		9	
Lenaitunyo	Wealthy	18	41	14	38
	Middling	15		16	
	Poor	9		8	

	<b>Total</b>	<b>%</b>	<b>Total</b>	<b>%</b>
Wealthy	53	23	55	24
Middling	66	29	70	31
Poor	108	48	101	45
<b>Total</b>	<b>226</b>	<b>100</b>	<b>226</b>	<b>100</b>

My target sample size was 55 percent of the village household population (Box 2.1).

<sup>27</sup> Sub-totals differed slightly in some cases from the intended sample due to rounding up or down based on the percentage of each wealth class within each sub-village.

**Box 2.1: Sample size calculation**

The sample size was calculated according to a 95 percent confidence level (Krejcie and Morgan 1970). Sample size is more or less independent of population size. I used the following formula from Krejcie and Morgan (1970):

$$\text{Sample size} = \frac{x^2 NP(1-P)}{C^2(N-1) + x^2 P(1-P)}$$

$x^2$  = chi-square value for 1 degree of freedom at some desired probability level

N = Population size

P = Population parameter of a variable (set to 0.5)

C = Confidence interval

Surveys of wealthy and middling individuals exceeded initial targets. The total number of poor surveyed was below target (94 percent). The *meinati* were often absent, herding people's cattle, looking for honey, and seeking casual labour. The sample included 202 Maasai household heads (89 percent) and 24 non-Maasai (11 percent). The sample was comprised of 224 men (99 percent) and 2 women (1 percent). The broad-scale survey gathered information from 107 of 165 *bomas* (Table 2.5)<sup>28</sup> and demographically included 1,755 people.

**Table 2.5: Percentage of *bomas* surveyed by sub-village in broad-scale survey**

Sub-village	Bomas Surveyed	Total Bomas	Percent
Laarkaitial	8	11	73%
Meleleki	13	16	81%
Esilalei	13	14	93%
Emboreet	49	92	53%
Ingung	6	10	60%
Kati-Kati	5	5	100%
Lenaitunyo	13	17	76%
<b>Totals</b>	<b>107</b>	<b>165</b>	<b>65%</b>

<sup>28</sup> Emboreet sub-village was unique. It contained the village's social services, shops and many non-Maasai residents. Non-Maasai nicknamed it '*Majengo*' (Buildings) due to its township-like planning. Maasai referred to it as '*shule*' (School). Residential compounds in Emboreet were considered *bomas* only if they had a livestock enclosure.

Interviews were conducted with my research assistants, Raymond Teekishe and Olerere Lemtunde in Kiswahili, or in Maa with translation into Kiswahili (Figure 2.4). We mainly went to peoples' homes, but also to places where people congregated, such as the borehole, village offices or wealthier *bomas*.

**Figure 2.4: Conducting a survey at a *boma***



The survey illustrated and fuelled tensions about conservation. One question asked if respondents would choose *not* to increase the size of their farms in exchange for the equivalent of a US\$ 371 per year tourism dividend.<sup>29</sup> Rumours circulated that I was trying to trick people into selling their land. Another question asked into which activity households would invest a wildlife dividend.<sup>30</sup> Villagers became ill at ease when I asked questions about the park and wildlife; these questions triggered peoples' fundamental land loss fears.<sup>31</sup> Sensitivity to the research was heightened by campaigning prior to the

<sup>29</sup> The figure selected was intentionally high. An internationally acclaimed CBT project in Kenya, Il Ngwesi, considered one of the most successful examples in Kenya distributed an annual household dividend from 1996 to 1998 of US\$ 24 per year (Sikoyo et al. 2001a: 27, 29). I discuss reasons why people rejected a dividend 15 times higher than Il Ngwesi's in subsequent chapters.

<sup>30</sup> This was designed to gauge whether Maasai would reinvest wildlife revenue into farming (cf. Ferguson 1990).

<sup>31</sup> Several years previously, Inyuat-e-Maa and AWF lobbied to reduce Maasai farming (see Chapter 3).



general election in 2004-2005, in which land alienation for conservation was a primary platform for many contestants at all political levels within Simanjiro.<sup>32</sup> Researchers asking sensitive questions about wildlife and land reinforced political campaigns that park expansion was imminent.<sup>33</sup>

My research was constantly drawn into local-level conflicts that embodied the frustration of a people facing the reality of conservation-induced poverty. My regular presence in the village meant people could vent their animosity and fear of conservation towards me. Resistance to my research was a component within broader strategies of resistance to conservation. A number of people refused to be interviewed, or vociferously criticized it. I was often fed false information.

Pressure was relieved by the fact that my research assistants were from Emboreet. Suspicion of me was tempered with trust for my assistants and their families. Several times, when resistance threatened to completely demoralize me, Raymond Teekishe encouraged me using a Kiswahili proverb: *“Kilele za chura hazinyimi tembo kunywa maji”* (“The noise of frogs does not stop elephants from drinking water”). Ultimately, the fact that I was able to complete the work suggests that I was not labelled a dangerous conservationist by everybody, perhaps even the majority. But managing relationships was important and stressful at all stages.

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<sup>32</sup> The politics of association extended across many levels. For part of the research, I encountered opposition because my appearance and vehicle resembled an unpopular tourism operator.

<sup>33</sup> Two other researchers surveyed Emboreet at the same time: a lion researcher, and the former TNP Chief Park Warden (CPW) and current CPW of Serengeti NP. Community perceptions towards the increased number of researchers were negative: villagers were anxious that it could signal that the park was planned for expansion.

### Repeat-round Survey

The aim of this survey was to collect detailed socio-economic information. Brockington (1998) and Thompson (2002) found that repeat surveys captured seasonal variations in livelihoods and household dynamics and afforded ample opportunity to cross-check data. I used their work and modified it to suit my conditions (Appendix III). The closer interaction of the repeat-round formed the basis of ethnographic work and oral histories around Tarangire.

I chose three sub-villages for the survey—Esilalei, Lenaitunyo and Laarkaitial—to allow comparison. Esilalei was the poorest of the sub-villages while Lenaitunyo was the richest.<sup>34</sup> I selected Laarkaitial as it was between the others in terms of wealth and I had good relations with families there. The sub-villages were located along a north-south gradient along the park boundary. In Lenaitunyo, household heads were often absent at the mines in Mererani, or moving cattle long distances. When mobile phones began to work in Emboreet in 2005, I interviewed respondents in Mererani by mobile phone. Sometimes, when households moved to neighbouring villages in the dry season, I followed them to conduct the surveys.

I surveyed 37 households containing 57 sub-households (Tables 2.6 and 2.7). The entire sample was Maasai. Household heads and each wife (managing a ‘sub-household’) were individually surveyed approximately once every two months. Households were visited an average of 4.4 times each over a 12 month period, between March 2005 and February 2006 (252 total visits). I used the household list to randomly select households from

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<sup>34</sup> In Esilalei, 62 percent of households were *meinati* and only 9 percent were wealthy; in Lenaitunyo, 23 percent were *meinati* and 43 percent wealthy.

within each wealth class in proportion to that class's size (Table 2.6). In some cases, it made logistical sense to select households clustered in the same *boma*.

**Table 2.6: Number of repeat-round survey households by wealth ranking (intended vs. actual)<sup>35</sup>**

Kitongoji	Total HH	%	Wealth	%	Intended	Sub-total	Actual	Total Surveyed
Laarkaitial	42	25%	Rich	19%	2	9	2	10
			Middle	33%	3		3	
			Poor	48%	4		5	
Esilalei	47	28%	Rich	9%	1	10	1	11
			Middle	30%	3		3	
			Poor	62%	6		7	
Lenaitunyo	80	47%	Rich	43%	7	18	4	16
			Middle	35%	6		9	
			Poor	23%	4		3	
<b>Totals</b>	<b>169</b>	<b>100 %</b>				<b>37</b>		<b>37</b>

	Intended	%	Actual	Sample %
Rich	10	27	7	19%
Middle	12	33	15	41%
Poor	15	40	15	41%

**Table 2.7: Outline of data collection: sub-households and sample size**

Kitongoji	No. of bomas	No. of HH	Wealth	No. of sub-HH
Laarkaitial	6	2	Rich	5
		3	Middle	4
		5	Poor	4
Esilalei	8	1	Rich	2
		3	Middle	6
		7	Poor	11
Lenaitunyo	8	4	Rich*	5
		9	Middle	16
		3	Poor	4
<b>Total</b>	<b>22</b>	<b>37</b>		<b>57</b>

<sup>35</sup> Sub-totals differed slightly in some cases from the intended sample due to rounding up or down based on the percentage of each wealth class within each sub-village.

Rich households in Lenaitunyo had fewer sub-households than expected for wealthier families. These individuals made their wealth in Mererani, but were from younger age-sets. Thus, they had not had time to accumulate wives.

### Household Level Data

Household heads were asked about:

### Livestock Dynamics

Every two months, I interviewed household heads about the number of livestock sold, given away, loaned, died or slaughtered since my previous visit to assess how livestock were used. I asked about the number of livestock bought, received as a gift or loan, exchanged or born. In each instance, I asked for the reasons why livestock had left, or been added to, the herd. On the first visit, I asked about livestock off-take and acquisitions over the previous month. Data were collected for cattle, sheep, and goats separately and in each case the sex was recorded. This gave a record of 13 months of livestock data for repeat-round households. Some households were not present all of the time, so the months of records available for each sub-village varied (Table 2.8).

**Table 2.8: Months of repeat-round household livestock data**

Sub-village	Months of livestock data	Weeks of market data
Laarkaitial	127	58
Esilalei	95	43
Lenaitunyo	128	56
<b>Totals</b>	<b>350</b>	<b>157</b>

Recall data in most cases is questionable, particularly for wealthier households with more frequent livestock transactions. The effects of this will be the likely underestimate of

livestock transactions in wealthier households, while poorer households are more likely to remember fewer events. However, this data was generally more robust than that collected in the broad-scale survey. I also conducted a total village census by a gate count of cattle and shoats at each *boma* in the village.

### **Weekly Market Data**

This question was designed to gain an idea of men's economic activities and expenditure. I asked household heads to list all of their purchases over the last week. Weekly recall data is constrained in that it may miss infrequent, large-scale food purchases. In all, 157 weeks of market data was collected (Table 2.8).

### **Farming and Off-Farm Incomes**

I asked about farming costs over the previous two months in order to gauge farming expenditure at different times of the year. In addition, I asked about harvest sales; the amount of maize/beans sold, for how much, where and what was the money used for. Produce was measured by the sack (*gunia*  $\pm$  120 kg) and 'bucket' (*debe*  $\pm$  20 kg).<sup>36</sup> These are standard units for measuring produce at local markets. Area under cultivation was estimated by household heads and was measured in acres (*heka*). Informants could be expected to have a good idea of the size of an acre as an acre was a common unit to measure rates used to pay for tractor hire and casual labour. Reported yields and acreage under cultivation can be prone to manipulation by informants. This was partially addressed by asking sons about their father's livestock and farm yields. However, the

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<sup>36</sup> Six *debe* comprise a *gunia*.

data was prone to significant bias. I asked about the amount and sources of off-farm income over the past two months and collected 13 months of data.

### **Sub-household Data**

We interviewed wives alone where possible but also in the presence of their husbands.<sup>37</sup>

Data were collected on:

### **Daily Milk Yields**

Milk yields from cattle and shoats were calculated by weighing gourds at dawn and dusk, before and after milking. The name of each cow milked was also recorded. On occasions when it was not possible to obtain both milk yields, we weighed volumes of water equivalent to the milk obtained that day. In total, 252 days of milk yield data were collected (Table 2.9). In addition, I tracked the volume and value of weekly milk sales and gifts over the previous week.

### **Household Food Survey**

Food use was surveyed using 24-hour dietary recall. We asked each woman what food she had prepared over the past 24 hours, how much was prepared and how many people ate it (cf. Brockington 1998). We asked each woman to weigh an equivalent amount of food using a spring scale from food samples which we carried. In total, 252 days of dietary records were obtained (Table 2.9).

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<sup>37</sup> This was unsatisfactory as women's responses, especially related to their income, were limited in the presence of men. Some women were interviewed alone.

**Box 2.2: Energy Values of Common Pastoral Foods**

The average energy value of milk was calculated by Sieff (1995: 52) from nine East African pastoralist surveys at 748 kcal (3,132 kj) per kg. Homewood and Rodgers (1991) estimate that meat is 2,750 kcal (11,506 kj) per kg. Maize is assumed to have a value of 3590 kcal (15,020 kj) per kg.

**Gifts Given or Received in the Last Month**

Potkanski noted that gifts were important to sub-household economies in Ngorongoro and that food security was often dependent upon mutual food aid (Potkanski 1997). Brockington observed that gifts in Mkomazi were less frequent but more substantial (Brockington 1998). I monitored gifts to women using a one month recall to track more substantial gifts that affected household economies and illustrated social networks.

**The Previous Week's Market Activity**

I asked about each woman's expenditure on household items as well as the revenue from the previous week's sale of goods. In all, 252 weeks of market expenditure and selling activities were collected (Table 2.9). The repeat-round visits were too sporadic to record all incidences of income and expenditure by individual women. However, by sampling many sub-households it is possible to develop a representative picture of women's economies.

**Table 2.9: Number of days and weeks for which sub-household data were collected**

<b>Sub-village</b>	<b>No of sub-households</b>	<b>Total days of daily milk yields</b>	<b>Total days of dietary records</b>	<b>Total weeks of market activity</b>	<b>Total weeks of selling activity</b>
Esilalei	19	87	87	87	87
Laarkaitial	13	79	79	79	79
Lenaitunyo	25	86	86	86	86
<b>Totals</b>	<b>57</b>	<b>252</b>	<b>252</b>	<b>252</b>	<b>252</b>

### Demographic Data

I generated a family list to calculate the number of reference adults in each household. Ages were recorded on each visit, as well as body weights, obtained by using a bathroom scale. Long-term visitors (who stayed for more than a month) were recorded as members of the household.

Unfortunately, it was difficult to record visitors who stayed for only a short period of time, or those who came to the household for a meal. The lack of data on short-term visitors does create some problems in trying to calculate food availability for each household as other studies show that these visitors can be a significant drain on resources (Arhem 1981, Sieff 1995). In total, 361 people were monitored in the survey; 179 males and 182 females (Table 2.10).

**Table 2.10: Number of people monitored in repeat-round survey**

<b>Sub-village</b>	<b>Number of people</b>	<b>Male</b>	<b>Female</b>
Esilalei	128	61	67
Laarkaitial	98	56	42
Lenaitunyo	135	62	73
<b>Totals</b>	<b>361</b>	<b>179</b>	<b>182</b>



### **Box 2.3 Reference Adult Calculations (from Brockington 1998)**

There are two ways of calculating Reference Adult Equivalent (RAE) of households. I follow Brockington, who used Grandin's (1988) and Little's (1980) estimations of adult male=1.0 RAE; adult female= 0.86 RAE; children 0-5= 0.52 RAE; children 6-10= 0.85 RAE and 11-15= 0.96 RAE (Grandin 1988, ILCA 1981). For food data, a different estimation was needed as a teenage boy has higher caloric needs than an adult man. I followed Brockington who used Homewood's estimations to standardize household energy needs, which incorporates weights of individuals in smaller samples (Homewood 1992). This calculation takes five stages:

1. Average weight of each person is calculated. Where no weight data was available, they were estimated from the average age and sex of similar individuals in the survey;
2. Basic Metabolic Rates (BMR) were estimated (WHO 1985);
3. Estimate energy requirements. The WHO suggests that rural women in developing countries have energy needs of 1.76 x BMR; men have needs of 1.78 x BMR; boys have 2.5 x BMR; and girls have 2.2 x BMR (WHO, 1985: 78, 96);
4. Energy needs were totalled per sub-household and per household;
5. Totals were divided by the energy needs of a reference adult equivalent of 2,638 kcal<sup>38</sup> per day (Brockington 1998).

### **Cattle Herd Performance**

To examine how livelihood diversification affects the pastoral economy, I monitored the performance of cattle herds. This methodology has been outlined in several studies (Brockington 1998, Coppolillo 2000, Dahl and Hjort 1976, Field et al. 1987, Homewood and Rodgers 1991, Western and Finch 1986). A list of cattle was recorded at the beginning of the repeat-round survey for each sub-household. At each visit, the list was reviewed with the women and men responsible for the different animals to check for any changes. The data were collected through interviews rather than by directly counting the

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<sup>38</sup> 1 kcal = 4,187 kj.

animals as it was common for livestock of multiple households to be pooled together in the same *boma*. A total of 580 cattle were monitored in the repeat-round survey.

#### **Box 2.4 Tropical Livestock Units (TLU)**

In order to compare livestock wealth across households, it is necessary to take into account the number of cattle in the household and the number of small stock. This is useful as some households can be wealthy in cattle but poor in shoats, and vice versa. The unit normally used to measure livestock wealth is ‘Tropical Livestock Units’ or TLU. The TLU used in this thesis were computed using ILCA’s 1981 formula. One cow is equal to 0.71 TLU, 1 sheep to 0.17 TLU and 1 goat to 0.17 TLU (ILCA 1981). This is a commonly used formula in studies of East African pastoralists and provides the greatest cross-site comparative scope (Grandin 1988, Homewood and Rodgers 1991, Sieff 1995).

#### **Cattle Life Histories**

In order to collect information on herd performance over time, I constructed cattle life histories for adult female cattle. This methodology has been outlined in several studies (Brockington 1999, Coppolillo 2000, Field et al. 1987, Homewood and Rodgers 1991). Maasai men and women possess encyclopaedic knowledge about their cattle; they name them and remember in detail their cattle’s family trees. I asked them about the fate of each individually identified cow and her offspring to calculate calving rates and mortality rates (see Appendix VIII for a detailed description of ‘bosography’ from Brockington 1998). I collected the life histories of 538 individual cattle, which generated a list of 2,169 named cattle. One of the assumptions I made was that the cattle have all been in a

reasonably similar area which makes generalizing about their fertility and mortality a meaningful exercise.

### Archival Data

Archival material was sparse and often not well-catalogued. It was a constant struggle to obtain historical data. Archival records were researched at village, ward, district, and national levels. A body of historical data came from Emboreet ward archives. The records were stored in sacks; many were unusable due to termite and water damage, but others yielded a wealth of information (Figure 2.5).

**Figure 2.5: Reviewing the Emboreet ward archives**



Unfortunately, I was not granted access to Emboreet village archives, which were locked in the village office. A composite of village archival history was generated from private

sector archives<sup>39</sup> and access to over ten years of Village Council meeting minutes independently recorded by a village councillor. This record was a personal written account of the meetings (not official minutes) so prone to bias.

Historical data was obtained from the National Archives in Dar es Salaam. Crop and livestock trends were consulted at the Simanjiro District Council headquarters in Orkesumet, as well as Emboreet Livestock and Agricultural Field Officers' Files. Arusha and Manyara Regional Headquarters were also the source of limited historical information regarding the registration of villages in Simanjiro. I queried the archives through unstructured interviews with villagers to ask about specific events or timelines.

### **Key Informant Interviews, Conversations and Meeting Participation**

Oral histories and interviews constituted key sources of ethnographic data. I conducted 127 interviews with villagers,<sup>40</sup> NGO staff, commercial farmers, tourism and hunting operators, and government employees. These included 43 recorded interviews. I listened to the interviews shortly after they were taped and transcribed key points in notebooks. Most interviews were conducted in Kiswahili, while some were conducted in Maa and translated into Kiswahili. During unrecorded interviews I made a note of key information. Numerous additional, informal conversations and interactions with people during the research yielded useful information that was transcribed into daily field notes.

Participation in public meetings is a useful data collection strategy (Williams 2005). In the course of my research, I attended meetings organized by NGOs and the private

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<sup>39</sup> Files at tourism company offices were a meticulous trove of well-catalogued information regarding the history of CBT and wildlife revenues to Emboreet.

<sup>40</sup> Including interviews with villagers in Kimotorok, Loiborsoit, Mererani, Sukuro, and Terat villages.

sector, as well as government workshops and researcher meetings. Within Emboreet, I attended Village Assemblies, Village Council and sub-village meetings. I also attended village ceremonies, which provided an opportunity for informal interactions. My research assistants resided permanently in Emboreet. They were equipped with notebooks and collected information from their interactions and conversations with villagers, which we discussed on a weekly basis.

Gaining access to respondents involved in the chaotic tanzanite industry was complex. There are close links between the various processing centres, held together by traders, in often impenetrable networks bound by secrecy (Macfarlane *et al.* 2003). The lawlessness and difficulty of access in Mererani did not make it conducive to research (hence a paucity in the literature about the impacts of the tanzanite trade). I was fortunate that my research assistant had worked in the mines and was closely connected to one of the wealthiest Maasai mining barons, Lengai Ole Mako. I was able to gain access to Mererani's sub-cultures as a personal guest of Ole Mako.

### **Wildlife Revenue Data**

I collected information on wildlife revenue streams to Emboreet from photographic and hunting operators over a 10 year period. This data was provided by tourism operators working in Emboreet in terms of employment, contractual fees, and aid projects. This was cross-checked with village records and receipts where possible. There were gaps in this data as some hunting companies did not provide financial details. I also attempted to quantify the value of bush meat poaching by Emboreet villagers. My research assistant conducted these interviews alone with villagers whom he knew to poach and

deal in bush meat. Data is presented for comparative purposes but is unreliable. This is an illegal and secretive industry and my sample was very small.

### **Resistance to the ‘Ramani’**

Maps (*ramani*) of Maasai geographies using geographic information systems (GIS) provided a useful analytical tool. Information obtained through interviews was continually cross-checked through remotely-sensed spatial data. Agricultural land use change was calculated using a combination of remotely-sensed satellite imagery and GPS (global positioning system) mapping. We collected spatial data using GPS units in the field. These were downloaded into OziExplorer with way-points listed in Microsoft Excel. Data was mapped on Landsat imagery. Approximately 24 data-sets were collected, including land use change, livestock dynamics, wildlife movement, roads, water points, mines, *bomas*, and tourism areas. Maps presented in this thesis were designed collaboratively with David Williams. I provided data sets from the field and he mapped them against Landsat imagery in ESRI’s ArcGIS 9.1 Desktop.

Hodgson and Schroeder describe the conflicts inherent in conservation mapping efforts involving territorialization and privatization (Hodgson and Schroeder 2002). Igoe (2004) outlined resistance to mapping in Simanjiro due to fear about whether conservationists would use these maps against people (Igoe 2004: 125). A number of people objected to their farms being measured and I discontinued this activity. People were afraid that measuring farms could lead to land dispossession.<sup>41</sup> Intense objections came from non-Maasai agriculturalists or villagers farming or leasing land in the plains, where a fear was expressed that mapping could curse their *shambas*.

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<sup>41</sup> NK, *Landisi*, Emboreet Village Assembly meeting, 22 March 2005.

Anxiety about land dispossession using researcher data contributed to resistance to the *ramani*. Resistance to community mapping was rooted in land tenure claims at a village level. Villagers protested the need for another *ramani* as previous maps done by NGOs contested the village boundaries. These maps did not speak for the reality of Emboreet villagers. The Chairman worried that I would provide data to the government on where people lived;<sup>42</sup> another villager stated that mapping was a precursor to wildlife corridors and NCAA-style land use restrictions.<sup>43</sup> The Chairman categorically stated that the only mapping would be done by the village government to measure farms for village title deeds.

### **Statistical Analysis**

Data from the surveys were entered into Microsoft Access and analyzed using SPSS 14.0 and Microsoft Excel.

### **Discussion**

Despite efforts to minimize the impacts, I am aware that my affiliation with AWF might have affected the quality of some of the data I collected. Additionally, in the process of the research my own position shifted from being a firm supporter to a critic of AWF and this may have also had some impact on the data collected and the way I interpreted them. Nevertheless, I am certain that the data collection and analysis was sufficiently rigorous and are comparable to studies conducted elsewhere to enable me to write with

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<sup>42</sup> Interview, VEO, Emboreet, 9 November 2005.

<sup>43</sup> Statement, NL, Emboreet Village Assembly meeting, 22 March 2005.

confidence. My use of local research assistants and their standing in the community could have helped to mitigate against some of the perceived weaknesses in the data.

Significant local level fear and resistance to conservation infused each stage of the research process. In order to better understand the context of local peoples' antagonism to conservation, we now move onto an analysis of colonial pastoral history, pastoral engagements with State wildlife policy in Simanjiro District, and an examination of actors within the State bureaucracy which influence the formulation of Tanzanian wildlife policy.



## Chapter Three

### Historical and Policy Perspectives of Pastoral Impoverishment

This chapter is about the impact of conservation policies generally on the Maasai and the character of the institutions which handle wildlife policy. This chapter has three sections:

1. I consider pastoralist history during the colonial era and the historical legacies of land alienation;
2. I outline the impacts of wildlife policy in Tanzania on pastoralists and conservation. I discuss how protected area (PA) administration in Tanzania served to control local peoples and to extend the power of the State. I suggest that these policies disempowered local people, increased resistance to conservation, and contributed to biodiversity declines.
3. I examine institutional interests and incentives that affect community-based conservation (CBC) in Tanzania, with specific focus on tourist hunting.

My purpose in this chapter is to demonstrate that pastoralists in this region, as elsewhere in East Africa, have experienced marginalisation, denial of their needs and unwelcome attention from wildlife management institutions. I will also explore the institutional cultures of State institutions with relation to villagers and CBC. This chapter traces the history of violence that the State has visited on its citizens and the consequences of NGO activities in order that we might better understand the attitudes and responses I encountered during my fieldwork.

**Introduction: Conservation Ideology, Finance and Power**

In Tanzania, protected areas cover 167,602 km<sup>2</sup> including national parks, the Ngorongoro Conservation Area (NCA), Game Reserves (GR), Game Controlled Areas (GCA), Wildlife Management Areas (WMA) and Forest Reserves (FR) (Figure 3.1). Approximately 30 percent of Tanzania's land surface is strictly protected in which cultivation and settlement is prohibited (Brockington 2006). But many are chronically under-funded and under-policed (Baldus and Cauldwell 2004, Brockington 2002).

The PA network was initiated under European rule. In Tanganyika, the German colonial administration established the Selous GR in 1905. Incited in part by the severity of German game laws (Koponen 1995), the Maji-Maji Rebellion originated in the Selous in the same year; the largest African rebellion against colonial rule in Tanganyika (Illiffe 1979, Pakenham 1991). Successive governments evicted an estimated forty thousand residents from within the Selous (Kjekhus 1977).

National parks represented a European vision of Africa and demonstrated the colonial State's power to control natural resources and land (cf. Adams 2004). Colonial administrators sought to make their idea of the superiority of Euro-American conservation practices and elite perceptions of nature and culture (based on aristocratic hunting access to reserved areas) a reality in the colonies (Neumann 1998). Nature preservation thus became a powerful mechanism for the legitimation of political claims.<sup>1</sup> The British attempted to physically construct a dehumanized African 'wilderness' which represented Europeans' Edenic fantasies (Neumann 1998). The national park (NP) ideal developed from the mid-1800s with the establishment of Yosemite NP, California in

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<sup>1</sup> For a detailed historical account of Tanzanian wildlife management see Nelson et al. (2007).

1864. By 1900, the NP concept included people and was non-exclusive. By the 1930's this idea evolved into parks as people-free places (Nelson et al. 2007, Neumann 1998) When Hingston launched his plan for national parks in Africa in the 1930s, he envisaged a future where agricultural development had transformed the landscape except in the parks where wildlife alone could be found (Hingston 1931).

Figure 3.1: Map of the Maasai Steppe illustrating various PA categories



Tanzania at independence inherited a large PA estate, has been vigorously expanding it ever since, and particularly so in recent years (Brockington et al. Forthcoming, Neumann

1998). Tanzania now has the largest PA estate in Africa, both in absolute and relative terms. Given this context, it is important to consider what drives Tanzania's "environmental conservation complex" (cf. Brockington 2006).

There are two clear reasons for continued PA expansion. The first is clearly the economic value of tourism; it represents almost 18 percent of Tanzania's GDP. Tanzania's tourism market is more dependent on wildlife than neighboring countries with much of that value centrally captured. The second reason at play in PA expansion is 'post-independence internationalism'. Conservation is one area where poor developing countries can take a leadership role (Mackenzie 1988). Conservation granted Tanzania prestige as a player in the international arena (Garland 2006).

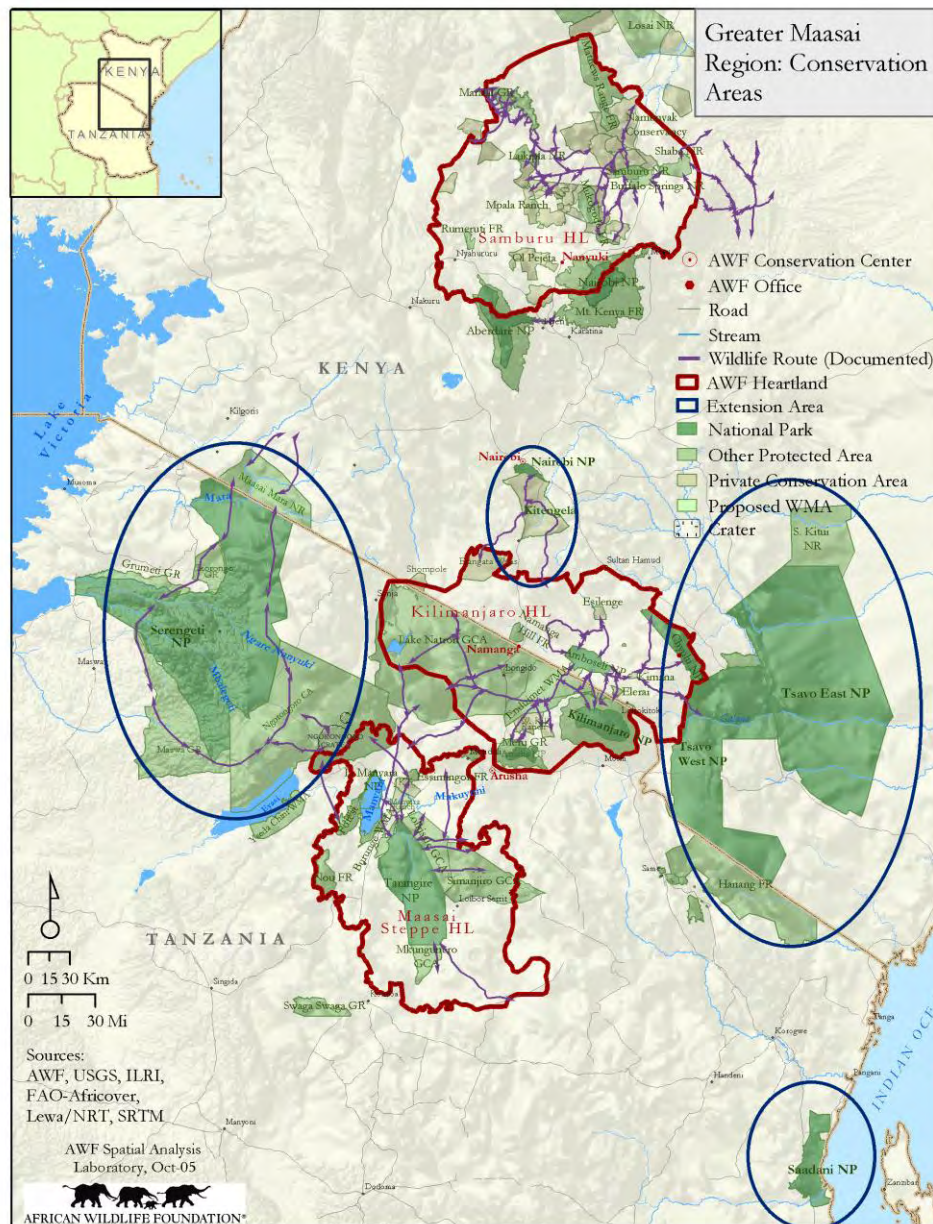
But it is not merely the economic value of the wildlife which is important. Rather it is the lucrative economic opportunities and incentives wildlife offers to the nation's elites. Part of the problem is that Tanzania is relatively poor, with generally few investment opportunities. Wildlife provides obvious possibilities. Nelson's comparative study of the hunting sector in the region suggests that no other country in east or southern Africa had a tourist hunting system which was as uncompetitive and non-transparent as Tanzania's (Nelson et al. 2007). The institutionalized corruption surrounding hunting greatly enhanced wildlife's instrumental value (Nelson, *pers. comm.*, 2007). Tanzania's governance history (combining single-party autocratic State with socialist ideology)<sup>2</sup> contributed to maintaining centralized forms of resource control. This resulted in the creation of elite economic opportunities which ideologically wedded conservation to repressive models of

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<sup>2</sup> In 1967, President Julius Nyerere delivered his vision for African Socialism termed 'Ujamaa' (family hood) through the Arusha Declaration (Nyerere 1968). The ideology of *Ujamaa* increased centralized control of the State in the ruling party (Legum and Mmari 1995). *Ujamaa* aimed to transform rural agricultural productivity and make service provision more efficient (Hyden 1980). Comprised of individual homesteads, 'villages' represented political and administrative units (Homewood and Rodgers 1991).

power (Adams 2004, Brockington 2002, Gillingham 1998, Igoe and Brockington 1999, Nelson et al. 2006, Neumann 1992, Neumann 1998). The Maasai have probably been the most severely affected by PA establishment in East Africa (Neumann 1998), and have good reason to be wary of interference from conservation policy (Figure 3.2).

Figure 3.2: PAs established in Kenyan and Tanzanian Maasailand

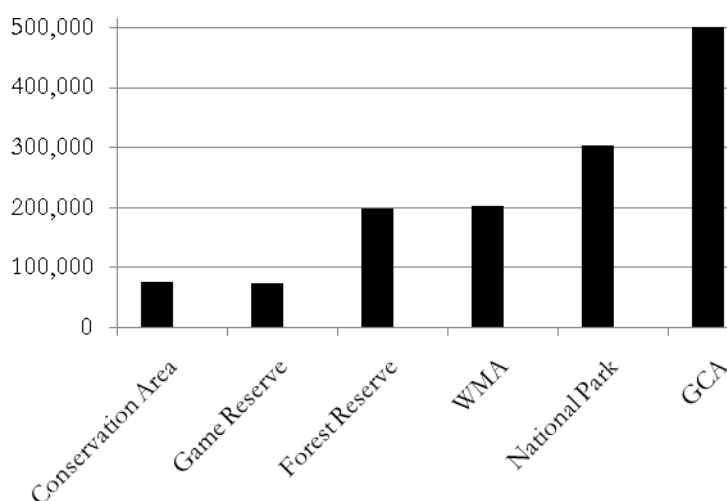


The global goal is to protect 10 percent of specific habitats (Jepson 2001: 191).<sup>3</sup> However, approximately 59 percent of the Maasai Steppe was under some form of conservation management regime (Table 3.1) including PAs in which people are not excluded.<sup>4</sup>

**Table 3.1: Category, size and land cover percentage of PAs in the Maasai Steppe** (Source: AWF)

Category	Hectares	%
Private Conservancies	35,028	2%
Village Conservation Area	41,121	2%
Game Reserve	73,757	3%
Forest Reserve	197,288	9%
WMA	201,426	9%
National Park	302,046	13%
GCA	500,904	22%
<b>Total</b>	<b>1,351,569</b>	<b>59%</b>
<b>Maasai Steppe Area</b>	<b>2,275,403</b>	

**Figure 3.3: Hectares and Category of PAs in the Maasai Steppe** (Source: AWF)



PAs in which people are excluded comprise 30 percent of the ecosystem. Private conservancies and WMAs contributed to an increase of 11 percent in conserved land in

<sup>3</sup> The 10 percent goal was discussed at the 1982 Bali World Parks Congress.

<sup>4</sup> Although, government protection in OAs and GCAs is low (URT 1995c).

the last 5 years (Figure 3.3). Community-based tourism (CBT) concessions were not included in these analyses.<sup>5</sup>

### **Pastoralists and Conservation Policy**

Policy with respect to pastoralists in conservation areas needs to be considered in the context of State-pastoralists relations which we examined in Chapter one, but it is useful to review briefly some of the more salient and recent experiences of conservation policy in selected national parks to understand how wildlife policies specifically may influence pastoralists' thinking.

### **Serengeti NP and Ngorongoro Conservation Area**

The Serengeti, initially established as a reserve in 1908, (which included NCA) was designated as Tanzania's first national park in 1948 (Adams 2004). European visions of timeless pristine landscapes demanded residents be evicted, both Maasai herders and others to the west (cf. Grzimek and Grzimek 1960, Shetler 2007). In 1951, the Serengeti's borders were finally set and in 1959, the National Parks Ordinance excised Ngorongoro from Serengeti and 1,000 Maasai herders were evicted from the Serengeti plains (Adams 2004, Bonner 1993, Homewood and Rodgers 1991, Neumann 1998: 138). In 1974, Maasai were evicted from the Crater (Bonner 1993, Neumann 1998). Evictees described the Crater, with its permanent water and graze as "*peponi ya wafugaji*" (pastoral Eden).<sup>6</sup>

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<sup>5</sup> CBT referred to community-based tourism: partnerships between villages and tour operators to conduct tourism on village land. CBT was a component of CBC. Data were sparse regarding CBT concessions.

<sup>6</sup> Interview, CT, NCA emigrant, Emboreet, 12 November 2004.

The NCA's dominant conservation management narrative compromises the livelihoods of 52,000 pastoralists who inhabit the NCA under a joint land-use policy (Charnley 2005, Homewood and Rodgers 1991, MNRT & NCAA 1996, Poole 2006). Periodic evictions, increasing human populations (McCabe 2003), static livestock populations (Potkanski 1999), and farming restrictions contributed to declining food security in the NCA (Field et al. 1987, Homewood et al. 1987, Johnsen 1997, McCabe 1991, McCabe et al. 1992, Poole 2006, Potkanski 1997), raising the profile of the land rights problems Maasai face in NCA (Fratkin and Wu 1997, Lissu 1999, Shivji and Kapinga 1998). In the absence of cultivation, NCA residents had to purchase grain to fulfill their caloric requirements (Charnley 2005, McCabe et al. 1992). Seeing themselves as "environmental refugees", some Ngorongoro Maasai emigrated to Simanjiro to seek farms and improved livelihoods. They warned that any process termed 'conservation' would weaken and impoverish herders in Simanjiro.

### **Amboseli NP**

A detailed political account exists of eviction and conservation in the Maasai Mara National Reserve and Amboseli NP in Kajiado District, Kenya (Sindiga 1984). In 1948, a reserve of 3,260 km<sup>2</sup> was established in Amboseli, with management handed over to Olkejuado County Council in 1961 (Lindsay 1987, Western 1982). The upgrade in 1974 to a centrally administered 488 km<sup>2</sup> NP resulted in evictions, resource loss and retaliatory wildlife killings (Bonner 1993, Leakey and Morell 2001, Western 1994). Problems with joint resource use and benefit sharing created a legacy of distrust and hostility (Cameron 2001, Homewood and Rodgers 1991, Hulme and Murphree 2001, IIED 1994, Western 1994, 1997).



As Kenya's most visited NP, Amboseli exemplifies the manipulation of conservation and the Maasai for short term political gain. In September 2005, President Kibaki unilaterally down-graded Amboseli to a National Reserve and placed its control under the Olkejuado County Council. The unprecedented move to unmake a park was viewed by many as a cynical attempt to buy Maasai votes prior to an upcoming referendum on constitutional changes advocated by the President (Lange 2006). The move was labeled illegal by conservationists who challenged it in the courts.<sup>7</sup> Neither the President nor the minister responsible for wildlife had the power to degazette a national park. That power rests solely with the national assembly (Western 2005).

### **Mkomazi GR**

More recently the well-documented eviction of up to 10,000 herders from the Mkomazi and Uмба GRs in 1988-9, with a proportion of evictees moving to the Maasai Steppe, have further strengthened people's collective fear of the government's power and its resolve to move people in favour of conservation (Brockington 1998, Brockington 1999, Brockington and Homewood 2001, Brockington 2002, Coe et al. 1999, Homewood and Brockington 1999, Tenga 1999). Pastoralists had not suffered the scale of the land loss in Mkomazi (3,234 km<sup>2</sup>) for decades. The Mkomazi evictions coincided with the rise of indigenous NGOs which introduced new forms of protest to conservation areas and increased pastoral networks in northern Tanzania (Igoe 2000, Neumann 1995).

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<sup>7</sup> No High Court ruling has been made and the status of the park remains the same. The Kenyan Government seems to have given up trying and the director has instead written a ten year agreement with the council on revenue-sharing. This too is illegal in the way it is written (D. Western, *pers. comm.*, 2008).

## Usangu GR

When militant conservation policies interfaced with State pastoral policies, the results were sometimes violent and irrational. In 2006, the “National Anti-Livestock Operation” aimed to flush out herdsmen from GRs, water catchment areas and other PAs in Tanzania. Usangu GR was annexed to Ruaha NP concurrently. This entailed the eviction of hundreds of herders and an estimated 300,000 cattle from the Ihefu wetlands by police and wildlife rangers (Mkonya and Nachilongo 2007, Sikagonamo 2007, Ubwani 2006), termed an “unprecedented operation involves heavy weaponry, ground and occasional air backup and patrol” (Albert 2006). Pastoralists were blamed for reduced flows of the Ruaha River (and electricity shortages in Dar es Salaam) in spite of documentation of rice irrigation being the main cause (Walsh et al. 1997, Walsh 2004: 3, Walsh 2006, Williams 2005).

## Conservation in Simanjiro

“If cattle could drink, it would not be a problem if the park extended to Naberera”

—Sukuro villager, 2005, referring to Tarangire’s dry season water resources

*“Hii envas ni kliniki ya wanyama”* (These plains are the clinic for wildlife)

— Councillor, Terat, 2006 referring to the Simanjiro Plains

The State has had a range of instrumental reasons for alienating pastoralist land to wildlife conservation. The possibility of a park in Tarangire and its social consequences

was discussed by colonial authorities in 1949.<sup>8</sup> Tarangire was gazetted as a GR in 1957. This caused unease in Simanjiro as people had relatives recently evicted from the Serengeti (Igoe 2004: 61). The gazettement of Tarangire as a national park in 1970 remains a painful memory for people who were evicted (Igoe and Brockington 1999). Respondents reported that aircraft herded people and cattle out of the park, while government personnel burned shelters behind them.<sup>9</sup>

Herders blamed the evictions for declines in livestock production due to lost access to the Tarangire River and Silalo Swamp in the dry season (Igoe 2000, 2004, Waller 1979).<sup>10</sup> The swamp is adjacent to Emboreet and an important drought refuge for pastoralists,<sup>11</sup> as were the hills around Kikoti (Emboreet's tourism concession). In the drought of 2005, pastoralists from as far away as Narok, Kenya sought graze and water in Kikoti.<sup>12</sup>

Conservation was not the only force behind State led-resettlement. Tanzania's villagisation policies moved perhaps as many as five million people into *Ujamaa* villages (Freyhold 1979, Hyden 1980, Kahama et al. 1986). Many Maasai herders viewed *Ujamaa* as another attempt by the State to appropriate pastoral rangelands (Arhem 1985). In northern Tanzania, the resettlement was known as '*Operation Embarnat*' (Maa: permanent settlement). By 1978 there were 35 villages established with a population of 48,465 people in Kiteto District which then included Simanjiro district (Ntundu 1978). People were forcibly relocated into *Ujamaa* villages by paramilitary officers who burned *bomas* and drove livestock to new locations, upsetting livelihoods in the process (Ndagala 1990,

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<sup>8</sup> "...it was unanimously decided that the Tarangire area including the Gallapo-Medege area is urgently required for the settlement of the Gorowa...", TNA 255/1/782: 23 September 1949.

<sup>9</sup> Interview, TA, Emboreet, 30 January 2005; Interview, PP, Laarkaitial, 10 June 2005.

<sup>10</sup> Interview, OL, Emboreet, 13 September 2004; Interview, LL, Emboreet, 9 December 2004.

<sup>11</sup> Discussion, LL, Lenaitunyo, 14 January 2006.

<sup>12</sup> Interview, PP, tour operator, Kikoti, 15 April 2006.

Shivji 1993).<sup>13</sup> The government ordered herders to begin farming.<sup>14</sup> Villagisation also assisted removals for conservation.<sup>15</sup> Former President Nyerere supported evictions in Serengeti NP, for example, partly because this coincided with *Ujamaa* (Tanganyika National Parks 1964 in Neumann 1998: 145).

In 1982, Markus Borner of the Frankfurt Zoological Society (FZS) proposed a multiple land use authority covering the entire Lolkisale GCA/Simanjiro area modeled after the NCA (Borner 1982: 9). The proposal for the “Simanjiro Conservation Area” (SCA) cited threats to conservation from commercial farming and livestock grazing, and called for a total ban on farming within the “SCA” (Borner 1985). Subsequent government proposals called for the Simanjiro Plains to be strictly protected and farming restricted (Kajuni et al. 1988). Kiteto District proposed a new game reserve of 3,822 km<sup>2</sup> in the Simanjiro and Sanya Plains (URT 1993b). Herders vigorously opposed these schemes (Igoe 1999, Igoe and Brockington 1999, Igoe 2000, 2004). To them it was proof that Simanjiro was at grave risk of land appropriation. The “SCA” spurred people to politically mobilize against conservation and resolve to block future conservation efforts in the plains (Igoe 2004: 66). The SCA proposal prompted the communities to survey their lands and obtain title deeds in the mid 1980s (Igoe and Brockington 1999). The SCA also contributed to the rise of the pastoralist civil society movement of the mid 1990s (Igoe 2000).

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<sup>13</sup> Letter, N. Kissenge, CCM-Secretary, Kiteto District to DEOs of Kibaya and Naberera, Ref. KB/K.1/18/3, 15 August 1974; Interview, KK, Esilalei, 9 February 2005; Letter, WEO, Terat to District Development Director-Kiteto, Ref. OP/EM/KE/21, 12 December 1976; Letter, WEO-Emboreet to DEO-Naberera, Ref. OP/EM/KE/13, 21 December 1976; Letter, P. Bura (DC-Kiteto) to Kiteto DEO's, ref. KT/SO.10/04/21, 13 May 1980; Letter, BL Mwanga to Emboreet Chairman, Ref. CCM/KLOB./TAAR./OPER.II/Aii, September 1978.

<sup>14</sup> Letter, A. Lendarkashi, Emboreet VEO to villagers not living in their allocated area, Ref. HAL/KI/EMB/3/29, 5 December 1984.

<sup>15</sup> See Williams (2005) for a detailed account of the *Ujamaa* process and links to conservation in southern Tanzania.

### The Trojan Horse? Conservation NGOs

“If an AWF vehicle came to Emboreet with boxes of money, no one would touch the money and would instead chase the cars away with stones!”

—Emboreet Chairman, 22 January 2005

Conservation NGOs have their own reasons for supporting the alienation of pastoralist land to wildlife conservation. The actions of conservation NGOs in support of conservation causes conflicts between these organizations and pastoralist communities. In 1985 TANAPA established a Community Conservation Service (CCS) termed “Ujirani Mwema”, Kiswahili for “Good neighbourliness” (Bergin 1995, Dembe and Bergin 1996). The impetus for CCS came from support from AWF (Neumann 1998: 209). Tarangire was significant in that the CCS was pioneered there in 1990 before being integrated into all Tanzanian NPs (Clark et al. 1995).

From the Maasai point of view, good neighbourliness should mean access for livestock to natural resources such as Silalo inside Tarangire (just as wildlife graze outside the park). But this was not something the government or conservation organisations were prepared to consider. Community meetings in the late 1990s broke down, and AWF representatives withdrew from the debate. AWF was criticised for constructing the appearance of community participation through urban meetings with selected community representatives. Scholars contend that AWF’s rhetoric did not match its practice: AWF ignored what people wanted, perpetuated policies that restricted herding systems and “...contributed to the rise of emergency farming practices by impoverished herders” (Igoe 2004: 66). Pastoralists interpreted AWF’s efforts to establish wildlife

corridors and to limit Maasai farming as an attempt to block peoples' herd recovery strategy.<sup>16</sup>

An intense point of contention with local people was AWF's partnership with *Inyuat-e-Maa* (MAA), an urban based Maasai NGO with strong connections to Emboreet.<sup>17</sup> MAA's founder, Saruni Ole Ngulay, died in Emboreet; two subsequent directors, Peter Toima and Jacob Porokwa, were Emboreet villagers. Igoe argues that Ole Ngulay's openly corrupt leadership led to MAA's initial loss of legitimacy with western donors and rural communities (Igoe 2004: 32, 118-123). Peter Toima assumed MAA's leadership in 1996. A charismatic individual, he harboured parliamentary aspirations and used MAA as a platform to build support.<sup>18</sup> However, following Ole Ngulay's mismanagement, MAA needed funds to operate and to regain legitimacy amongst Simanjiro's communities.

In the late 1990s AWF received a large amount of USAID funding for CBC and needed a visible institutional link to pastoral communities. MAA provided a Maasai face for AWF's CBC initiatives and clearly pushed AWF's agenda (Igoe 2004:12 ).<sup>19</sup> Igoe infers that MAA's institutional corruption made it an attractive partner for AWF; one which could be easily controlled. Local people did not trust AWF's CBC rhetoric; they knew that its primary orientation was wildlife conservation. Toima became a vocal opponent of farming (P. Toima, *pers. comm.*, 2004), and MAA an inflammatory proponent of wildlife corridors and WMAs.<sup>20</sup> Emboreet villagers were shocked that a fellow Maasai promoted

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<sup>16</sup> Discussion, MN, 24 March 2004, Orkesumet.

<sup>17</sup> MAA was criticized by villagers for claiming to be a Maasai organization but without a representative office in a pastoral area.

<sup>18</sup> Toima battled with the incumbent MP. Interview, PB, AWF employee, Arusha, 3 October 2004.

<sup>19</sup> Interview, PB, AWF employee, Arusha, 3 October 2004.

<sup>20</sup> Interview, JO, Arusha, 26 January 2005; Interview, SC, SDC, Orkesumet, 20 May 2006.

policies that were fundamentally in conflict with peoples' land rights and food security.<sup>21</sup> The community ostracised Toima,<sup>22</sup> and MAA and AWF were rejected, with the threat of violence, from Emboreet and Loiborsirret during a WMA sensitization tour in 2001.<sup>23</sup> Since then, AWF actively avoided villages in Simanjiro as it simply was not safe for its personnel and property.

MAA became completely financially reliant on AWF by 2000. It was a marriage of convenience. When AWF encountered budgetary cuts, it cut its contribution to MAA from 2001 to 2002 by 42 percent.<sup>24</sup> MAA's operations ground to a standstill; staff went unpaid.<sup>25</sup> MAA became even less useful to AWF following Toima's departure in 2002 for a District Commissioner's (DC) position.<sup>26</sup> The next director set about making MAA more acceptable at a community level and deconstructing MAA's identity as conservation organisation.<sup>27</sup> Resentment at MAA mounted towards AWF; MAA felt AWF used it to raise money but then abandoned it.<sup>28</sup>

In the late 1990s, an Italian NGO, Instituto OIKOS began a multi-year research project in the Maasai Steppe (TCP 1998). Of alarm to educated Maasai, OIKOS's rhetoric mirrored that of the SCA. Secondly, a component of the project involved mapping village resources and developing land use plans. People suspected this approach sought to expand TNP. Fearful villagers and indigenous NGOs stonewalled OIKOS in Simanjiro (Igoe and Brockington 1999, Igoe 2004). Experiences with FZS, MAA,

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<sup>21</sup> Discussion, MN, Emboreet, 26 October 2004; Interview JP, Emboreet, 22 January 2005.

<sup>22</sup> Interview, NK, Emboreet, 20 June 2005.

<sup>23</sup> Interview, JK, Emboreet, 6 May 2004; Discussion, RS, Terat, 15 October 2004; Interview, PK, SDC, Orkesumet, 26 May 2006.

<sup>24</sup> Source: PORI project budgets, AWF Arusha.

<sup>25</sup> Discussion, LS, MAA Employee, Arusha, July 2005.

<sup>26</sup> Apparently, as a favour to Kone, Toima was promoted to DC by CCM to remove him from parliamentary contention in Simanjiro (PB, *pers. comm.*, 2005).

<sup>27</sup> Interview, LM, Loiborsoit, 14 June 2005.

<sup>28</sup> Interview, JP, MAA, Arusha, 31 May 2006.

OIKOS and AWF cemented people's conviction that conservation NGOs favored animal rights over human rights. To local people, NGOs operated like "Trojan horses"—offering incentives but secretly aiming to alienate land.

### **Structural Adjustments and Investment Promotion**

Private land alienation gained momentum following radical macro-economic structural adjustments in 1986 (Lane 1991, Lane and Pretty 1991, Lane 1996, URT 1993d). Large tracts of land to the east of TNP were allocated to agricultural investors for export production (Igoe 2000:127). For example, the "Stein Lease" of over 380,000 acres extending across most of the Lolkisale GCA (Borner 1982, Igoe and Brockington 1999:76, TNRF 2005b).<sup>29</sup> Commercial farming was oft cited as a threat to TNP's sustainability and pastoral livelihoods (Borner 1985, EcoSystems Ltd. 1980a, Kahurananga 1981, Lamprey 1964, Peterson 1978, TCP 1998). It imperiled local livelihoods through loss of access to resources (Igoe and Brockington 1999, TNRF 2005b).<sup>30</sup>

Pastoral fears of disempowerment and resource expropriation were fuelled by the Land Acts of 1999 which encouraged district councils to set up "land-banks"; village lands earmarked for outside investment.<sup>31</sup> Herders were afraid that rangeland looked like unused "wilderness" (*pori*) to policymakers (WWG 2004).<sup>32</sup> Emboreet's Village Council rapidly sub-divided the plains to individuals, to hedge against the potential threat of land

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<sup>29</sup> Another well-documented case was the Canadian Wheat Project in Hanang District (see Lane 1991, 1996).

<sup>30</sup> A hunter turned commercial farmer scouted for areas of higher moisture in semi-arid Simanjiro. In the wet season his farm was frequently in the clouds, whereas a farm within walking distance was not (Discussion, JR, pilot, Arusha, 28 October 2004).

<sup>31</sup> Interview, RA, NGO employee, Arusha, 22 April 2004.

<sup>32</sup> Village Council meeting minutes, Emboreet, 23 May 2004.



appropriation for the “land bank”. Rangeland declined in Emboreet as the Village Council reluctantly allowed commercial external farmers to lease land from villagers partially driven by the need to brand the land.

### **The Boundary Issues: Emboreet and the Lolkisale GCA**

In the mid 1980s, as a result of a CCM (Chama Cha Mapinduzi, Tanzania’s ruling party) directive, the Ministry of Lands embarked upon surveying, registering and titling villages (Shivji 1999). The process gave rise to village boundary disputes across Tanzania, many of which still remain unresolved (URT 1993a,d). In 1991, Emboreet was granted a ‘Certificate of Occupancy’ by the Lands Registry in Moshi.<sup>33</sup> It was signed by the former Chairman and Village Executive Officer (VEO) and clearly marked its western boundary as the Lolkisale GCA boundary. Villagers claimed that Emboreet extended to the TNP boundary; that the State had erroneously claimed village land (Figure 3.4). The result was a difference of 16,572 hectares; 49 percent of the title deed area of 34,173 hectares.

Villagers suspected that leaders had “sold” the land, or that government officers took advantage of the illiterate Chairman. The Village Councils of Emboreet and Loiborsoit held a joint meeting in 1995 agreeing on their joint boundaries with TNP and to carry on normal activities in the GCA.<sup>34</sup> As of 2006, the village boundaries were still contested. Few knew the boundaries of the contested GCA.<sup>35</sup> Various agencies’ renditions contradicted each other (Figure 3.5).

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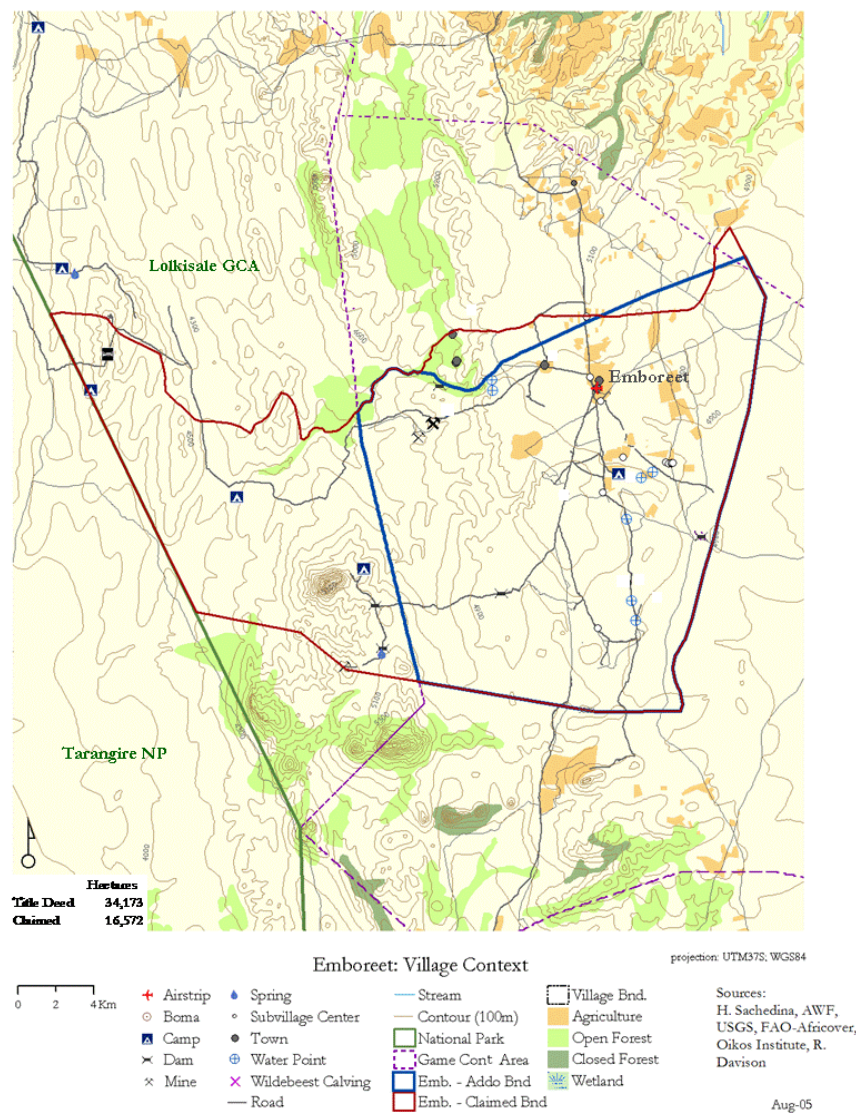
<sup>33</sup> Emboreet “Certificate of Occupancy”, Title No. 8174, Land Office Number: KITETO/RV/1187 dated 30 June 1991. In this 99 year certificate, according to map number 23974, Emboreet’s surveyed land surface was 36,468 ha.

<sup>34</sup> Emboreet and Loiborsoit Village Council meeting minutes Ref. VIJ/EMB.LOI/ARD/1/VOI2/95, dated 26 July 1995.

<sup>35</sup> Discussion, WEO, Emboreet, 7 December 2004; Recorded interview, PO, tour operator, 27 April 2004.

Adding to the confusion, Monduli District claimed that the Lolkisale GCA was under its jurisdiction (URT 1980). It also claimed that Emboreet's CBT projects fell under its jurisdiction (URT 1995b).<sup>36</sup> Usually, GCAs overlapped with village land and fell under village authority but Lolkisale was an anomaly, considered "no man's land" by the SDC.<sup>37</sup> Confusion and fear regarding the Lolkisale GCA affected land use in Emboreet.

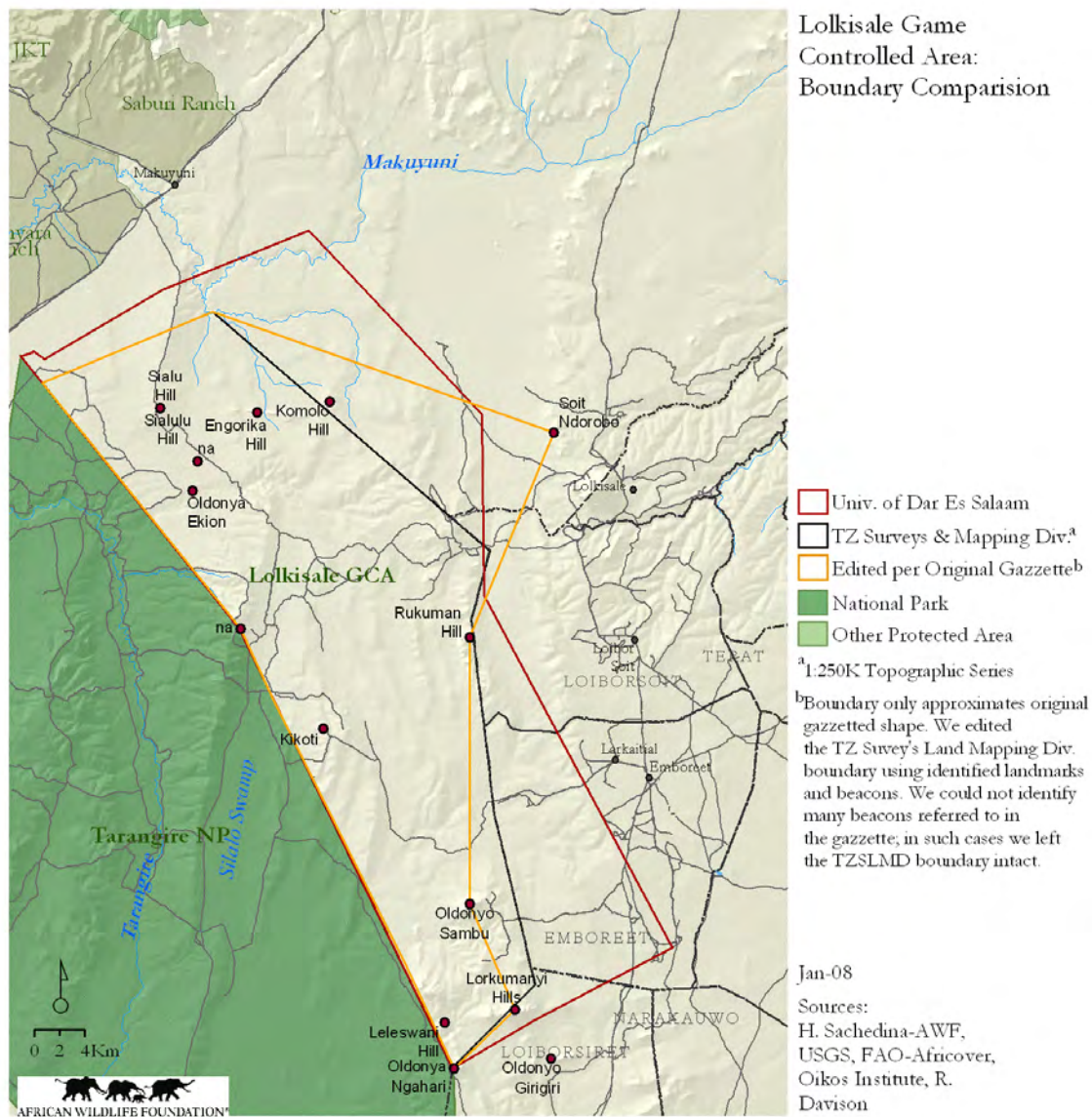
Figure 3.4: Map of Emboreet showing title deed and claimed boundaries (Source: (TCP 1997b))



<sup>36</sup> Letter from J.N. Lyatuu (DED-Monduli) to DED-Simanjiro, Ref. HW/MON/G.I/4/19 dated 15 July 1996.

<sup>37</sup> Recorded interview, SC, DTPO, Orkesumet, 25 May 2006.

Figure 3.5: Interpretive differences of the Lolkisale GCA



I sought clarification regarding Emboreet's boundaries from the Arusha Regional Lands Officer. He informed me that since Simanjiro became a part of Manyara Region in 2002, these details would be in Babati.<sup>38</sup> The Manyara Regional Lands Officer had not heard of Emboreet village as the new region focused on villages near Babati.<sup>39</sup> There was thus general confusion: TANAPA wardens believed Emboreet extended to TNP;<sup>40</sup> SDC

<sup>38</sup> Interview, OS, Regional Lands Officer, Arusha, 15 March 2006.

<sup>39</sup> Interview, MM, Regional Lands Officer, Babati, 16 March 2006.

<sup>40</sup> Interview, ML, GIS Database Specialist, TNP, 30 June 2005.

officers believed Emboreet's boundary ended at the GCA, and that Emboreet had taken advantage of the boundary confusion to appropriate the GCA.<sup>41</sup>

### **Emboreet and the TNP Boundary**

Tarangire's boundary caused residents of Emboreet significant problems. Approximately 71 percent of respondents believed the park had extended into the village. The boundary had never been properly marked since gazettelement (URT 1970 ); villagers were never involved in the demarcation. During intense droughts, TNP sometimes permitted cattle to enter Silalo. For many years it was a soft boundary - politically and physically.<sup>42</sup> Following the SCA proposal, the Maasai believed that TNP would have expanded had they not politically mobilised.<sup>43</sup> In 1989, a district land committee meeting attended by the MP and DC reported that, following scientists' recommendation, TNP planned an expansion into Emboreet, Sukuro and Loiborsirret wards. The meeting discussed TNP desires for evictions, no-farming zones and wildlife corridors.<sup>44</sup> Villagers intensely distrusted TANAPA and believed that TNP could unilaterally be expanded without local consultation.

Changing TNP boundary markings observed by herders in the late 1990s and early 2000s incited park expansion rumours. When TANAPA graded a new firebreak road 1 km from a management road towards the villages, herders thought that the actual boundary

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<sup>41</sup> Interview, SC, SDC Town Planning Officer, Orkesumet, 25 May 2006.

<sup>42</sup> Recorded interview, PO, tour operator, Arusha, 28 April 2005; Discussion, IO, Kikoti, 29 June 2005; Letter, Simanjiro (Emboreet) Ward to Masai District DC, Ref. S.WD/P/11, 15 December 1973 requesting access to TNP due to drought.

<sup>43</sup> Interview, JI, researcher, Arusha, 19 August 2005.

<sup>44</sup> Meeting minutes, Land Committee, Terat, 1 April 1989 attended by representatives from Terat, Loswaki, Emboreet, Komolo, Sukuro, and Loiborsirret. The meeting confirmed village resolve to overrule TANAPA's proposed plan before implementation.

(which they thought was the road) had moved.<sup>45</sup> TANAPA contended that the firebreak was the actual boundary, and the other track was a management road. The owner of Kikoti Safari Camp in Emboreet maintained that the boundary shifted closer to the camp four times in six years.<sup>46</sup>

When Tarangire's boundaries were resurveyed in 2004, 900 acres of land were returned to Loiborsirret village due to the park encroaching, but an additional 250 km<sup>2</sup> was added to Tarangire from the Mkungunero GR and Kimotorok village.<sup>47</sup> I physically mapped the 'new' boundary at Emboreet and compared it against the original gazettelement, finding that the park had not expanded. But the park's dealings with villagers rarely showed sensitivity to the anxieties park boundaries provoked.

### **Wildlife Wars, Conservation Policy and Local People**

“All wildlife should die, because communities have no management rights or benefits from them.”

—Emboreet Divisional Executive Officer, government workshop in Morogoro, Tanzania<sup>48</sup>

“We live in a free country, but with regards to wildlife we are still colonized” —Sukuro Village Chairman to “Simanjiro Wildlife Forum” meeting, 2004.

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<sup>45</sup> Recorded interview, former VEO, Loiborsoit, 14 June 2005; Interview, SM, Outreach Warden, TNP, 28 January 2005.

<sup>46</sup> Interview, PP, tour operator, Arusha, 11 April 2005.

<sup>47</sup> “...*sisi tulizembea sana*” (...we were very negligent), interview, Warden, TNP, 28 January 2005.

<sup>48</sup> Interview, JT, Emboreet, 7 May 2004.

The wildlife sector is characterized by strong State control over land tenure rights, resources, and revenue despite a lack of resources and capacity to manage the wildlife resource outside of national parks (TNRF 2005b, URT 1995c). This is underscored by a particularly militant state of environmentalism within the present administration in Tanzania (Guardian 2006, Kivamwo 2006). In 1989, following significant poaching and wildlife declines, the government responded with an unprecedented militarized mobilisation named “Operation Uhai” (*life*); a national anti-poaching campaign carried out by the Wildlife Division (WD), military and police (Gordon 1991, Siegel and Baldus 2000). There were concerns about the level of force used in rural areas during the operation, but it succeeded in regaining control of the PA estate and indelibly marked the role of the State on conservation, if necessary, through militarized force.

Despite the gains of Operation Uhai, by the late 1980s it became clear to policy makers that PAs had failed to protect wildlife (Caro and Scholte 2007, Leader-Williams et al. 1995, Newmark et al. 1994, Stoner et al. 2007). Experiences elsewhere in Africa with CBC (Anderson 1988, IIED 1994, Western et al. 1994), including Zimbabwe’s influential CAMPFIRE program (Alexander and MacGregor 2000, Bond 2001, Jones and Murphree 2004, Metcalfe 1994, Murombedzi 1991, 1999, 2001, Patel 1998) catalyzed new thinking in Tanzania about integrating communities into the conservation equation (Baldus et al. 1994). Thus, a process began to define Tanzania’s policy incorporation of CBC (Ndolanga 1996, URT 1995a,c).

By 1989, a draft Wildlife Policy elevating the role of CBC was finalised, but had not been passed by the cabinet and parliament. Though wildlife management projects around Serengeti and Selous incorporated CBC around this time (Leader-Williams et al. 1996:

viii).<sup>49</sup> Central to the reform agenda was empowering communities to benefit from tourist hunting (URT 1995d). The legislation providing for the establishment of WMAs had been created as early as 1994 (Omar 1994, URT 1995c). The Wildlife Policy of 1998 clearly confirmed the government's intent to devolve management rights (URT 1998b). Wildlife policy reforms stemming from the Wildlife Policy (such as WMAs in the early 2000s) were required by the State to contribute to poverty alleviation goals in the 'National Strategy for Growth and Reduction of Poverty',<sup>50</sup> an overarching national development plan (LAMP 2005).

WMAs heralded Tanzania's adoption of CBC pursuant to the Wildlife Policy (1998), though the WMA Regulations were only approved in 2002.<sup>51</sup> The government targeted WMAs in wildlife-rich areas adjacent to PAs in order to devolve management tenure, share wildlife benefits, create a PA buffer and institute more control over wildlife policy (MNRT 1998). Despite its obvious candidature, Simanjiro's strong local level resistance meant it did not become a pilot WMA.<sup>52</sup> Villagers perceived WMAs as a construct to alienate village land for conservation.<sup>53</sup> Villages in Loliondo District adjacent to Serengeti also refused to participate due to the same fears (Gardner et al. 2004).<sup>54</sup>

WMAs faced several criticisms (Baldus et al. 2004, Nelson et al. 2006, Nelson 2007, Shauri 1999, Williams 2005):

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<sup>49</sup> These programs were based on community hunting (Baldus *et al.* 2004).

<sup>50</sup> Termed 'MKUKUTA' – *Mkakati Wa Kukuza Uchumi na Pupunguza Umaskini Tanzania*.

<sup>51</sup> WMAs theoretically empowered communities to establish income generating biodiversity enterprises (including wildlife) and retain the revenues (Christophersen et al. 2000, MNRT 1998).

<sup>52</sup> WMAs were announced in adjacent Kiteto and Babati Districts.

<sup>53</sup> Interviews, JM & PK (SDC Officers), Orkesumet, 26 May 2006; Interview, LM, Loiborsoit, 14 June 2005.

<sup>54</sup> Interview, TP, tour operator, Arusha, 14 October 2004; Interview, EL, DNRO, Orkesumet, 20 July 2005.

- It was unlikely that communities would have the capacity and resources to establish WMAs given the long and complex requirements;
- WMAs did not entail devolution: the Director of Wildlife (DoW) still had final authority in WMAs;
- Economic returns were unlikely to impact household livelihoods.

Two of the WMAs Regulations weakest provisions were communities' distinct lack of control over tourist hunting vis-à-vis photographic tourism. Tourist hunting offers the most significant returns from wildlife at a WMA level but rights and management are not devolved to a local level. This creates an incentive for communities to opt for photographic tourism over which they have more control. This leads to the second weak provision that is one of scale; WMAs are promoted at a multi-village level. Photographic tourism agreements usually exist at the level of single villages. The WMA Regulations insist that revenues be shared amongst multiple villages which created conflicts between villages with and without CBT revenues.

Despite the empowerment rhetoric of WMAs (Severre 2000), two central tenets – the devolution of control to new institutions and the imposition of complicated requirements – are strategies used by central agencies to resist reform (Ribot 2004). The village forest management policy in Tanzania offered a sharp contrast to wildlife policy. The Forestry and Beekeeping Division devolved relatively clear resource rights to downwardly accountable and locally elected community institutions. This resulted in the gazettement of 382 Village Land Forest Reserves. However, three years after the release of the WMA regulations, just 4 WMAs had been gazetted (URT 2006 cited in Nelson 2007). But they had not completed the WMA preparatory process, and therefore none of the communities were earning wildlife revenues (Nelson et al. 2006). While no



revenue had yet to be generated at a local level, WMA gazettelement had led to approximately 16,000 km<sup>2</sup> of communal land zoned for conservation.

The major constraint WMAs faced was a lack of institutional commitment from the WD, the responsible implementing agency. Subsequent legislative developments confirmed that policymakers within the WD opposed reforms. An overhaul of the colonially rooted Wildlife Conservation Act (1974) presented an opportunity for CBC to be mainstreamed according to the Wildlife Policy (1998). But early drafts entrenched and expanded centralised control over wildlife, indicating that the objectives of State agencies did not reflect the rhetorical support for devolution found in the wildlife policy (Nelson et al. 2007).<sup>55</sup> The WD sought to limit CBT as it was seen to erode WD control and its ability to satisfy its primary customer base of outfitters (Baldus and Cauldwell 2004: 32). Further legislation rendering CBT projects illegal in hunting blocks without the express permission of the DoW was propagated in 2000 (URT 2002b).<sup>56</sup> In 2007, the “Non-Consumptive Wildlife Utilization Regulations” (URT 2007b) empowered the DoW to control all non-consumptive wildlife use in GRs and on village lands in further attempts to maximize WD control over tourism revenues, which WD had traditionally had no jurisdiction over.

Reforms decentralizing natural resource management to local communities are often launched as a result of donor pressure (Agrawal and Ostrom 2001). Foreign donors and international conservation NGOs provided key incentives for western fortress conservation paradigms, financing 90 percent of conservation programs in Tanzania (URT 1998c). Donors also drove the more reformist WMA process. USAID threatened

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<sup>55</sup> As of 2007, the new WCA had not been legislated by Parliament.

<sup>56</sup> “Blocks” refer to concessions allocated to tourism outfitting companies.

to withdraw its funding from the WMA process unless the WD began to act.<sup>57</sup> A central motivation for the WD's support of wildlife sector reforms was the need to access donor funds to build its own capacity (Baldus et al. 2003). Nelson et al. (2007: 249) argue that the impetus for the Wildlife Policy was to raise donor funds "...by providing a reformist narrative, which can legitimise donor expenditures...".

Wildlife sector reforms formed part of the broader politico-economic changes occurring in Tanzania in the 1990s. This included land tenure reforms (URT 1993a,d) which resulted in a new Land Act (1999) and Village Land Act (1999).<sup>58</sup> The new legislation retained ownership of land in the State, but strengthened customary land tenure through village institutions (Sundet 1997, Wily 2003). However, local people do not have statutory rights to wildlife, nor legal claim to revenues generated, resulting in a fundamental conflict of interest over the use of village lands where wildlife occurs (Nelson et al. 2007, Nshala 1999, Shauri 1999). I now explore the reasons why the WD opposed reforms.

### **Hunting in Tanzania**

The discourse of empowerment and devolution in the Wildlife Policy and WMA framework concealed a reality of government agencies resisting the adoption of CBC approaches. The primary market of the WD is 42 hunting outfitters and 1,654 tourist hunters per year in a multi-million dollar industry (Baldus and Cauldwell 2004). The privileged relationship of hunting outfitters with WD officers and the revenue generated reduced the incentives for reform.<sup>59</sup> Institutionally bureaucrats did not want to

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<sup>57</sup> Interview, JK, AWF, Arusha, 16 June 2006.

<sup>58</sup> For a comprehensive description of Tanzanian land law see Sundet (1997).

<sup>59</sup> An outfitter is a company responsible for the general organisation of a client's hunt.

decentralise their powers and individually there were incentives through corruption and rent-seeking. Ironically, tourist hunting thus constrained CBC. Hunting concessions are granted purely based on WD discretion with no public tenders or auctions. The lack of a competitive market-based concession leasing system is believed to lead to corruption or rent-seeking, and creates individual incentives within the industry. Blocks can also be revoked administratively at any time—this provides an incentive for hunting companies to accede to demands for corruption.

In southern Africa, sport hunting has contributed to both local livelihoods and conservation because legal rights to wildlife and its economic value have been devolved or decentralized (Barnett and Patterson 2005: iii, Bond et al. 2004, Murphree 2001). Proponents of hunting focus on its lucrative economics (Baldus and Cauldwell 2004, Lindsey et al. 2006, Lindsey et al. 2007, URT 1995d). Hunting returns per client generally outweigh those from photographic tourism (Lewis and Alpert 1997), though not always (Murphree 2001: 177). A core argument reproduced by proponents of hunting is its utility for conservation (Adams 2004, Baldus and Cauldwell 2005, Bothma 1996, Hutton and Leader-Williams 2003, Lindsey et al. 2007, Murphree 2001). However, as I shall argue, tourist hunting and its management was a contributing factor to wildlife declines in Simanjiro.

Tanzania is renowned for its trophy quality (Baldus and Cauldwell 2004, Bull 1988, URT 1995d).<sup>60</sup> Annual hunting income to the WD in 2001 was approximately US\$ 10.5 million. Including multipliers, the industry generated an estimated gross income of US\$ 27.6 million from 1,400 clients (Baldus and Cauldwell 2004: 14).<sup>61</sup> However, significant

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<sup>60</sup> See Appendix VI for a map of PAs and hunting areas in Tanzania.

<sup>61</sup> Such as air charters, accommodation, souvenirs, tips and taxes.

concern about ethics, corruption and mismanagement within the hunting sector continued to be raised (Baldus and Cauldwell 2004, 2005, Barnett and Patterson 2005, Kitembo and Tarimo 2007, This Day 2007a,b,c, URT 1996a). Baldus and Cauldwell's (2004) informed report made three powerful claims: 1) the current trophy and block fee lease system resulted in a massive loss of income per year to the WD; 2) the sustainability of wildlife in many hunting blocks continued to decline; and 3) bureaucrats within the WD had personal incentives not to reform hunting policies. Why would WD policy makers, in the face of declining wildlife resources and inefficient revenue capture at an institutional level, be slow to reform the hunting sector?

Blocks are not allocated according to a transparent and market driven system. Outfitters are believed to influence this process (Baldus and Cauldwell 2004: 22). When allocated a block, an outfitter is required to pay all fees and enter into an agreement with the WD to contribute to anti-poaching, community development and road construction in the assigned blocks. However, these criteria are vaguely defined. Some outfitters took their conservation and community development obligations seriously. Investment in anti-poaching varied: some outfitters established their own NGOs, funded by client donations, to patrol their blocks; other companies conducted less anti-poaching. Outfitters contract to utilize at least 40 percent of their wildlife quota. If outfitters are unable to shoot 40 percent of their quota, they must pay a top-up to the WD to meet revenue expectations (Baldus and Cauldwell 2004). Tanzania's dependence on trophy fees (rather than daily use fees) perversely encouraged more wildlife to be shot.

The tourist hunting industry in Tanzania is non-transparent and controlled by powerful cartels. The WD developed a centralized system with little external accountability or transparency, that ended up favoring select outfitters; a system that shielded outfitters

from competition and excluded local communities from the economic benefits from hunting (Baldus and Cauldwell 2004: 4, 18). This encouraged the establishment of lower-end outfitters who leased blocks which they heavily utilized to generate adequate turnover. These companies tend to maximize profits by minimal investment and maximum tax evasion (Baldus and Cauldwell 2004: 20).

The WD continued to subdivide hunting blocks, which increased opportunities for corruption.<sup>62</sup> The quota for new sub-divided blocks stayed the same as the original, thus, off-take in an area might double or quadruple. In this way, the WD's focus on revenue generation through trophy fees could indeed have contributed to wildlife declines (Baldus and Cauldwell 2004: 7, 9). Tourism hunting contributed to declines of several antelope and predator species in Tanzania (Caro et al. 1998). Hunting seemed to be a cause of lion declines around TNP (Kissui 2007: 6), though Maasai retaliatory killings caused more mortality (Kissui In Review, Lichtenfeld 2005). Professional Hunters (PHs) anecdotally reported wildlife declines in hunting blocks (Baldus and Cauldwell 2004). Outfitters were aware of the declining viability of hunting. Yet, hunting quotas were not set scientifically. Except for the Selous GR, population monitoring was not systematically conducted, and aerial surveys did not provide reliable data for species such as predators. Project Managers suggested quotas for GRs, and Regional Game Officers suggested quotas in GCAs and OAs, with suggestions from outfitters. The WD referred to its quota setting as: "... very much a sound educated guess" (Severre 1996: 57).

Tanzania consistently ranks near the top of Transparency International's annual rankings of the most corrupt countries in the world (Heilman et al. 2000: 497). Corruption is a

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<sup>62</sup> An outfitter retired due to "greed and corruption" in the sector (recorded interview, retired outfitter, Arusha, 20 April 2005).

day to day reality in Tanzania and pervasive in the natural resources management sector.<sup>63</sup> In 2003, the official annual block fee was US\$ 7,500 (Damm 2007). This was subsequently raised to US\$ 10,000 per year. Some hunting blocks were more than 9,000 km<sup>2</sup>, larger than some NPs (Baldus and Cauldwell 2004: 9). The cost of leasing blocks was well below market value which resulted in an estimated US\$ 7 million annual loss of income to the WD (Baldus and Cauldwell 2004: 4).

Rumours abounded about outfitters allegedly bribing government officers in order to secure blocks (This Day 2007a,b,c). Hunters themselves spoke openly of these bribes.<sup>64</sup> Wildlife declines across Tanzania (Baldus and Cauldwell 2004, Caro and Scholte 2007, Stoner et al. 2007: 202) resulted in blocks with abundant trophy species becoming more valuable to outfitters. The estimated income in exclusive blocks in the Selous between 1990 to 2001 averaged US\$ 450,000 per block (Baldus and Cauldwell 2004: 19). In 2004, the bribe per block was reportedly US\$ 20,000.<sup>65</sup> Some senior WD officers allegedly held shares in outfitting companies. By 2005, prime blocks reportedly commanded US\$ 100,000.<sup>66</sup> But, the potential income from hunting made block bribes, even many times the official block fee, a rational business expense to outfitters (Baldus and Cauldwell 2004). While outfitters and the WD focused on maximising profits, wildlife declined in areas under their management. In Simanjiro, poor relations between outfitters and villages, the lack of benefit sharing, maximising trophy off-take and little to no anti-poaching protection probably contributed to wildlife declines.

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<sup>63</sup> The forestry sector lost US\$ 58 million in royalties during 2004 and 2005 due to poor management and corruption involving senior government officials (Milledge and Kaale 2005, Milledge et al. 2007).

<sup>64</sup> Recorded interview, outfitter, Arusha, 27 April 2006; Discussion, PH, Arusha, 2006; Recorded interview, retired outfitter, Arusha, 20 April 2005.

<sup>65</sup> Recorded interview, PO, tour operator, Arusha, 27 April 2006.

<sup>66</sup> A new hunting outfitter seeking blocks in Simanjiro reportedly paid US\$ 40,000 but with no guarantee of receiving blocks. Interview, PH, Lolkisale GCA, 21 January 2005.

Institutionalised corruption reportedly did not stop within the WD (This Day 2007a,b) allegedly benefiting a cabinet minister and senior CCM officials (This Day 2007c). The Tanzania Hunting Operators Association (TAHOA) argued strongly against reform in the hunting sector (Baldus and Cauldwell 2004: 36). TAHOA's Chairman, Gerard Pasanisi, was perhaps the most influential person in the Tanzanian hunting sector. Owner of Tanzania's largest outfitter cartel, he had access to former Presidents Valery Giscard d'Estaing, George H.W. Bush and Benjamin Mkapa, and rumoured connections to senior government officials in Tanzania (Liganga 2005). Pasanisi's ethics were questioned through his links to institutionalised corruption in the wildlife sector (This Day 2007c, URT 1996a). Pasanisi illustrated the networks of power in the vested interests who might have prioritised profits over conservation.

Despite legislation limiting the maximum number of blocks an outfitter can hold to six, several key players dominated the industry. Of Tanzania's 141 blocks, 51 blocks (36 percent) were leased to the 3 largest companies; Pasanisi's companies controlled 23 blocks.<sup>67</sup> Tanzania Game Trackers controlled 15 blocks, and Tanzania Big Game Safaris (TBGS) 16 blocks (Baldus and Cauldwell 2004). Both Pasanisi and TBGS controlled multiple blocks in Simanjiro. TBGS's owner objected to participating in a land lease scheme organised by local NGOs to rent valuable areas of the Simanjiro Plains for conservation (see Foley 2007). Despite the potential benefits to his business, this scheme recognized village rights—a feature he could not condone. I encountered similar attitudes from the two other outfitters in Simanjiro. Simanjiro's four outfitters controlled 33 percent of Tanzania's total blocks. Their opposition to reforms promoting CBC policies were thus extremely influential.

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<sup>67</sup> See Appendix VI for a map of PAs and hunting areas in Tanzania.

In 2007, the MNRT substantially raised annual concession fees to US\$ 50,000<sup>68</sup> per block (Damm 2007, URT 2007a). Trophy fees for key species were also increased several fold reflecting the government's desire to increase hunting revenues (URT 2007a). There was speculation that the WD, amidst accusations of institutionalised corruption, raised fees to assuage intense pressure raised by the local press and in parliament (Damm 2007: 3). Prior to the increase in fees, Tanzania was already considered the most expensive destination in Africa to hunt (Barnett and Patterson 2005).

### **Pioneering CBT in Tanzania: Emboreet Village**

“You can't spite the tree that gives you fruit. But when a branch from that tree falls into the road, it needs to be cleared so that the road can still be used”

—Villager, Emboreet, 2004 describing CBT

In the 1990s, the liberalization of Tanzania's economy resulted in a flood of investment into the wildlife-based tourism sector (Neumann 1998: 144). Much of this development was concentrated in the “northern circuit”. Growth in international demand for ecotourism products and increased competition for sites in NPs compelled tour operators to seek concessions in village lands adjacent to PAs. Community lands offered a number of advantages over PAs such as exclusive ‘wilderness’ experiences, high wildlife densities and a lack of regulations (Nelson 2004). CBT mushroomed across northern Tanzania over the last decade, and increasingly in southern Tanzania.

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<sup>68</sup> Category A blocks of a minimum of 800 km<sup>2</sup> cost US\$ 50,000 per year and Category B, with a minimum of 100 km<sup>2</sup> cost US\$ 40,000 per year.



CBT in Tanzania was pioneered in Emboreet village. Alarmed by the detrimental effects of policies guiding PAs and rampant land-use change around TNP (Ndaskoi 1991), Dorobo Safaris and Oliver's Camp engaged directly with Emboreet from 1990 to initiate two low-impact photographic tourism operations (Dorobo Tours and Oliver's Camp 1996: 102).<sup>69</sup> Dorobo negotiated a concession of 120 km<sup>2</sup>; Oliver's obtained 20 km<sup>2</sup> (Dorobo Tours and Oliver's Camp 1996: 102, 104). TANAPA credited these operators for contributing significantly to the development of its CCS program (TANAPA 1994). Initially, the Director of Wildlife approved the projects,<sup>70</sup> as did the SDC and TANAPA (TANAPA 1995).<sup>71</sup> Subsequent DoW's deemed the projects illegal.<sup>72</sup>

Oliver's Camp began operations in Emboreet in 1992.<sup>73</sup> Conflicts between villagers and Oliver's Camp began when part of Oliver's concession was claimed by Loiborsoit Village in 1993.<sup>74</sup> Although Loiborsoit lacked evidence of formal title (Ndonde No Date), Oliver's Camp entered into partnership with both villages.<sup>75</sup> The US\$ 12 bed-night fee originally paid in full to Emboreet was divided into US\$ 6 per village. This reportedly made Emboreet seek another tourism investor. In 1998, Emboreet entered into contract with Tanzania Photographic Tours and Safaris (TPTS)<sup>76</sup> – and annulled their contract with Oliver's Camp (Sikoyo et al. 2001b: 14).<sup>77</sup>

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<sup>69</sup> Interview, VEO, Emboreet, 22 March 2004; Interview, PO, tour operator, Arusha, 27 April 2006.

<sup>70</sup> Letter, C. Mlay-DOW, to Dorobo safaris and Oliver's Camp, Ref. PA/GWC/177, 30 April 1991 permitting CBT: "...ie enhancing the value of wildlife to the immediate local community through fees paid to the Village Councils."

<sup>71</sup> Letter, E. Chengullah, TANAPA to Oliver's Camp, Ref. TA/ADM/46/11.

<sup>72</sup> Letter, M.A. Ndolanga-DoW, to Luke Samaras Safaris, Ref. LSS/GD/12/10/93, 20 October 1993; Letter, P. Luhanjo, PS-MNRT, to Oliver's Camp, Ref. GD/G.80/51/63, 18 April 2000.

<sup>73</sup> Interview, PO, Arusha, 28 April 2005.

<sup>74</sup> Interview, LM, VEO, 14 June 2005, Loiborsoit; Interview, PO, tour operator, Arusha, 27 April 2006.

<sup>75</sup> Letter, Emboreet VEO to Oliver's Camp, Ref: KIJ/EMB/325/18/10, 18 July 1994.

<sup>76</sup> Initially, the company was named Rickshaw Safaris. It is now known as African Legacy Safaris.

<sup>77</sup> Emboreet Village Council meeting minutes, Ref. KIJ/EMB/352/Vol. 2/33/98, 6 June 1998.

In 1999, Oliver's Camp moved exclusively into Loiborsoit. However, disputes were rife between Oliver's Camp and TPTS, 'Tanzania Conservation Safaris' (TCS), Emboreet and Loiborsoit villages. TCS sought Oliver's concession in Loiborsoit and made numerous promises to Loiborsoit which were never kept.<sup>78</sup> Loiborsoit accused Oliver's Camp of fraud in 2000 and did not renew the contract.<sup>79</sup> Villagers threatened to burn the camp down and Oliver's Camp took Loiborsoit to court. In 2001, Oliver's Camp moved into TNP.

Kikoti Safari Camp was built by TPTS in Emboreet in 2002.<sup>80</sup> Prior to that, it had operated as a mobile camp since 1996.<sup>81</sup> TPTS strategically situated the lodge in a 36 km<sup>2</sup> concession in the TNP buffer zone. TPTS's owners aspired to conduct tourist hunting operations and gain exclusive use of the Lolkisale GCA (See Appendix VII describing the 'Simanjiro Wildlife Forum').<sup>82</sup>

The relationship between TPTS and Oliver's Camp was acrimonious.<sup>83</sup> TPTS formally approached Emboreet for a tourism concession three months before Emboreet's contract with Oliver's Camp was broken.<sup>84</sup> Some villagers alleged that TPTS bribed village councillors in order to obtain the contract (Sikoyo et al. 2001b: 17). Tension with Dorobo was attributed to TPTS's lack of transparency and competitive nature. The friction and lack of collaboration amongst photographic operators undermined the potential benefits of CBT, and fuelled corrupt factions within the Village Council.

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<sup>78</sup> Letter, Conservation Tanzania Safaris Ltd. to Loiborsoit Village Chairman, 2 October 2000. TCS never began operations. This illustrates the risks of villages losing revenue when operators compete.

<sup>79</sup> Loiborsoit Village Council minutes, 24 October 2000.

<sup>80</sup> Interview, PP, Arusha, 11 April 2004.

<sup>81</sup> Interview, PP, Kikoti, 25 July 2004; Interview, JP, Emboreet, 15 September 2004.

<sup>82</sup> Interview, PP, Emboreet, 20 September 2004; letter, TPTS to Emboreet, Loiborsoit, Kimotorok, Loiborsirret, Narakauo and Sukuro villages, 2 February 1999.

<sup>83</sup> Interview, PP, Kikoti, 25 July 2004; Discussion, PP, Arusha, 3 October 2004.

<sup>84</sup> Letter, TPTS to Emboreet Village, 20 March 1998.

### Oil and Water: Photographic and Hunting Conflicts

Hunting and photographic tourism activities practiced in the same area created conflicts (Nelson et al. 2007).<sup>85</sup> The aims of hunters and photographic tourists were divergent: one group wanted to photograph live animals; the other wanted to shoot them. The MNRT threatened to cancel the Tourism Agents Licensing Authority (TALA) licenses of CBT operators in order to pressure them (F. Nelson, *pers. comm.*, 2007).<sup>86</sup>

Outfitters saw themselves as exclusive concessionaires and saw CBT as an illegal land use. This antagonism reduced the commercial viability for CBT in Emboreet.<sup>87</sup> Hunters reportedly shot predators intentionally close to photographic camps.<sup>88</sup> In 2004, a hunter threatened Dorobo Safaris clients at gunpoint in the Lolkisale GCA.<sup>89</sup> Dorobo Safaris encountered difficulties with outfitters since the start of its operations. A letter from Bundu Safaris illustrated this position: “It is important to make sure that other outfitters, including Ndorobo (*sic*) safaris, do not hunt in my company’s block”. The letter goes on to state that anyone going into the block would be considered a poacher.<sup>90</sup> That fifteen years later, operators had not been able to coordinate their field activities reflects the entrenched conflict of interests between the different actors and the fact that they derive their legitimacy from different sources: wildlife law and the WD for hunters; land and local government law and Village Councils for CBT operations.<sup>91</sup>

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<sup>85</sup> Interview, TP, 3 February 2005, Arusha; Interview PP, 11 April 2005, Arusha; Interview DP, 15 April 2005, Arusha.

<sup>86</sup> Interview, PO, 28 April 2005, Arusha.

<sup>87</sup> Interview, MP & TP, 12 August 2005, Arusha.

<sup>88</sup> Interview, PP, tourism operator, Emboreet, 25 July 2004.

<sup>89</sup> Recorded interview, DP, tour operator, Arusha, 15 April 2005; Discussions with villagers, Emboreet, 16 November 2004.

<sup>90</sup> Letter, G. Alexiou to Emboreet Chairman, Ref: TBS/09/CG/90/91, 30 December 1991.

<sup>91</sup> The compatibility of the activities could be easily solved by zoning (spatial or temporal zoning), were it not for the underlying conflict of jurisdictions (F. Nelson, *pers. comm.*, 2008).

The delay in the development of WMAs is partly attributable to high-level negative influence by hunting outfitters (Baldus and Cauldwell 2004: 4). Outfitters opposed WMAs due to fear that costs might rise, and their privileged situation might change. In Simanjiro, it was rumoured hunting outfitters corrupted village leaders to oppose WMAs, though it is unlikely that this caused the groundswell of resistance to WMAs.<sup>92</sup> Outfitters were simply not ready to embrace competition and communities as wildlife managers (Box 3.1). My research revealed intense community animosity towards outfitters in Simanjiro due to their perceived disregard for human rights and village land tenure.

### **Box 3.1: Royalty, Hunting and CBT**

Ortello Business Corporation (OBC) leases the Loliondo GCA hunting concession. OBC is owned by a member of the United Arab Emirates (UAE) royal family. The grant of OBC's lease in 1992 sparked the "Loliondogate" controversy due to high-level corruption documented in the Warioba Commission on Corruption (URT 1996a). OBC attempted to interfere with Ololosokwan Village's CBT earnings, inflaming villagers (Nelson and Ole Makko 2005). Yaeda Chini WMA was allocated to another member of UAE royalty by the State (McCrummen 2007). This was linked to allegations of bribery of the Mbulu DGO who railroaded the hunting block upon the local people.<sup>93</sup> In Serengeti, Paul Tudor Jones's Grumeti Reserves attempted the relocation of Robanda village (Igoe 2007), and sought to end village contracts with three tourism companies (Joel 2005, Poole 2006).

<sup>92</sup> Recorded interview, PM, NGO Employee, Orkesumet, 21 July 2005.

<sup>93</sup> Interview, DP, tour operator, Arusha, 2004.

## Wildlife Populations

After reviewing conservation policies affecting Simanjiro, I examine their impact. The Maasai Steppe is promoted as a site of global biodiversity value; second only to the Serengeti in terms of large migratory mammals (Reid et al. 1998). Research to monitor the area's wildlife populations by air and by road have occurred since the 1960s (EcoSystems Ltd. 1980b, Foley 2004, Kahurananga 1981, Lamprey 1963b, Lamprey 1964, TAWIRI 2004b, TCP 1998, TWCM 1999, 2000).

These surveys have used different methodologies and counted different areas, making comparison through the years difficult. In addition, Systematic Reconnaissance Flights (SRF) cover very large areas and extrapolate total population estimates based on sampling transects covering relatively small proportions of the total area (Norton-Griffiths 1978). This makes SRF subject to high standard errors and questionable accuracy, particularly in heterogeneous landscapes where such extrapolations may not take account of the patchy distribution of many wildlife species (INRF 2005b: 7).

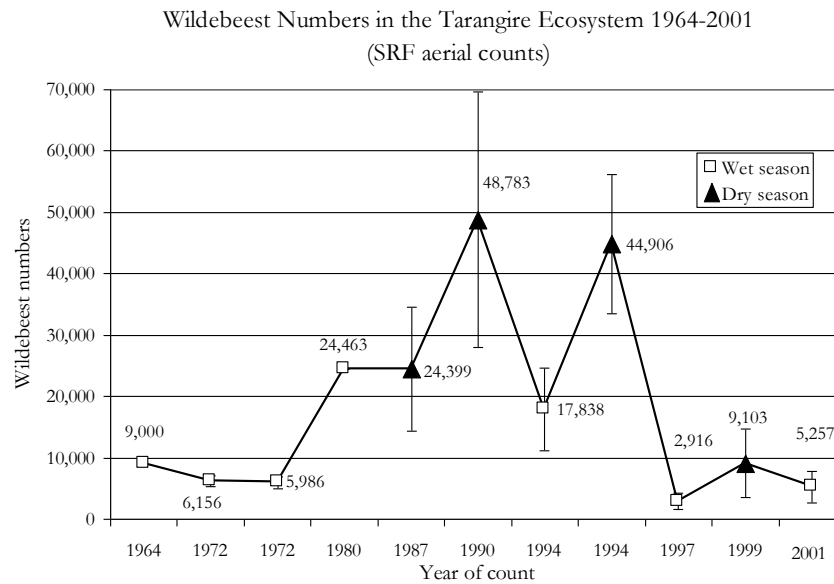
While both SRF and road count data are independently prone to errors, taking these different data sets together enables comparison which may lead to a more accurate overall impression of what is happening to wildlife in the system census wildlife (Figures 3.6, 3.7). Both ground and aerial survey data presented strong evidence of a considerable drop in wildebeest and zebra populations, though less severe than that of wildebeest, supporting anecdotal evidence of wildlife declines (Figure 3.8).<sup>94</sup> But note also that Lamprey (1964) suggested that wildebeest and zebra numbers using Tarangire in 1960 to

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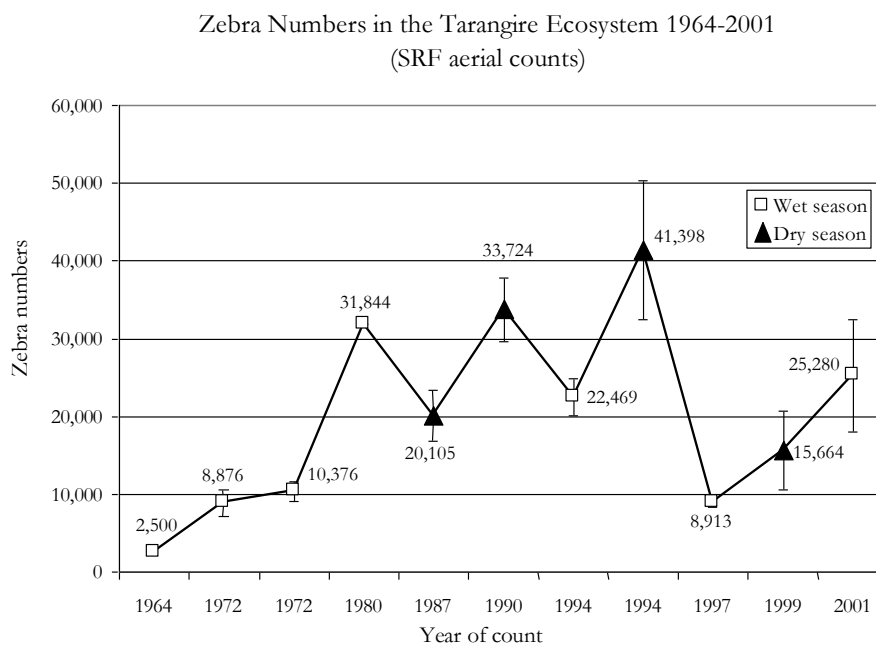
<sup>94</sup> Recorded interview, retired outfitter, Arusha, 20 April 2005; Recorded interview, outfitter manager, Arusha, 21 April 2005; Interview, PP, tour operator, Emboreet, 25 July 2004.

1962 were 1,200 and 2,500 respectively; a fraction of estimates in the mid 1990s. It is unresolved why large ungulates populations may have possibly been so low 45 years ago (TNRF 2005b).

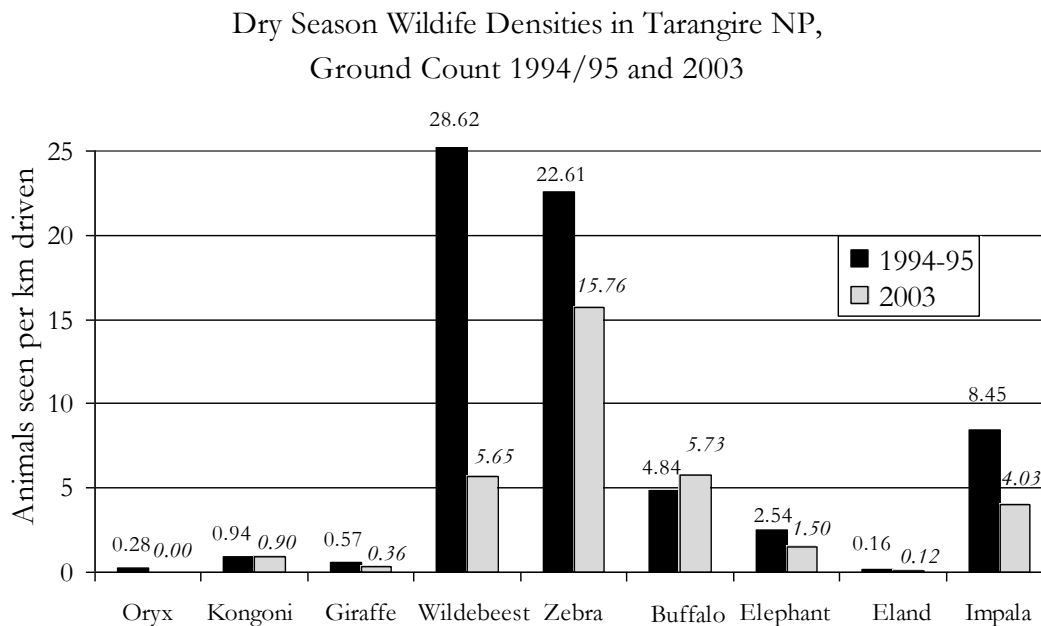
**Figure 3.6: Wildebeest SRF data for the Tarangire ecosystem. Figures before 1987 are not comparable and are included for illustrative purposes only (Source: Foley and Foley 2005)**



**Figure 3.7: Zebra SRF data for the Tarangire ecosystem. Figures before 1987 are not comparable and are included for illustrative purposes only (Source: Foley and Foley 2005)**



**Figure 3.8: Dry season road counts of wildlife densities in TNP in 1994/95 and 2003** (Source: Foley and Foley 2005)



Data for the wildebeest population estimates used in the 1990s to designate Tarangire a site of global importance may have been over-estimated. Zambia's Liuwa Plains NP estimate of 33,000 to 50,000 migratory wildebeest surpasses that of Tarangire (Travel Africa 2001, Viljoen forthcoming).<sup>95</sup> In fact, over a ten year period from 1991 to 2001, most significant wildlife areas in Tanzania (except Serengeti) registered significant wildlife declines, including 67 percent of large herbivore species in the Maasai Steppe (Stoner et al. 2007: 207). While most antelope species registered declines, buffalo and elephants increased (Foley and Foley 2006, TAWIRI 2004a). Elephant populations in the Maasai Steppe grew by 7 percent per annum since 1994, close to their known maximum reproductive rate (TNR 2005b: 14). Elephants numbered approximately 2,300 individuals, the largest population in northern Tanzania (Foley and Foley 2006). The 1989 global Ivory Ban and suppression of poaching were key catalysts in elephants' recovery in the Maasai Steppe. The elephant increase in the Maasai Steppe is part of a

<sup>95</sup> [http://www.african-parks.org/apffoundation/index.php?option=com\\_content&task=view&id=48&Itemid=83](http://www.african-parks.org/apffoundation/index.php?option=com_content&task=view&id=48&Itemid=83) Accessed 27 February 2008.

more general recovery of elephant populations across Tanzania. Prior to 1990, few elephants were seen outside the park due to poaching compression. Reports of human-elephant conflict increased throughout the Maasai Steppe as expanding elephant populations encounter human settlement (Brockington et al. Forthcoming).

### **Discussion: The Centrality of Power in CBC**

CCM and the President probably did have a vision for PAs consistent with nation building and economic growth. There were also probably a group of officials within the government engaging wildlife policy for the public good. In Tanzania, wildlife policy is dominated by personal patronage motives, with a high level of loss at the aggregate public level of society. The ideology of top-down development prevails in Tanzania though it is masked by participatory, empowering and community-oriented language.

The government exercised power top-down through local officials and wildlife agencies who did not share the values or benevolent intentions of the Dodoma government. Government bureaucrats personally profited from State power through illicit resource rents. Local officials made decisions on both a personal and official basis interchangeably with regards to the wildlife sector. Wildlife policy served as a site for the expansion of State authority in Simanjiro; implemented by corrupt government bureaucrats resulting in pervasive lawlessness on the plains.

The salient aspects of policies that affect rural villagers and wildlife management are Tanzania's tourist hunting and land policies. The Land Act vests all ownership of land in the President and is overtly centralised. The tourist hunting sector is the most useful segment of the wildlife policy to government officials seeking personal advancement. As



a result, hunting policy in Tanzania is presented as conservation policy and shapes the Tanzanian government's engagement with conservation in areas outside of PAs. Recent legislation, such as the WMA framework and the draft WCA, illustrate the continued extension of State power over village land in the name of conservation (PINGOS and LARRI 2004: 9). Under these wildlife policies, Tanzania experienced significant wildlife declines across almost all of its key wildlife habitats in just a ten year span (Stoner et al. 2007). Locally, the experience of hunting policy in the Maasai Steppe was land alienation for conservation and personal enrichment of officials. These factors resulted in negative local perceptions of the government and its wildlife policy in Simanjiro. In the following chapter, I examine more closely the financial returns of wildlife conservation and their impacts on local livelihoods.

## Chapter Four

### **Wildlife is Our Oil: Conservation Benefits and Resistance**

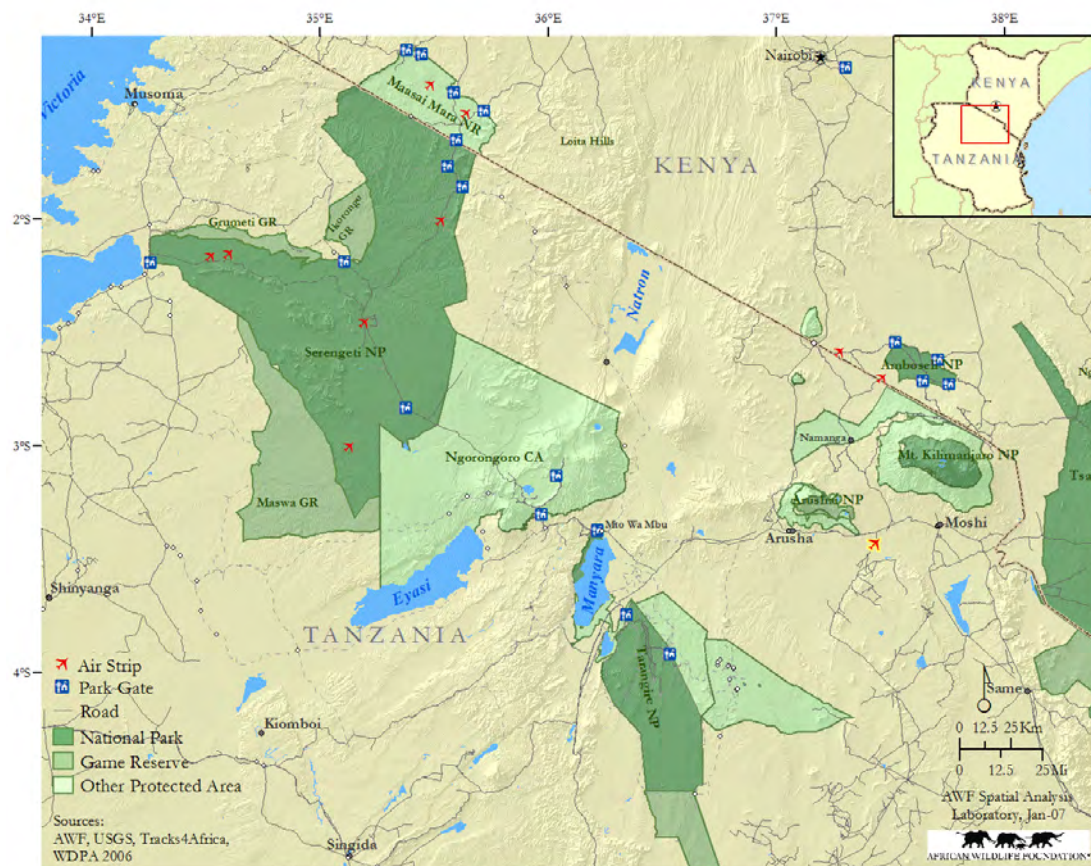
This chapter examines the flows of wildlife financial benefits at national, district, and village levels. It explores who benefits and who does not from wildlife enterprise. It describes state and NGO interventions to increase ‘participation’ and land under ‘conservation management’ – two often conflicting notions at a local level. It concludes with an analysis of people’s perceptions towards wildlife and strategies they employed to resist conservation programs. I argue that photographic tourism revenue management encouraged corruption at a local level which ultimately undermined conservation and contributed to wildlife declines in the Maasai Steppe. I illustrate how village based corruption, and strained relationships with wildlife authorities, hunting companies, and conservation NGOs undermined wildlife related poverty alleviation and pro-conservation behaviour. I also illustrate how the relationship between photographic operators and villages perversely undermined CBC through corrupt dealings with village officials.

#### **The Value of Wildlife in the Maasai Steppe**

Tourism, in large part generated by wildlife viewing and hunting, has assumed an increasingly important role in the Tanzanian economy since structural adjustment policies in the mid 1980s. It now ranks among the top employment sectors, accounting for 16 percent of GDP and nearly 25 percent of export earnings. Revenue generation increased from US\$ 259 million in 1995 to US\$ 731 million in 2003 (Jones 2005), and US\$ 746

million in 2005 (East African 2006), enjoying an annual growth rate of 30 percent (CSF and TANAPA 2004) . A TANAPA Official summed up the fundamental value of wildlife to the state as: “Wildlife is our oil!”<sup>1</sup>

**Figure 4.1: The Northern Circuit**



Growth has focussed on the ‘northern circuit’ or protected areas in which Tarangire features as a major destination en route to the Serengeti and the NCA and only a short drive from the main tourism hub of Arusha (Figure 4.1). Between 1992 and 2006, Tarangire and neighbouring Lake Manyara NPs generated an estimated US\$ 42 million in direct revenues from more than 1.9 million visitors (Table 4.1).<sup>2</sup>

<sup>1</sup> Discussion, MD, global USAID livestock project director, Nairobi, 27 June 2006.

<sup>2</sup> Direct revenue referred to fees paid to TANAPA in the form of daily fees from visitors, vehicles, aircraft and lodge concession fees.

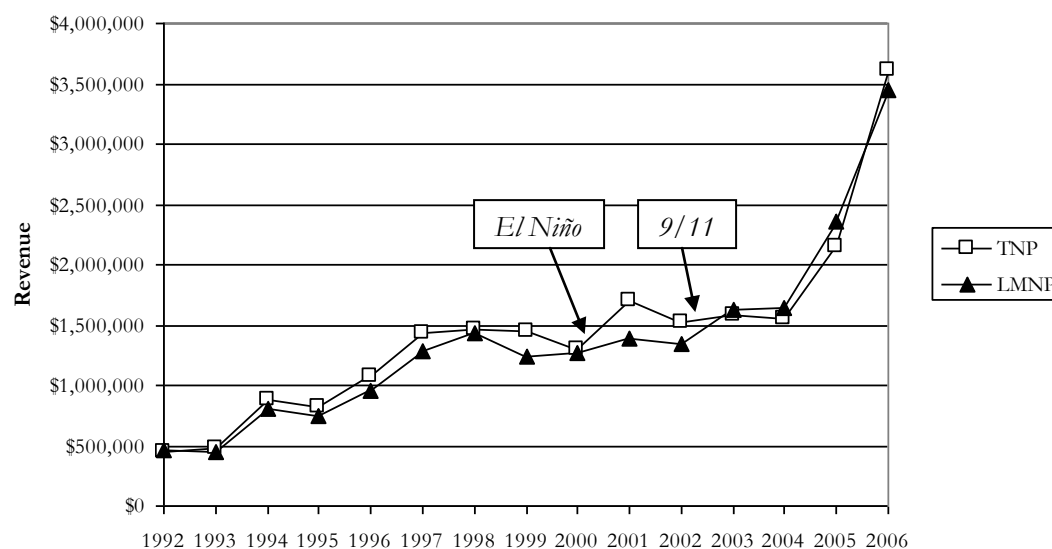
**Table 4.1: Visitor numbers and direct revenue for Tarangire and Lake Manyara NP's between 1992 – 2006** (Source: TANAPA Tourism Department)

Year	Visitor Numbers			Total Revenue US\$		
	Tarangire	L. Manyara	Total	Tarangire	L. Manyara	Total Revenue
1992	28,878	30,864	<b>59,742</b>	\$454,990	\$458,653	<b>\$913,643</b>
1993	32,305	46,662	<b>78,967</b>	\$472,618	\$452,629	<b>\$925,247</b>
1994	44,343	63,336	<b>107,679</b>	\$873,324	\$803,487	<b>\$1,676,811</b>
1995	39,231	59,076	<b>98,307</b>	\$818,817	\$752,093	<b>\$1,570,910</b>
1996	43,792	61,934	<b>105,726</b>	\$1,079,744	\$961,979	<b>\$2,041,723</b>
1997	54,454	75,870	<b>130,324</b>	\$1,425,665	\$1,277,632	<b>\$2,703,297</b>
1998	50,464	64,608	<b>115,072</b>	\$1,455,262	\$1,427,087	<b>\$2,882,349</b>
1999	41,147	70,628	<b>111,775</b>	\$1,441,824	\$1,241,274	<b>\$2,683,098</b>
2000	50,668	70,193	<b>120,861</b>	\$1,299,972	\$1,261,683	<b>\$2,561,655</b>
2001	58,181	72,498	<b>130,679</b>	\$1,705,321	\$1,388,572	<b>\$3,093,893</b>
2002	55,596	71,921	<b>127,517</b>	\$1,518,341	\$1,349,627	<b>\$2,867,968</b>
2003	63,031	87,461	<b>150,492</b>	\$1,589,215	\$1,624,461	<b>\$3,213,676</b>
2004	68,754	83,332	<b>152,086</b>	\$1,554,058	\$1,636,397	<b>\$3,190,455</b>
2005	91,980	118,343	<b>210,323</b>	\$2,149,400	\$2,362,285	<b>\$4,511,685</b>
2006	103,114	133,519	<b>236,633</b>	\$3,618,602	\$3,441,943	<b>\$7,060,544</b>
<b>Totals</b>	<b>825,938</b>	<b>1,110,245</b>	<b>1,936,183</b>	<b>\$21,457,153</b>	<b>\$20,439,802</b>	<b>\$41,896,954</b>

Visitors to Tarangire increased from 7,290 in 1988 to 103,114 in 2006. Tarangire operated profitably since 1991, becoming the 3<sup>rd</sup> largest revenue generating park in Tanzania (after Serengeti and Kilimanjaro) in 2006. Tarangire and Lake Manyara's revenues supported the operations in under-resourced parks so their ecological and economic maintenance was strategically important to the government (Otto et al. 1998).

A risk of tourism is its fickleness. East Africa's tourism market was susceptible to local and international perturbations such as terrorist attacks (Figure 4.2). Kenya's post-election violence in 2008 resulted in up to 20 percent cancellations in Tanzania (Ihucha 2008a).

**Figure 4.2: Tarangire and Lake Manyara NP's revenue (1992 to 2006) illustrating dips following September 11<sup>th</sup>, 2001 and El Niño rainfall in 1998/1999** (Source: TANAPA Tourism Department)<sup>3</sup>



### Sport Hunting in Simanjiro

Hunting companies covet Simanjiro for its trophy quality and distinct species.<sup>4</sup> Simanjiro allocated 64 percent (12,682 km<sup>2</sup>) of the district to hunting activities (SDC 2003). There are 11 hunting blocks, operated by 4 outfitters owning 6 companies (Table 4.2, Figure 4.3).

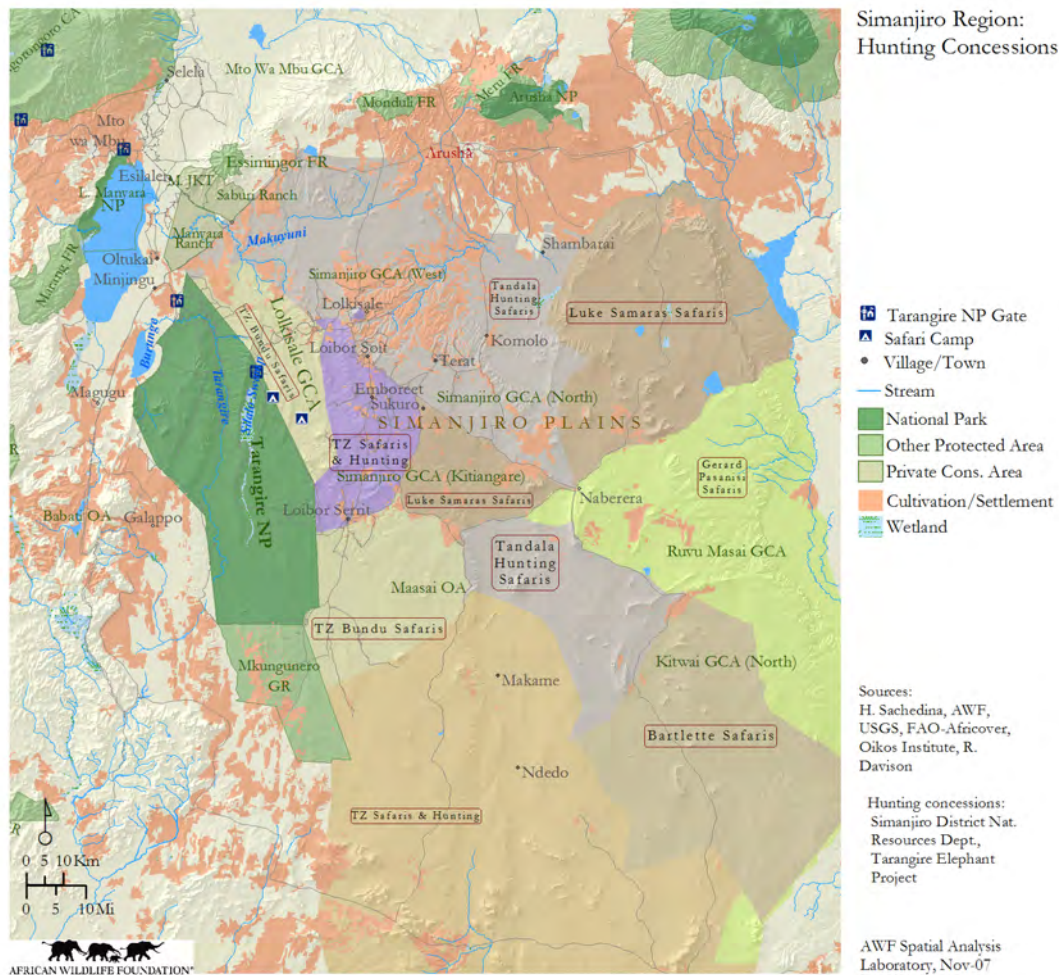
**Table 4.2: Name of Simanjiro block and lease holder** (Sources: Baldus and Cauldwell (2004: 50-51); interviews, acting Simanjiro DGO, 25 May 2006, Orkesumet; PH, Lolkisale GCA, 17 March 2005)

Principal	Nationality	Company Name	Simanjiro Block
Gerard Pasanisi	French	Bartlette Safaris	1. Kitwai GCA (South)
		Gerard Pasanisi Safaris	2. Kitwai GCA (North) 3. Ruvu Masai GCA
Luke Samaras	Greek	Luke Samaras Safaris	4. Landanai GCA 5. Simanjiro/Kitiangare GCA (South)
Raoul Ramoni	Italian	Tandala Hunting Safaris	6. Simanjiro GCA (West)
		Tanzania Safaris and Hunting (Tanzania Big Game Safaris)	7. Simanjiro Naberera GCA 8. Masai Open Area (East) 9. Masai Open Area (South)
Adam Clemens	American	Tanzania Bundu Safaris	10. Masai Open Area (West) 11. Lolkisale GCA

<sup>3</sup> 2006 figures from <http://www.tanzania.go.tz/economicsurveyf.html> accessed 12 October 2007.

<sup>4</sup> Interview, outfitter, Arusha, 5 October 2004.

Figure 4.3: Simanjiro hunting block boundaries (note the map conceals considerable confusion over boundaries and subdivision of blocks)<sup>5</sup>



Tourist hunting revenues, not including multipliers, in the Maasai Steppe were estimated at US\$ 523,332 for 1996/97 (Otto et al. 1998). Kibebe (2005) suggests that tourist hunting game fees collected by the WD in Simanjiro increased from 1993, peaking in 1996 at approximately US\$ 320,000 per year. From 1997 to 2002, game fees from Simanjiro steadily declined to about US\$ 250,000 per year (Kibebe 2005: 37). Based on an estimate of the WD capturing approximately 40 percent of gross hunting revenues (Baldus and Cauldwell 2004, Hurt and Ravn 2000), tourist hunting in Simanjiro (including multipliers) could have generated approximately US\$ 660,000 per year from 1997 to 2002. But outfitters reported declines in block viability, which they allege is due to the increase

<sup>5</sup> Discussion, JM, acting DGO, Orkesumet, 30 June 2006.

in farming, human population and poaching suggesting that the sustainability of the wildlife industry was already in decline.<sup>6</sup>

Based on Kibebe's (2005: 41) estimates of company income, I derived an estimate of outfitter revenue, game fees, and multiplier effects in Simanjiro (Table 4.3). I included trophy fees to the WD as a separate category as these are not included in the client daily rate paid to the outfitter. Hurt and Ravn (2000) estimated that 45 percent of hunting revenue accrued to the outfitter which would have meant them grossing over US\$ 1.2 million per year. Hurt and Ravn (2000) estimated a multiplier rate of 14 percent,<sup>7</sup> meaning hunting could have been worth up to US\$ 1.7 million per year to the economy. Considering that tourist hunting was conducted in Kiteto, Babati, Monduli, Kondoa, and Mbulu districts, the value of hunting in the entire ecosystem was probably worth much more.

**Table 4.3: Estimated annual outfitter income (2004) from sport hunting in Simanjiro (including multipliers) in US\$** (Sources: \*Kibebe (2005: 41), Hurt and Ravn 2000, and † my own estimation based on Kibebe's estimates and my discussions with outfitters and PH's)

Service	* Tanzania Bundu	* Luke Samaras	* Tandala Hunting	* TZ Safaris & Hunting	† Bartlette Safaris	† Gerard Pasanisi	Totals
<i>Client Daily rate</i>	\$600	\$500-600	\$1,100	\$1,100	\$1,100	\$1,100	
<i>Annual income</i>	\$96,872	\$182,750	\$246,272	\$360,436	\$120,145	\$240,290	\$1,246,765
WD Trophy and block fees							\$250,000
Multiplier Rate of 14% (Hurt and Ravn 2000)							\$174, 547
<b>Total hunting revenue in 2004 in Simanjiro including multipliers</b>							<b>\$1,671,312</b>

<sup>6</sup> Recorded interviews, MM & BRJ, outfitter managers, Arusha, 21 April 2005.

<sup>7</sup> Multipliers include air charters, accommodation, curios, tips and taxes.

I could not collect data from Tarangire photographic tourism operators on client spending but estimated that 75 percent of foreign tourists spent one night in the parks on their way to Serengeti and Ngorongoro. At an average of US\$ 180 per person per night,<sup>8</sup> in 2005, 63,037 foreigners visiting Tarangire generated approximately US\$ 9 million. A multiplier rate of 30 percent would generate an additional US\$ 3 million.<sup>9</sup> I estimated the amount of direct revenue and multipliers generated by an estimated 10 camps in villages around TNP at US\$ 2 million by comparing their perceived visitor traffic with Emboreet's CBT operations which I knew intimately.

These calculations give a crude estimate of the worth of Tarangire's wildlife industry of about US\$ 16 million a year from 2005. Including LMNP the same calculations would push the annual value to over US\$ 32 million per year. Indeed these estimates may be conservative; the 'northern circuit' was the backbone of a tourism industry estimated to value US\$ 1.3 billion per year (Sumba et al. 2005: 3). Thus, given the market value of the industry, to what extent did tourism reduce poverty or support sustainable land use outcomes at a local level?

### **Shotguns and Jewellery: District Wildlife Management**

CBC suffers from the wildlife's sector's lack of funds and the perverse incentives discussed in the previous chapter (Baldus et al. 2003: 54). The lack of incentive and budget constraints meant that the WD had little capacity to conduct CBC (Barrow 1996: 9). District Game Officers (DGO) were mandated with wildlife management and facilitating CBC at a district level. DGOs often carried out their work in rural areas with

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<sup>8</sup> A general estimate based on my experience with a number of lodges and discussions with tour operators on their rates in Tarangire.

<sup>9</sup> Assigning a definitive multiplier rate for tourism is problematic as it depends on many variables. The assumption of 30 percent is my own.



little oversight from the WD or District Councils. This, combined with the aggressive and often secretive nature of anti-poaching work, meant that human rights abuses and alarming transgressions of accountability could occur.

A resident hunter in Arusha alleged that he regularly bribed DGOs for his hunting licenses; that this was a common practice amongst resident hunters. In Emboreet, a DGO allegedly hunted out of season with a group of Arabs and sold the meat in the village centre. My assistant phoned the District Natural Resources Officer, a family friend, in Orkesumet who stated that the aforementioned Komolo-based DGO was ‘on patrol’ when he was apparently poaching in Emboreet.

On April 17<sup>th</sup>, 2006 the Simanjiro DGO, Emmanuel Muyengi, died following an exchange of gunfire with poachers (Arusha Times 2006a). District staff interviewed expressed concern with Muyengi’s professional conduct prior to his death. Muyengi was notorious for the scale of corruption and human rights abuses he reportedly engaged in. Muyengi had been repeatedly warned by the SDC for acting as a law unto himself—allegedly including multiple deaths following beatings he administered.<sup>10</sup> Several district officers speculated that Muyengi’s death was retaliatory following his seizure of a vehicle, firearms and large cash bribe to allow suspected poachers to go free. Muyengi’s monthly salary was approximately US\$ 119 per month.<sup>11</sup> His personal home on the edge of Orkesumet stood out amongst the modest corrugated iron roofed buildings. The large

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<sup>10</sup> Muyengi allegedly beat and killed an eighty year old man for not giving him directions. Another man died after Muyengi allegedly forced him to drink five liters of illegal brew. Poachers were allegedly forced to eat guinea fowl feathers, or charcoal made without a permit (Interviews, Acting DED and DVO, Orkesumet, 26 May 2006).

<sup>11</sup> Interview, Acting Simanjiro DED, Orkesumet, 26 May 2006.

walls, tinted windows and prominent satellite dish were a clear indication to his colleagues that Muyengi had alternate sources of income.<sup>12</sup>

In May 2006 Muyengi's replacement, the acting DGO, told us that they would have "finished them off", had the poachers who shot Muyengi been apprehended. The patrol had been searching for a well-known poacher the night of the patrol with the aim to "cripple him to stop him poaching".<sup>13</sup> The interview was interrupted when a barefoot handcuffed villager was slapped by a bicycle chain carrying ranger in the doorway. Later, I met a different man apprehended in the same night time raid. He was limping, and claimed he had been kicked and beaten with a pipe by rangers.<sup>14</sup>

Sporting heavy imitation gold jewellery, a pistol gripped shotgun and an expensive personal motorbike used for office errands the acting DGO projected an aura of power. The acting DGO epitomized the difficulties related to working at the interface of a lucrative wildlife industry as an underfunded district employee. He expressed his frustration at corruption within the judicial system that led to poachers being quickly released with minimal punishment. This, combined with low wages, a demanding job in remote areas,<sup>15</sup> and a lack of departmental resources (Muyengi 2003), led to incentives for bureaucrats to engage in corruption and aggressively administer 'bush justice'.

The department focused its resources on anti-poaching, lacking both the will and resources to engage in community outreach. The militant approach of district wildlife management staff fomented resentment on the part of villagers towards conservation.

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<sup>12</sup> A DEO put this into perspective: he earned 4 times as much as Muyengi (29 years) was 2 years from retirement (58 years) and could not afford the house that Muyengi built.

<sup>13</sup> Interview, JM, Acting DGO, Orkesumet, 25 May 2006.

<sup>14</sup> Discussion, P, suspected poacher, Orkesumet, 25 May 2006.

<sup>15</sup> Our interview was interrupted by a report of a human fatality by an elephant in Lemkuna village which the DGO had to attend to.

Villagers perceived that district staff did not believe in participatory processes nor the pastoral way of life.<sup>16</sup> People mistrusted and feared district natural resources staff, believing them to represent powerful pro-wildlife State, hunting and NGO lobbies.

### **District Wildlife Benefits**

Since 1992 just over 9 percent of fees from hunting revenues has been allocated to district councils where the wildlife is shot (Barrow 1996, PAWM 1996a: 26, TANAPA 1996) (Table 4.4). Annual Simanjiro District hunting revenues averaged approximately US\$ 32,000 per year (Table 4.5), less than 2 percent of total district revenues and have declined recently to less than 1 percent. This may contribute to an explanation for why wildlife management was not a priority for the SDC.

Of the district allocation, officially 60 percent was budgeted for investment in villages near the blocks.<sup>17</sup> In reality, few benefits filtered to local communities (Barrow 1996: 11); probably closer to 3-5 percent of hunting revenues actually reached villages where hunting occurred (Sachedina 2003: 7). Actual expenditure included projects more convenient to the District Council than villages supporting wildlife. Hunting revenue allocations may have been driven by political considerations. For example, infrastructure investments in Ruvu Remiti and Msitu wa Tembo, densely populated villages with large voting blocs (Table 4.6).

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<sup>16</sup> Discussion, NGO employee, Emboreet, 25 April 2004.

<sup>17</sup> Letters, E. Muyengi, DGO to Simanjiro DED, Ref. GD/R.20/16/51, 27 April 2004 and Ref. HMW/SMJ/U/VOL. II/13/42, 13 January 2006.

**Table 4.4: Hunting fees charged by the WD from 1988-1993 and division of revenue** (Source: PAWM 1996: 28)<sup>18</sup>

Type of Fee	Distribution	Institution	Revenue Division	Percent
<b>Game Fees</b>	0.25	TWPF	TWPF	25%
	0.75	Treasury	GR Retention	37.5%
			Treasury	28.1%
			District Councils	9.4%
<b>Other Fees</b>				
Observer		TWPF	TWPF	100%
Conservation		TWPF	TWPF	100%
Permit		TWPF	TWPF	100%
Trophy Handling		TWPF	TWPF	100%

**Table 4.5: Revenue generated by sport and resident hunting as a proportion of the total Simanjiro District Council budget between 2001 to 2005** (Sources: (SDC 2003: 56) and “Muhtasari wa Mapato Halmashauri Ya Wilaya ya Simanjiro” (Ref. HMW/SMJ/M/1/58 Dated 6<sup>th</sup> March, 2006)

Year	2001	2002	2003	2004	2005	Sub-totals
<i>Exchange Rate</i>	690	950	1000	1050	1080	
<b>Income</b>						
Total SDC Budget	\$1,837,564	\$1,704,697	\$2,189,818	\$1,949,807	\$2,399,535	<b>\$7,681,886</b>
Farm Tax collected	\$50,424	\$40,371	\$40,119	\$29,136	\$58,819	<b>\$218,870</b>
Resident Hunting	\$1,690	\$3,206	\$4,327	\$822	\$2,217	<b>\$12,261</b>
25% Tourist hunting	\$48,464	\$31,732	\$32,163	\$14,961	\$20,296	<b>\$147,616</b>
<b>Total Wildlife Revenues</b>	<b>\$50,153</b>	<b>\$34,938</b>	<b>\$36,489</b>	<b>\$15,783</b>	<b>\$22,513</b>	<b>\$159,877</b>
<i>% of Total Budget</i>	2.73%	2.05%	1.67%	0.81%	0.94%	1.64%

**Table 4.6: SDC tourist hunting revenue expenditure 2003** (Source: (SDC 2003: 255-257)

1. Repair of administration block (Orkesumet)	\$7,213
2. Ward office construction (Terat, Ruvu Remit, Orkesumet, Naberera)	\$6,000
3. Administration block for Msitu Wa Tembo Secondary School	\$5,121
4. Water pump purchase (Sukuro)	\$3,000
5. Generator purchase for District HQ (Orkesumet)	\$2,828
6. Water tank construction for Orkesumet Secondary School	\$4,326
7. District Natural Resource Dept. anti-poaching patrols	\$3,802
<b>Total for Tourist hunting for 2003</b>	<b>\$32,290</b>

<sup>18</sup> Game fees refer to costs levied per animal shot. Hunting fees refers to game fees plus other fees charged to hunters.

The Investments in Orkesumet suggests that hunting revenue was considered a source of funding to support political expediencies and District Council needs rather than as a community development mechanism. Villagers were aware that much of their potential revenue was lost and this undermined support for hunting:

“We’re more closely allied with the photographic operators than the hunters. They are finishing off the wildlife before we’ve had a chance to realize a profit from it. Hunters don’t recognize us; they only recognize the government... 25 percent of hunting fees goes into the ‘hole’ at the district. We’re supposed to get 5 percent: we don’t even see that. The WD controls everything”.<sup>19</sup>

### **A Quasi-Legal Haemorrhage: Resident Hunting**

Commercial poaching and unregulated hunting were reported as major causes of wildlife declines in the Maasai Steppe (Kibebe 2005, Sachedina 2003, TNRF 2005b). The involvement of government officials in natural resource plunder was a widespread problem in Tanzania (Walsh 2004, 2006). The forestry sector also faced unsustainable illegal extraction (Milledge and Kaale 2005, Milledge et al. 2007, Yakuti 2005). Resident hunting (not by tourists but citizens and expatriate residents) came under widespread attack due to abuses reported, and the lack of a regulatory or monitoring system (Nelson 1999, Singleton and Capper 2004, URT 1998b).

Resident hunting was administered by District Councils, with an annual quota requested from the WD which was also responsible for regulating the activity. All revenue from

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<sup>19</sup> Interview, VEO, Emboreet, 14 November 2003.

resident hunting was retained by the district. But resident hunting licenses cost a fraction of tourist hunting permits, easily afforded by the elites for whom hunting was marker of their distinctiveness. Resident hunters could freely boast of overshooting their quota.<sup>20</sup> Hunting and photographic operators reported poaching under the guise of resident hunting permits. Both sectors were united in supporting the cessation of resident hunting (see Appendix VII for a description of a temporary ban).<sup>21</sup>

To villagers, resident hunters undermined village authority, utilised resources on village land and contributed nothing financially. Resident hunting was a wasteful use of wildlife; villagers felt disempowered by it, it reinforced state control over their land, and provided opportunities for wealthy, powerful urban elites to bully local people. Village leaders in Emboreet were outspoken about resident hunting as a threat to tourism revenues.<sup>22</sup> But, little was done by the village to restrict resident hunting. Armed resident hunters in blood and dust encrusted vehicles intimidated local people. There were no official village game scouts employed by the village, district or private sector.

### **Neighbours and Enforcers: TANAPA and Village Relations**

TANAPA's Community Conservation Service (CCS), *Ujirani Mwema* – attempted to address resources issues beyond park boundaries such as land use change and hunting (Barrow 1996: 8, TANAPA 2002a). The WD did not have an equivalent of a CCS which institutionally constrained it to foster relations with local communities. CCS activities comprised extension work, including visits to and communication with villages,

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<sup>20</sup> I tried to collect data on exactly how many citizens versus expatriates bought hunting licenses in Simanjiro. This data was not forthcoming from the DNRO.

<sup>21</sup> Recorded interview, outfitter manager, 21 April 2005.

<sup>22</sup> A letter from Emboreet's VEO to the Simanjiro DED dated 24 December 2003 complained about resident hunter behavior on village land and requested more oversight from the District referring to the potential for “*..umaskini kubwa sana..*” (massive poverty) from unchecked resident hunting.

negotiation, education and coordination of planning exercises, and benefit sharing of tourism revenues. The bulk of CCS investments were to a program termed ‘Support for Community Initiated Projects’ (SCIP). SCIP was initiated in 1992 and stressed support for village level socio-development projects initiated by communities bordering parks (Barrow 1996: 10, Dembe and Bergin 1996). The approval mechanism for SCIP was devolved to a park level (TANAPA 2002a).

Overall, 7.5 percent of TNP’s operational budget was allocated to SCIP. From 2000-2005, CCS distributed US\$ 329,669 to projects in six districts adjacent to TNP. Of this, US\$ 152,353 was allocated to villages in Simanjiro; 46 percent of the total TNP SCIP budget. The bulk of funding went to villages in the plains – Loiborsoit, Emboreet, Sukuro, Terat (Table 4.7), illustrating the ecological value of the plains to TANAPA (TANAPA 1994, 2002a, 2003).<sup>23</sup> Funding was also channelled to maintain an SDC vehicle used for anti-poaching.

**Table 4.7: SCIP investment in Simanjiro between 2000 to 2005** (Source: TNP CCS Department)

<b>Village</b>	<b>Sector</b>	<b>Amount</b>	<b>%</b>
Loiborsoit	Water, livestock	\$56,800	37%
Emboreet	Education, Livestock	\$32,699	21%
Kimotorok	Education	\$16,833	11%
Sukuro	Health	\$16,748	11%
Orkesumet	DNRO Office	\$11,263	7%
Terat	Education	\$9,199	6%
Endonyo Engijape	Livestock	\$8,812	6%
<b>Simanjiro Total</b>		<b>\$152,354</b>	

Emboreet benefited from US\$ 32,699; an average of \$6,540 per year for various projects Table 4.8.<sup>24</sup> Though not an insignificant amount, villagers perceived TANAPA benefits

<sup>23</sup> Interview, CCS Warden, TNP HQ, 28 January 2005.

<sup>24</sup> Exchange rate used 1 US\$= 1,000 TZS.

as very small.<sup>25</sup> CCS faced the challenge of linking its activities to park conservation (Dembe and Bergin 1996: 23, Kangwana and Mako 1998). CCS engagement with villages was *ad hoc* and lacked a clear strategy, with no rationale for prioritising village engagement (TANAPA 1994). SCIP projects were reportedly also prone to local political manipulation around TNP.<sup>26</sup> Members of parliament lobbied TANAPA headquarters or the SCIP committee at Tarangire to fund projects in their constituency irrespective of conservation value.<sup>27</sup> TANAPA used SCIP to build political favour with local parliamentarians.<sup>28</sup>

**Table 4.8: SCIP investments in Emboreet Village 2000-2005** (Source: TNP CCS Department)

Project	Year	Sector	US\$
Construction- Dormitory	2000/01	Education	12,261
Renovation- administration block	2003/04	Education	15,438
Cattle Dip renovation	2004/05	Livestock	5,000

Prior to the 2004 general election, TANAPA funded the rehabilitation of the Emboreet livestock dip. The then MP Mr. Kone (a TANAPA trustee) claimed credit for this support. The project was started, and after the election ended, was never completed. To villagers, this suggested that TANAPA interest lay less in village development than it did in upward accountability to their trustees. Villagers complained that TANAPA did not contribute to any local employment. Apparently “*tanapa*” meant “guardianship” in Maa, so villagers asked why TANAPA did not assume this role for them.

Despite rhetoric of community partnership, TANAPA’s appeared more comfortable with top-down decision-making. Tarangire’s leadership prioritized anti-poaching and park management. Paramilitary patrols, in collaboration with the WD and in

<sup>25</sup> Interview, VEO, Emboreet, 22 March 2004.

<sup>26</sup> Interview, CCS Warden, TNP HQ, 28 January 2005.

<sup>27</sup> The CPW chaired with the CCS warden as secretary to the SCIP committee.

<sup>28</sup> Interview, CCS Warden, TNP, 28 January 2005.



camouflaged fatigues and Kalashnikovs were a more frequent and visible TANAPA presence in Simanjiro than CCS visits (Box 4.1). The CCS department faced institutional constraints; limited human resources and a broken down vehicle. The CCS warden, working alone, needed to build relationships with multiple villages in 6 different districts. The enormity of this task for a single individual meant that TNP's SCIP annual budget was rarely exhausted, with funds remitted back to TANAPA HQ. A former CCS Warden left for the NGO sector due to these frustrations. He said of the CCS that: "They do nothing- they just travel around. I know, as I did that work for seven years".<sup>29</sup>

#### **Box 4.1: Lions, Livestock and TANAPA**

In 2004, I witnessed a powerful ceremony celebrating two *murrans* from Loiborsoit who speared a lioness. It was a joyous occasion; hundreds of villagers sang and danced for the *murrans*. Killing a lion was the pinnacle of bravery within Maasai culture, and they guaranteed their names in local history for decades to come. They did not want to be photographed, or be interviewed stating that I might report them to TANAPA for poaching.<sup>30</sup>

Human rights abuses and corruption were recurrent complaints against TNP staff. Rangers arrested LM grazing in TNP. His dogs killed an eland calf. He alleged that rangers forced him to eat the raw meat and hide of the eland, and his dogs were shot. He was detained at the Loiborsirret gate before being jailed in Babati. EM claimed that following his arrest for grazing in TNP, he was detained at Kuro Rangers Post where his cattle were mutilated with machetes. In Kimotorok, villagers reported regularly bribing rangers when caught grazing in TNP.<sup>31</sup>

Significant SCIP investments failed to generate positive local support for TNP, but isolated confrontations fuelled animosity against the park (Ibrahim and Ibrahim 1995,

<sup>29</sup> Interview former TNP CCS Warden, Arusha, 31 May 2006.

<sup>30</sup> Interview two *Korianga*, Emboreet, 16 July 2004.

<sup>31</sup> Recorded interviews, KK, Chairman; KM, villager; OL, youth leader; Kimotorok, 6 July 2005.

Igoe and Brockington 1999, Kangwana and Mako 1998). Villagers complained that TANAPA responded slowly to reports of animal damage; and blamed them for the problem by having farmed corridors.<sup>32</sup> TANAPA's investment in enforcement affirmed people's fear that the park was an instrument of control over villages. To villagers, quotes within a TANAPA guidebook about Borner's SCA proposal, the demise of Tarangire,<sup>33</sup> and a call by OIKOS for rapid action in 'critical areas' legitimated that TANAPA coveted the plains (TANAPA 2002b: 21-25). Overall, villagers viewed TANAPA with suspicion; they believed that TANAPA intended to extend Tarangire onto village lands.<sup>34</sup> In turn Emboreet had a perception amongst TNP wardens as problematic and resistant to TANAPA's point of view. TNP's Outreach Warden claimed to have almost "given up on Emboreet".<sup>35</sup> Publicly, TANAPA touted its CCS program as a success (Chhatbar 2006).

### **Village Wildlife Returns to Emboreet**

"Not even a latrine has been built with tourism revenues..."

—WEO, Emboreet, 10 November 2005

Since the late 1990s, there have been more concerted efforts to create sustainable community based wildlife enterprises (Barrow 1996: 12). Ololosokwan village in Loliondo District generated over US\$ 55,000 per year from lease fees and bed-night fees from a constructed lodge and campsites, and has been widely recognised to be the most remarkable case of revenue generation from wildlife in the country (Nelson 2004, Nelson and Ole Makko 2005, Nelson 2007, Nelson et al. 2007). Its annual budget is orders of

<sup>32</sup> Discussion, villager, Emboreet, 14 September, 2004.

<sup>33</sup> Interview, ML, TANAPA Database Specialist, TNP, 30 June 2005.

<sup>34</sup> Interview, EN, Emboreet villager, Arusha, 1 May 2006.

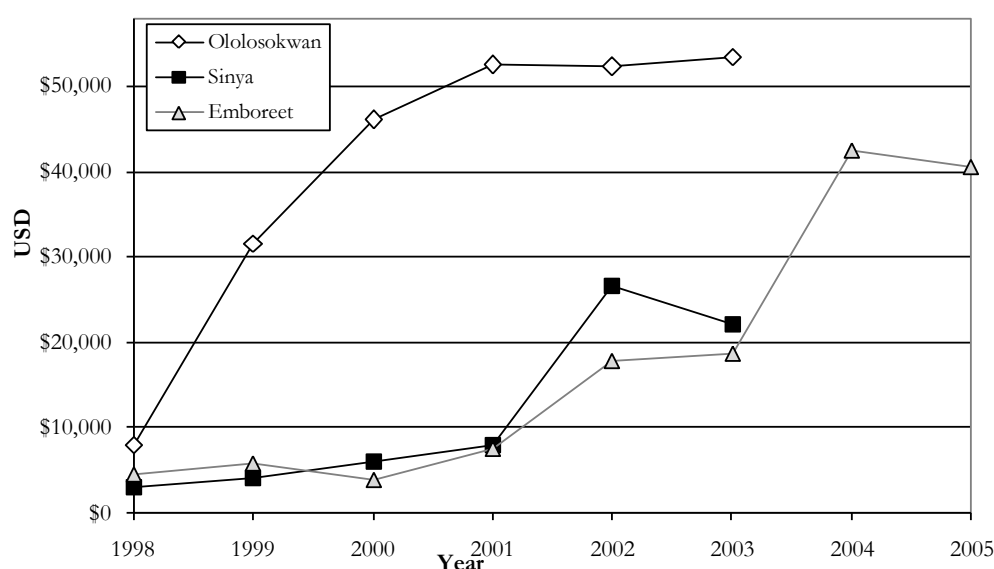
<sup>35</sup> Interview, TANAPA Warden, TNP, 28 January 2005.

magnitude above normal village budgets. Sinya village in Longido District generated US\$ 26,000 per year from a semi-permanent camp until a conflict with hunting outfitters disrupted operations. The amount generated by Emboreet village steadily increased from over US\$ 7,000 in 2001 to over US\$ 40,000 by 2005 (Table 4.9 & 4.10; Figure 4.4).

**Table 4.9: CBT revenue comparison between Ololosokwan, Sinya and Emboreet villages generated from concession and bed night fees** (Sources: Wildlife Working Group, unpublished data; Nelson 2004: 12-13; AWF Fact Sheet, unpublished data; and this study)

Village	1999	2000	2001	2002	2003	2004	2005
Ololosokwan	ND	\$31,600	\$52,437	\$52,239	\$53,386	ND	ND
Sinya	ND	ND	ND	\$26,601	\$22,137	ND	ND
Emboreet	\$5,746	\$3,907	\$7,512	\$17,812	\$18,617	\$42,356	\$40,592

**Figure 4.4: Tourism revenues to Ololosokwan, Sinya and Emboreet Villages between 1998 to 2004** (Sources: Wildlife Working Group, unpublished data; Nelson 2004: 12-13; AWF Fact Sheet, unpublished data; and this study)



In addition to direct revenue from tourism lease and bed-night fees, there were several other forms of wildlife revenue sharing with communities. These included employment,

SCIP funding and community development project funding from the SDC, NGOs, and hunting and tourism operators. These arrangements were loosely structured but nevertheless contributed significant amounts (Figure 4.5). Hunting outfitters shared profits in an informal and sporadic manner to garner local support (Davenport et al. 2002).

**Figure 4.5: Emboreet village offices constructed with hunting outfitter support**



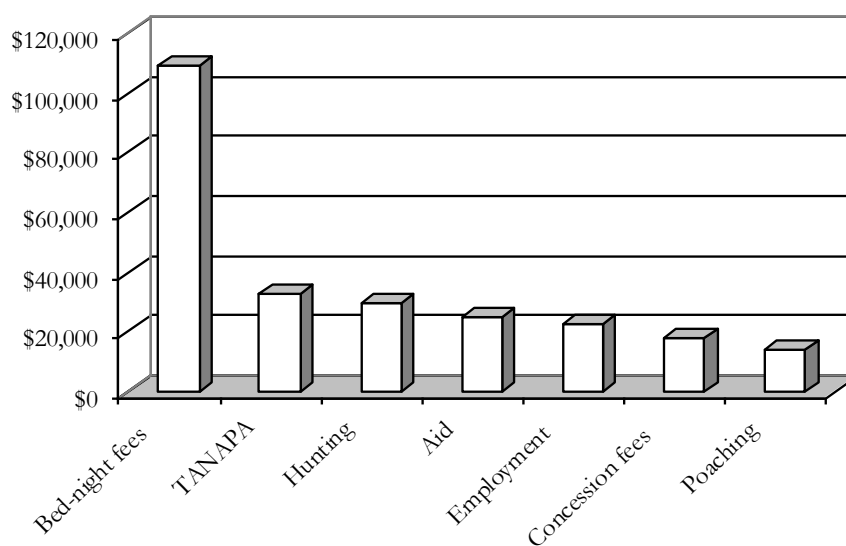
From 2001 to 2005, the total revenue from wildlife sources was over US\$ 250,000 in Emboreet (Table 4.10), with annual amounts fluctuating between USD 31,000 and US\$ 73,000. These data did not include tourism employee tips or casual labour wages that occurred sporadically. Thus, wildlife revenues in Emboreet are on a par with the best CBT example in the country: Ololosokwan.

**Table 4.10: Source and amount of wildlife related revenue to Emboreet Village from 2001 to 2005**  
(Sources: 1.) TPTS archives; 2.) (CF 2005); 3.) (Dorobo Tours 2005); 4.) Interviews with photographic and hunting operators and villagers)

Year	2001	2002	2003	2004	2005	Subtotals	Percent
<i>(Exchange Rate)</i>	690	950	1000	1050	1080		
Tourism bed-night fees	\$5,512	\$13,830	\$14,760	\$38,499	\$36,735	<b>\$109,336</b>	<b>44%</b>
TANAPA SCIP	\$12,261	\$0	\$0	\$15,438	\$5,000	<b>\$32,699</b>	<b>13%</b>
Hunting contributions	\$7,674	\$9,474	\$6,831	\$3,743	\$2,118	<b>\$29,840</b>	<b>11%</b>
Tourism Aid projects	\$1,170	\$7,701	\$14,653	\$797	\$777	<b>\$25,098</b>	<b>10%</b>
Tourism Employment	\$2,440	\$4,067	\$4,677	\$6,452	\$5,207	<b>\$22,843</b>	<b>9%</b>
Tourism concession fees	\$2,000	\$3,982	\$3,857	\$3,857	\$3,857	<b>\$17,553</b>	<b>7%</b>
Poaching	\$2,028	\$1,578	\$700	\$4,571	\$5,139	<b>\$14,016</b>	<b>6%</b>
<b>Total by Year</b>	<b>\$31,400</b>	<b>\$40,632</b>	<b>\$45,478</b>	<b>\$73,357</b>	<b>\$58,833</b>	<b>\$251,385</b>	<b>100%</b>

The majority of wildlife benefits came from bed-night fees (Figure 4.6). Bed-night fees were charged per client per night. Bed-night fees for TPTS and Dorobo Safaris were US\$ 10 per person.

**Figure 4. 6: Wildlife revenue into Emboreet Village (2001 to 2005) by source**



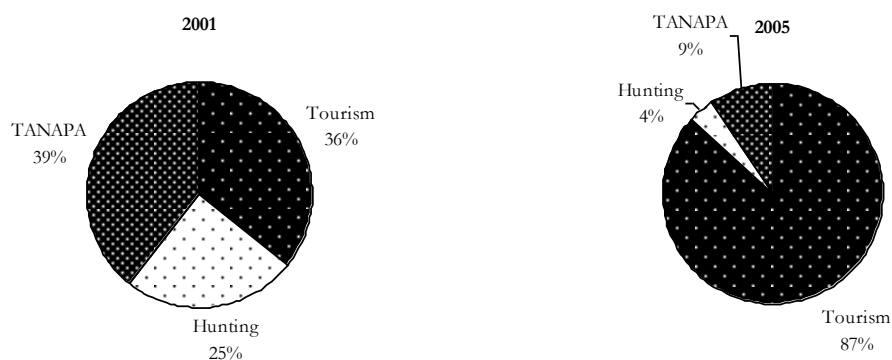
Combined tourism benefits constituted 74 percent of communal wildlife benefits (Table 4.11), when compared with hunting (13 percent) and TANAPA (14 percent) (this excludes figures from poaching).

Table 4.11: Gross Tourism, hunting and TANAPA incomes to Emboreet village 2001 to 2005

	2001	2002	2003	2004	2005	Subtotal	Percent
<b>Tourism</b>	\$11,122	\$29,580	\$37,947	\$49,605	\$46,576	\$174,829	74%
<b>Hunting</b>	\$7,674	\$9,474	\$6,831	\$3,743	\$2,118	\$29,840	13%
<b>TANAPA</b>	\$12,261	\$0	\$0	\$15,438	\$5,000	\$32,699	14%
<b>Totals</b>	<b>\$31,057</b>	<b>\$39,054</b>	<b>\$44,778</b>	<b>\$68,786</b>	<b>\$53,694</b>	<b>\$237,368</b>	<b>100%</b>

In terms of its importance compared with other wildlife streams, the proportion of tourism revenues grew from 36 percent in 2001 to 87 percent in 2006 (Figure 4.7).

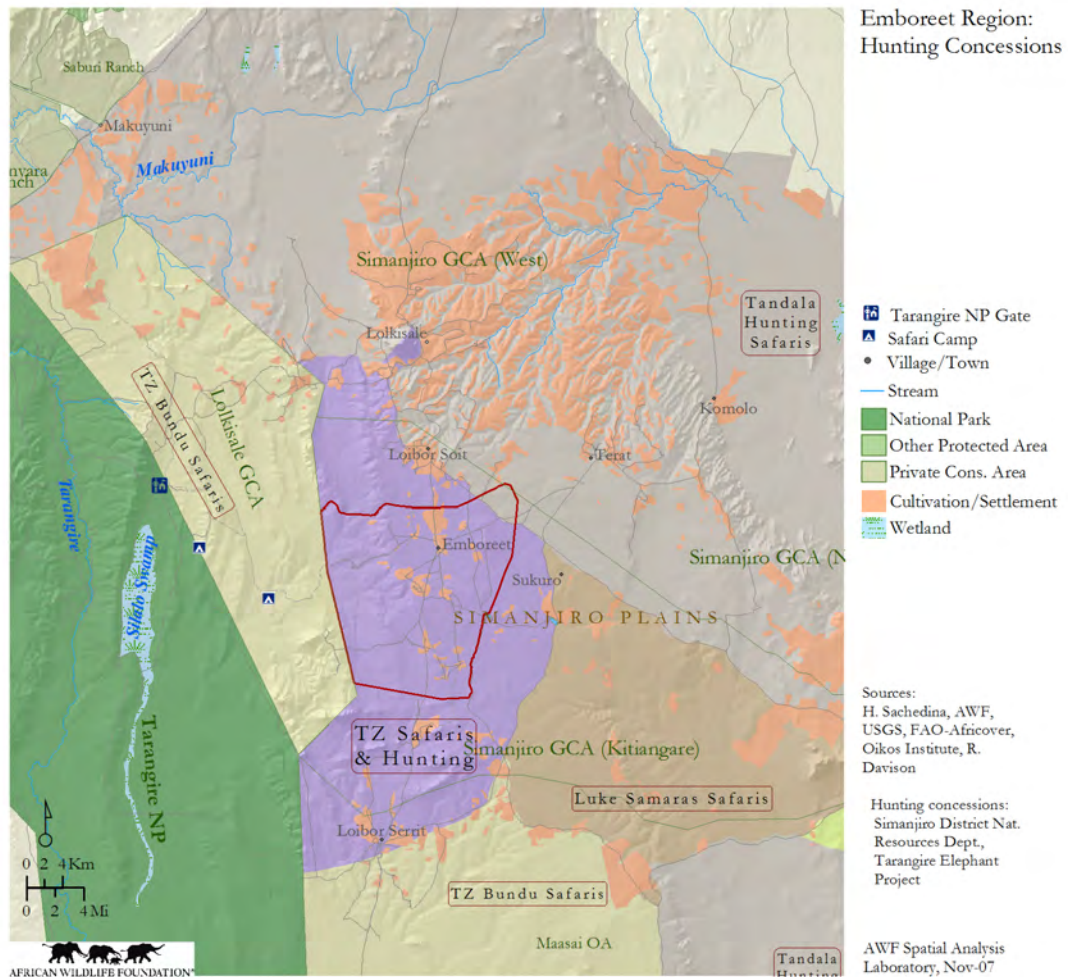
Figure 4.7: Proportion of gross tourism, hunting and TANAPA revenues to Emboreet in 2001 and 2005



Revenues could be allocated to individual benefits, village account payments and community benefits. Individual benefits included employment of individuals, educational scholarships or health clinics facilitated by tourism operators. The Village Council managed tourism bed-night payments and concession fees on behalf of the village as well as some contributions from hunting outfitters for socio-development projects. Emboreet received benefits from three hunting companies: TBGS, Bundu

Safaris and Luke Samaras Safaris (Figure 4.8). The third category was contributions from TANAPA which did not pass through the village account.

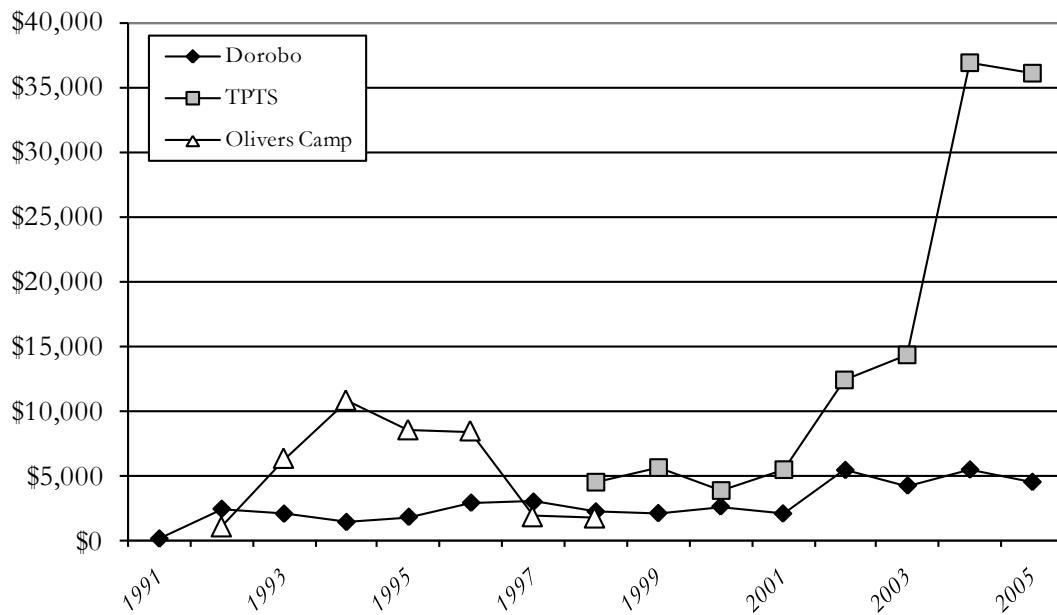
**Figure 4.8: Emboreet village in relation to hunting concessions**



The bulk of the revenue generated was by Kikoti Safari Camp (Figure 4.9), which grossed over US\$ 320,000 in 2004 (Hassanali Rutakyamirwa & Co 2004). Oliver's Camp ceased operation in 1998 in Emboreet (Sikoyo et al. 2001b: 14). Dorobo Safaris operated at a consistent yet low level attributed to wildlife depletion in this area.<sup>36</sup> Kikoti's payments to the village exploded from 2002, reflective of the growth in tourism to the 'northern circuit' (CSF and TANAPA 2004); making TPTS the key village investor.

<sup>36</sup> Recorded interview, DP, tour operator, Arusha, 15 April 2005.

**Figure 4.9: Total annual bed-night and concession revenues from TPTS, Oliver's Camp and Dorobo to Emboreet between 1998 to 2005** (Source: tour operator archives)



### Beyond Economics: Perceptions of Wildlife Returns

*“Badala ya kunyonya ng’ombe mwenyewe unapewa maziwa kwenye chupa”* (Instead of milking the cow yourself, you are given milk from a bottle)

—Villager’s description of limited wildlife benefits, Emboreet, 2005

Several studies explore people’s attitudes towards conservation (Bergin 1995, Holmes 2003, Infield and Namara 2001, Kangwana and Mako 1998, Newmark and Hough 2000, Parry and Campbell 1992). But, studies that did attribute improved attitudes to CBC carefully noted that circumstances resulting in behavioral change were not clear (Adams and Infield 2001).



My broad-scale survey asked whether wildlife contributed an overall loss or profit to people: 87 percent replied a “loss”, 6 percent responded a “profit”, and 6 percent replied “both loss and profit”. The proportion of 93 percent of people having some form of negative view of wildlife around TNP was larger than the 84 percent reported in 1994 (Newmark et al. 1994). I asked people if they received individual benefits from CBT and the park. In order to gauge people’s participation in CBT, I asked whether people were consulted when tourism was established in Emboreet. To explore the sensitive issue of Tarangire’s boundary, I asked about people’s perception of its present location. I present these data in table 4.12.

**Table 4.12: Responses to wildlife perception questions** (source: broad-scale survey)<sup>37</sup>

Question	N=	Percentages	
		Yes	No
1 Is there tourism in Emboreet?	219	80 %	12 %
2 Were you consulted when it began?	219	20 %	78 %
3 Do you receive household benefits from tourism?	225	8 %	92 %
4 Does the village receive benefits from tourism?	221	71 %	12 %
5 Does tourism have negative impacts for you?	185	39 %	53 %
6 Does your household receive benefits from TNP?	226	4 %	95 %
7 Does the village receive benefits from TNP?	220	48 %	33 %
8 Do farms stop TNP expansion?	219	74 %	18 %
9 Has the TNP boundary changed in your opinion?	220	71 %	1 %
10 If you received tourism revenues would you invest them into farming? <sup>38</sup>	121	77 %	23 %

Awareness of tourism was high: 80 percent knew of tourism within the village, but 78 percent said they were never consulted when the programs began. Fifty percent of households in Emboreet were classified as poor. Ironically, the majority of villagers, 92 percent, responded that they did not receive *any* household benefits from village tourism.

<sup>37</sup> Missing percentages reflect people who did not know or did not respond.

<sup>38</sup> I discontinued this question as it disquieted villagers.

TNP impacted even fewer households: 95 percent of villagers claimed they received no benefits from the park.<sup>39</sup>

About ten villagers benefited directly as photographic tourism employees. Ironically, these employees invested their wages into farming,<sup>40</sup> suggesting that even those who benefited directly from wildlife saw farming as a longer term development strategy. I interviewed all Emboreet villagers working at Kikoti at the time; not one knew how much tourism contributed to the village.

At the same time, villagers expressed pride that Emboreet possessed a lodge facility. Simanjiro residents perceived Emboreet as more ‘developed’ due to the fact that it had a concessionaire.<sup>41</sup> The land of the Kikoti concession was unsuitable for agriculture due to high wildlife numbers. Village leaders viewed the private sector as a buffer to park expansion,<sup>42</sup> based on a fear that land seen as ‘unused’ by the government was at greater risk of appropriation. The VEO referred to tourism concessions as: “...our shield so that the land is not taken” (*Hawa ndiyo ngao yetu ili eneo isichukulima*).<sup>43</sup> Comparatively powerful and wealthy expatriate investors were less likely to be evicted by the government in Tanzania’s investment promotion climate.<sup>44</sup> Villagers also cited the benefit of tourism revenues covering mandatory village and district levies (*mchango*).<sup>45</sup>

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<sup>39</sup> A villager stated that TNP helped to reduce cattle raiding by acting as a boundary to Mang’ati raiding parties.

<sup>40</sup> Recorded interview, PO, tour operator, Arusha 28 April 2005; discussion, SS, tourism employee, Laarkaitial, 16 June 2005; recorded interviews: KK, SK, LL, YL & IO, TPTS employees, Kikoti, 1 July 2005.

<sup>41</sup> Interview, Emboreet village councillor, Orkesumet, 24 March 2004.

<sup>42</sup> Interview, PO, tour operator, Arusha, 28 April 2005; Emboreet Village Council meeting minutes, Ref: K3/EMB/352/15/5, 20 & 21 November 1993.

<sup>43</sup> Interview, VEO, 22 March 2004, Emboreet. The use of the private sector as a ‘buffer’ was noted in Loiborsirret: an American cattle rancher was allocated land next to TNP; villagers felt the GoT would be less likely to evict a foreigner. Interview, WE, 19 April 2005, Arusha.

<sup>44</sup> Interview, PO, Arusha, 28 April 2005,

<sup>45</sup> Interview, JP, village councillor, Emboreet, 15 September 2004.

Clearly though, the majority of villagers felt that they personally received few tangible benefits from wildlife. I asked people how they would invest hypothetical tourism benefits at a household level, and 77 percent replied farming. But 71 percent of respondents believed that the village benefited from tourism, while 48 percent believed the village benefited from Tarangire. However villagers perceived a significant distinction between the ‘village’ administration and themselves; a distance made greater by a view of village leaders using their position to enrich themselves.<sup>46</sup> Participation in governance, including information regarding tourism revenues, was non-existent, and tightly controlled by village elites.

Attitudes towards tourists were combined with a vigorous resentment towards tourist hunting in Simanjiro, which was longstanding, intense and widespread. Villagers felt that hunting was destructive, exploitative, and disempowering, and jeopardised village CBT revenues.<sup>47</sup> Archives revealed a history of complaint letters written by villages complaining about hunting.<sup>48</sup> People referred to hunting as a ‘calamity’ that abused human rights (Box 4.2).

TBGS carried out the most organized semblance of a village development program. But its support seemed erratic, lacking in strategic direction, and not linked to conservation. Piecemeal donations of stationery, furniture, and medical supplies, constituted the bulk of TBGS’s development efforts (CF 2005). Outfitters believed that the farming and resistance to conservation was due to villagers’ ignorance of the value of wildlife.<sup>49</sup>

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<sup>46</sup> Discussion, AM, villager, Emboreet, 13 February 2005.

<sup>47</sup> Emboreet Village Council meeting minutes, 14 January 1995, Ref. KIJ/EMB/325/SK/16/5/95; Emboreet Village Council meeting minutes, 6 June 1997, No Ref., Agenda 3.

<sup>48</sup> Letter from Emboreet to Simanjiro DC, 13 September 1994; Letters, WEO – Emboreet to Luke Samaras Safaris, 20 August 1993 and 27 November 1993, Refs. OMW/EMB/MAL/1.93 and OMW/EMB/MAL/6.93.

<sup>49</sup> Recorded interview, outfitter employee, Arusha, 21 April 2005.

TBGS's 'Conservation Foundation of Tanzania' distributed 1000 environmental education pamphlets to villages advising villagers to stop farming. The cartoons in poorly phrased Maa heightened antagonism; villagers perceived it as evidence of a patriarchal external campaign to stop farming (CF 2004). These perceptions could explain that while village leaders tried to enforce anti-poaching, villagers did not; bushmeat was widely consumed and it was common knowledge who was involved.

#### **Box 4.2: The Sub-Village Chairman's Castration**

In 1986, a *murran* was reportedly assaulted by sport hunters during an *orpu<sup>50</sup>* in the Lolkisale GCA (Motomoto 1992). He sustained lifelong genital injuries. The case was widely cited by villagers (known as the 'castration of the *mwenyekiti*') to lobby against hunting. The *murran* became a sub-village chairman in Emboreet and crusaded for over 20 years but failed to obtain compensation. He enlisted the support of the MP and the media but to no avail. Reportedly, the WD attempted to block this compensation case.

In 1983, a Maasai herder was allegedly run over intentionally by a hunting vehicle. The Kiswahili press reported that villagers threatened to kill all wildlife in Simanjiro in retaliation for human rights abuses by hunters (Motomoto 1992). The underlying issue was that villagers felt disempowered and disenfranchised by tourist hunting on communal lands.

<sup>50</sup> Customary meat feast conducted by Maasai men in the bush. Discussion, SL, Emboreet, 15 September 2004.

## The Anatomy of Corruption

*“Iyolo ingishu ong’ok iim ereshata okimgiki”* (Maa: It is known that cattle deceitfully gained trickle through the fingertips)  
 — Maasai proverb, SK, Esilalei sub-villager, 2005

Tragically, local misuse of tourism revenues can cause poverty (Thompson 2002, Thompson and Homewood 2002).<sup>51</sup> Problems with accountability of wildlife revenues by village leaders (Murombedzi 1991, Woien and Lama 1999), and community heterogeneity affected CBC projects in Tanzania and elsewhere in Africa (Brockington 2007, Davenport et al. 2002, Gillingham 1997). Conservation in a ‘market-driven’ context frequently transforms environments towards consumptive and touristic experiences. This can have the effect of revaluing landscapes and transforming power relations in ways that are often detrimental to local livelihoods.

Early in the WMA process, concerns were raised about the risks of the private sector driving CBC in village lands. The 1990 Investment Promotion Act stated that enterprises on community land must have community equity (meaning part community ownership). However, the history of CBC had been to excise such land from communities such as Oliver’s Camp, Klein’s Camp in Ololosokwan, and VIP Safaris in Grumeti-Ikorongo.<sup>52</sup> While tourism was undeniably the core for most CBC strategies in Tanzania, profit-making motives sometimes provided incentives to the private sector to act in ways which undermined CBC and the resource base.

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<sup>51</sup> Richard Leakey, lecture, Royal Geographical Society, London, 15 March 2007.

<sup>52</sup> Memo from P. Bergin, AWF to ‘Community Conservation Coordinator’ dated 24 September 1997, Ref. Guidance for WMA’s – Memo for Discussion.

Villages are considered a corporate entity according to Tanzanian law: they can sue, own property and enter into contracts with other corporate entities. Village institutions and governance exist through the existence of the Village Assembly and Village Council which are supported by various specialized committees (Nelson and Ole Makko 2005). A Village Executive Officer (VEO) and Chairman were responsible for day-to-day village administration. A district employee, the role of the VEO ranged from planning, management, monitoring, and law enforcement (Intermacco Ltd. 2004). The District has powers of regulating and monitoring revenue collection from the Village Council under the Local Governments Act (1982).

Problems of accountability of village tourism revenues were noted in CBT projects in northern Tanzania (Nelson 2004, Nelson and Ole Makko 2005, Woien and Lama 1999).<sup>53</sup> In Emboreet, villagers regularly claimed that village officials personally benefited from tourism revenues.<sup>54</sup> SDC audits uncovered “numerous” examples of village leaders misappropriating village funds in the district,<sup>55</sup> and this sometimes resulted in removal from office (Msangi 2004b). Irregularities in Emboreet’s audit included:

- Village leaders were not transparent nor democratic in village fund management;
- Government protocols of managing village funds through committees, Village Council meetings, and village General Assemblies were ignored;
- Village fund management showed evidence of significant fraud.
- There was poor record keeping and travel and allowances were well over budget

(Msangi 2004a, Msangi 2004b).

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<sup>53</sup> Recorded interview, PO, tour operator, Arusha, 28 April 2005.

<sup>54</sup> Interview, Emboreet village councillor, Orkesumet, 24 March 2004; Discussion, YK, Emboreet, 11 September 2004; Interview, DC, Emboreet, 17 September 2004.

<sup>55</sup> Interview, MB, SDC Officer, Orkesumet, 26 May 2006; Recorded interview, PO, tour operator, Arusha, 28 April 2005.

The 2004 audit stated that signatories were ignored, leaders overspent on travel allowances, internal audit systems in the village were corrupt, and a lack of oversight resulted in the VEO wielding excessive control over the allocation of funds (Msangi 2004a: 2). The VEO fulfilled the roles of signatory, financial manager and auditor for the village. The net result was that auditors could not verify expenditures of over US\$ 25,000 in 2004 due to a lack of supporting documentation. Fraud was possible as the village account had three signatories: the VEO, Chairman and a Maasai woman.<sup>56</sup> It was rumoured that the VEO and Chairman made her sign blank cheques with which they drew from the account in Arusha with impunity. The audit listed loans allocated to villagers; several of whom were village councillors, or within the VEO's family. In villages where audits uncovered fraud, the district first queried the VEO.<sup>57</sup> Witnesses believed that the SDC did not discipline the VEO as the auditors were influenced. They alleged that a flow of meat, beer, and prostitutes arranged by the VEO occupied most of the time of the audit in Emboreet. The VEO told me that the district auditor was his friend, and once solicited cash from the VEO. In exchange, he offered to teach the VEO "...all the tricks of fraud".<sup>58</sup>

I went through Kikoti Safari Camp's financial records at TPTS and recorded every payment made to the village bank account or villagers between 1998 to April 2006. In addition, I quantified the number of bed-nights recorded per month by the reservations department. I encountered inconsistencies with payments to the village compared with the number of bed-nights TPTS recorded.<sup>59</sup> In 2004, bed-nights fees alone should have earned Emboreet US\$ 34,050 at the rate of US\$ 10 per bed-night specified in the 1998

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<sup>56</sup> Emboreet Village Council meeting minutes, 27 February 2004, Ref. KIJ/EMB/352/MIH/1/02/2004: Ag. No. 07/04.

<sup>57</sup> Interview, MB, SDC Officer, Orkesumet, 26 May 2006.

<sup>58</sup> "...*trickey zote za uvizi*". Discussion, VEO, Arusha, 26 January 2005.

<sup>59</sup> The bed-night register was used by TPTS to keep track of lodge occupancy.

TPTS-Emboreet contract but TPTS only paid the village US\$ 24,312 in 2004 according to TPTS bank deposit slips. In 2003, the bed-night fee was increased to US\$ 20 per (TPTS and Emboreet Village 2003). Had TPTS honored this agreement the shortfall in payments to Emboreet was even more significant. An analysis of TPTS bank vouchers paid to Emboreet from 1998 to 2005 suggested a possible shortfall in village payments; perhaps as much as US\$ 62,000 over 8 years.<sup>60</sup> It is possible that TPTS could have paid the balance to Emboreet, but there was no record of it in TPTS's accounting files, nor did I have access to Emboreet's bank statements.

In 1998 and 1999, TPTS payments were paid in cash to the VEO and the Chairman. Initially, these amounts were under US\$ 100. From 2000, TPTS used cheques to pay the village bank account and payments to individuals declined. Some individual payments were made but receipts were not available to prove that payments went to the causes specified. In 2004 and 2005, the VEO, Chairman and Ward Executive Officer drew personal cheques totaling US\$ 3,000.<sup>61</sup> These cheques were paid from money owed to the village by TPTS from village monies at TPTS. Other CBT operators in Emboreet paid individuals in cash against village tourism funds. But they claimed that this practice stopped as soon as Emboreet established a village bank account.<sup>62</sup> In the case of TPTS, copies of the 2004-2005 personal cheques were filed in the 1998 section of TPTS's otherwise immaculate filing system. This system may have benefited TPTS: in December 2007, Emboreet agreed to a 30 year contract extension,<sup>63</sup> a marked departure from its previous 5 year leases. Transparency between TPTS and the village was low: villagers did not have access to bed night registers or accounts; villagers who worked at Kikoti had no

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<sup>60</sup> Possibly more if the US\$ 20 bed-night were calculated from 2003.

<sup>61</sup> In 2002, the Emboreet Village Council named a committee to oversee the TPTS contract on behalf of the village. Four of the six committee members either received payments individually or worked for TPTS.

<sup>62</sup> Recorded interview, PO, 28 April 2004, Arusha.

<sup>63</sup> E-mail from PP, dated 15 January 2008.



idea about visitor numbers and revenues, and the Village Council depended on TPTS for accounting.

It is impossible to know how these funds were used and that they may well have gone directly to good village development causes. If this were the case then the close relationships that these leaders enjoyed with the company is a manifestation of the strength of the relationship with the village as a whole. However, given the published problems of probity of local government institutions (Brockington 2007, Igoe and Brockington 1999, Nelson 2004), it is also possible that the funds were misused and that monies paid did not have the impact on village development that the company might have wished. If that was the case then the benefits the company gained (close access to local leaders, and cheaper payments overall), have to be set against the losses that it may well have experienced from the perception that conservation funds were not helping local groups.

The privileged and nontransparent relationship benefited village officials with unaccountable personal sources of cash. In turn, village officials did not question Kikoti's accounting. TPTS's owner felt that tourism revenues had increased farming in Emboreet.<sup>64</sup> He acknowledged the lack of benefits due to village financial accountability: "Ask a woman in Emboreet 'what has Kikoti done for you?' They'll say "Nothing""<sup>65</sup>. However, TPTS opposed a household level dividend scheme because it would upset the *status quo*. TPTS's owner's behavior resembled that of a politician - strategic and public donations to village causes, discreet 'donations' to protect his business interests,<sup>66</sup> and

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<sup>64</sup> Discussion PP, TPTS director, Arusha, 4 October 2004; interview, PP, Arusha, 11 April 2005; Interview, PP, tour operator, Arusha, 11 April 2005.

<sup>65</sup> Recorded interview, PP, tour operator, Arusha, 18 April 2005.

<sup>66</sup> TPTS's owner alleged that he paid the WD Zonal Anti-poaching Unit to settle accusations of a former lodge manager poaching from Kikoti. Interview, PP, Emboreet, 28 January 2005.

contributions to senior CCM officials – which did not fit his rhetoric about community empowerment and conservation. This meant that although from 1998 to 2005, TPTS paid Emboreet over US\$ 156,000 in tourism benefits (Table 4.13), these funds were not linked to conservation activities.

**Table 4.13: TPTS Benefits to Emboreet (1998-2005)**

Description	1998	1999	2000	2001	2002	2003	2004	2005	Totals
<i>Exchange Rate</i>	600	600	745	890	950	1000	1050	1080	
<b>Bed-nights</b>	\$4,497	\$5,746	\$3,907	\$3,982	\$9,540	\$11,550	\$34,050	\$33,245	<b>\$106,517</b>
<b>Concession Lease</b>				\$1,500	\$2,857	\$2,857	\$2,857	\$2,857	<b>\$12,928</b>
<b>Employment</b>				\$1,900	\$2,977	\$2,977	\$5,492	\$4,207	<b>\$17,552</b>
<b>Medical aid</b>						\$13,250			<b>\$13,250</b>
<b>Office construction</b>					\$5,778				<b>\$5,778</b>
<b>Totals</b>	<b>\$4,497</b>	<b>\$5,746</b>	<b>\$3,907</b>	<b>\$7,382</b>	<b>\$21,152</b>	<b>\$30,634</b>	<b>\$42,399</b>	<b>\$40,309</b>	<b>\$156,025</b>

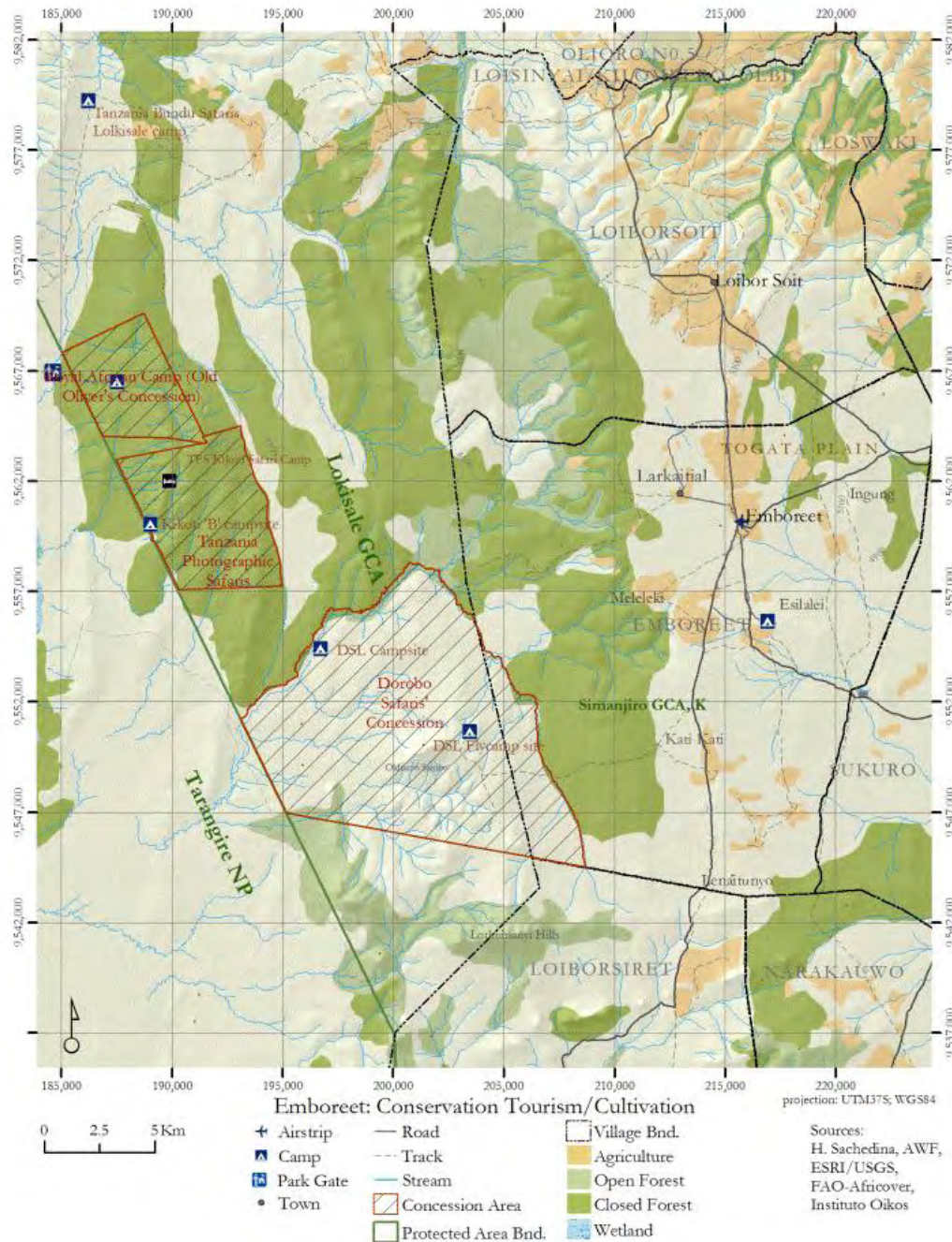
Dorobo Safaris, and its owners, the Peterson family, were highly regarded for their integrity. They pioneered CBT in Tanzania, and through their NGO, Ujamaa Community Resource Trust, strove to empower villages. But even Dorobo paid cash to Emboreet leaders, and gave their family members jobs and scholarships.<sup>67</sup> This suggested that even tour companies that strove for checks and balances contributed to a system that rewarded a few influential villagers but ignored accountability as a whole. The Petersons acknowledged their lack of impact on conservation and household livelihoods, but noted that their sizeable concession limited agriculture (Figure 4.10).<sup>68</sup> This raised questions of whether CBT should impact a small concession or the wider community; to what extent should tour operators attempt to impose accountability over village tourism funds?<sup>69</sup>

<sup>67</sup> Interview, TP and DP, tour operators, Arusha, 12 August 2005.

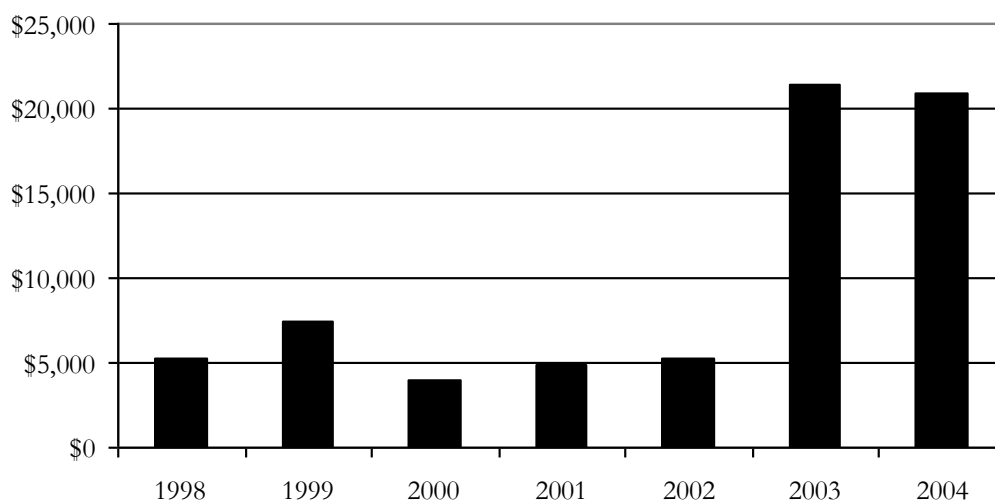
<sup>68</sup> Recorded interview, DP, tour operator, Arusha, 15 April 2005.

<sup>69</sup> A former TANAPA Director-General claimed that tourism corrupted village leaders. Recorded interview, PO, tour operator, Arusha, 28 April 2005.

Figure 4.10: Agriculture in relation to CBT concessions in Emboreet



Management of village funds lacked transparency once they reached the village account. An analysis of village budgets from 1998 to 2004 illustrated considerable growth in village expenditures in 1998 from US\$ 5,300 to over US\$ 21,000 in 2003 (Figure 4.11).

**Figure 4.11: Emboreet Village Budget 1998- 2004** (Sources: village archives; Msangi 2004a and 2004b)

Village leaders allocated themselves about 28 percent of the village budget in terms of travel allowances, salaries, entertainment and loans to associates (Table 4.14). Other major expenses such as office expenses (meetings, furniture and stationary), and infrastructure and repairs consumed 26 percent of the budget. Msangi (2004a and 2004b) stated these payments lacked supporting documentation. Weaknesses in the system resulted in perhaps over 50 percent of the village budget being vulnerable to manipulation (cf. Brockington 2006). It is possible that these funds were used legitimately, but villagers were skeptical; they believed that expenses were overstated so that funds could be stolen, or contracts awarded for infrastructure based on who paid the highest kickback.

Village finances were overseen by the ‘Finance, Economics and Planning Committee’;<sup>70</sup> in theory, a powerful institution in village development. The Emboreet committee included the VEO, Chairman, members of their families, and a previous VEO and

<sup>70</sup> *Kamati ya Fedha, Uchumi na Mipango.*

Chairman allegedly fired for corruption.<sup>71</sup> Witnesses alleged that the VEO influenced the committee with cash and sugar to endorse his accounting at village meetings. They alleged that associates of the VEO were primed before the meeting to silence critics of the budget.<sup>72</sup> They claimed that people who queried officials risked having their farm allocations nullified by the VEO. Officials used the fear of land alienation as a smoke screen so people focused less on village financial management. Thus, tourism revenues were controlled in a haze of confusion and fear. For many villagers, the risks of retaliation against their livelihoods outweighed the illusion of household wildlife benefits.

**Table 4.14: Comparison of Emboreet village revenues and expenditures, 1998 to 2004** (Sources: village archives; Msangi 2004a and 2004b)

Year	1998	1999	2000	2001	2002	2003	2004 <sup>73</sup>	Totals	%
<i>Exchange Rate (TZS)</i>	600	600	745	890	950	1,000	1,050	833	
<b>Village Revenue</b>	<b>\$9,773</b>	<b>\$12,405</b>	<b>\$8,428</b>	<b>\$11,406</b>	<b>\$15,520</b>	<b>\$19,227</b>	<b>\$25,442</b>	<b>\$102,201</b>	
Borehole	\$2,692	\$3,105	\$3,664	\$5,622	\$0	\$0	\$1,099	<b>\$16,182</b>	<b>18%</b>
Travel	\$1,981	\$2,496	\$2,403	\$2,299	\$1,207	\$1,807	\$1,689	<b>\$13,882</b>	<b>16%</b>
Office expenses	\$715	\$787	\$388	\$404	\$1,265	\$5,199	\$3,811	<b>\$12,568</b>	<b>14%</b>
Primary school	\$1,169	\$0	\$0	\$255	\$442	\$8,682	\$264	<b>\$10,812</b>	<b>12%</b>
Infrastructure repairs	\$0	\$0	\$0	\$0	\$957	\$2,625	\$6,972	<b>\$10,553</b>	<b>12%</b>
Salaries & allowances	\$824	\$791	\$564	\$730	\$832	\$1,460	\$1,310	<b>\$6,510</b>	<b>7%</b>
Levies	\$267	\$0	\$403	\$253	\$493	\$1,220	\$2,476	<b>\$5,111</b>	<b>6%</b>
Entertainment	\$322	\$231	\$276	\$708	\$79	\$240	\$2,007	<b>\$3,862</b>	<b>4%</b>
Maize purchase	\$0	\$1,500	\$0	\$0	\$0	\$0	\$2,335	<b>\$3,835</b>	<b>4%</b>
Court Expenses	\$1,433	\$1,279	\$0	\$84	\$0	\$0	\$0	<b>\$2,797</b>	<b>3%</b>
Village activities	\$0	\$1,542	\$293	\$542	\$0	\$0	\$0	<b>\$2,376</b>	<b>3%</b>
Loans and grants	\$0	\$333	\$0	\$112	\$0	\$200	\$95	<b>\$741</b>	<b>1%</b>
<b>Totals</b>	<b>\$5,279</b>	<b>\$7,417</b>	<b>\$4,034</b>	<b>\$4,845</b>	<b>\$5,274</b>	<b>\$21,432</b>	<b>\$20,958</b>	<b>\$89,227</b>	<b>100%</b>

The village paid the Chairman a wage of approximately US\$ 9.52 per month (US\$ 114 in 2004) which he derided as “soap money”.<sup>74</sup> He did not report significant sources of other income. Yet his reported expenses were US\$ 1,345 in 2004. The VEO reported an annual income of US\$ 457 yet his household reported expenses of US\$ 1,278 in

<sup>71</sup> Emboreet Village Council meeting minutes, 30 December 2004, Ref. KIJ/352/MIH/1/12/2005.

<sup>72</sup> Discussions, RN, OL and TN, Emboreet, 17 July 2005.

<sup>73</sup> Data for 2004 is from January 1<sup>st</sup> to September 30<sup>th</sup> only.

<sup>74</sup> Interview, Chairman, Emboreet, 14 September 2004.

2004.<sup>75</sup> The Chairman was considered a pauper (Maa: *orkeijun*) in terms of cattle.<sup>76</sup> To villagers this explained the incentive to engage in corrupt tendencies. Both invested heavily in their extended families - funding education, shoats and farming. The VEO developed an alcohol addiction, purchased a motorcycle worth over US\$ 1,000 and spoke to me of his plan to build a costly concrete home.

The distribution of power shaped by patronage relationships resulted in the majority of villagers feeling that village institutions did not represent their interests. Disempowerment resulted in apathy and little public pressure for accountability on the village leadership. Leaders kept village financial matters nontransparent. People were banned from taking notes at village meetings.<sup>77</sup> It was rumored that the VEO underreported actual revenues;<sup>78</sup> he refused to show people copies of the budget or receipts, and personally prepared meeting minutes. Systematic plunder extended beyond tourism revenues into most forms of revenue collection by the village office: household levies and donor funds were not accounted for and their development projects never completed.<sup>79</sup> The VEO's concentration of power was possible as he was administratively responsible for the day-to-day business of the village. The Chairman and several village councillors were illiterate, depending on the VEO for clerical matters. In his own words: "I am the VEO, and the Chairman".<sup>80</sup>

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<sup>75</sup> From 2005, VEOs became district employees. Previously they were village employees. Interview, VEO, Emboreet, 7 May 2004; Discussion, JO, Emboreet, 31 January 2005.

<sup>76</sup> Interview with RK, villager, Emboreet, 3 February 2005.

<sup>77</sup> While village assemblies in theory represent the entire village populace, these meetings were sparsely attended and unrepresentative. Women interviewed knew nothing about tourism revenues or land issues. Tourism revenues and land issues were male domains.

<sup>78</sup> Discussion, JO, Emboreet, 1 April 2005.

<sup>79</sup> I fundraised US\$ 3,000 for the Emboreet Primary School. The WEO strongly advised me not to put the funds into the village account as it would be misappropriated, WEO, Emboreet, 10 November 2005.

<sup>80</sup> Discussion, VEO, Emboreet, 20 November 2005.

It is important to realize how significant the existing level of wildlife revenues could be on household livelihoods and land use decision making. In 2005, the SDC convened a Village Assembly to guide a participatory village development planning process to reduce dependence on food aid, which has been disbursed in Emboreet since 1976. The output was an official plan in which a key development goal to increase sub-household level income by US\$ 93 per year to US\$ 185 by 2008, primarily from farming (SDC 2005). Therefore, depending on how many wives a man had, the amount per household would vary. In 2005, wildlife revenues to Emboreet totalled US\$ 53,694 (Table 4.11), approximately US\$ 90 per sub-household. This amount would have purchased over 800 KG of maize which could have provided the average household in Emboreet (5.41 AU) with food security for most of the year. Thus, unbeknownst to villagers, wildlife in 2005 technically already injected the money that villagers identified as their poverty reduction target by 2008.

### **Wildlife Poaching**

Heavy poaching in Simanjiro was reported from the 1970s.<sup>81</sup> Rhinos were eradicated in the ecosystem by the early 1980s, and elephant declined significantly (Foley 2002, TNRF 2005b). The Former parastatal TAWICO culled approximately 4,000 animals (mainly zebra and wildebeest) a year in Arusha region, significantly impacting Simanjiro's wildlife populations (Igoe and Brockington 1999, Sommerlatte and Melamari 1989, TNRF 2005b). Simanjiro's proximity to Arusha, Mererani and Moshi, Rombo and Kondoa Districts meant that it sustained long-term commercial poaching pressure (Barnett 2000,

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<sup>81</sup> Letter, village NRO to DNRO, 30 March 1973, Ref. L/G/P.3.

Foley 2004, TNRF 2005b).<sup>82</sup> In 2004, bushmeat cost about 50 percent less per kilogram than beef in Arusha.<sup>83</sup> Elephant poaching decreased significantly after the 1989 ivory ban, but bushmeat poaching remained a consistent off take in northern Tanzania (Arusha Times 2004, Campbell et al. 2001, Majira 2003, Musa 2004, Nelson 1999).

Poachers apprehended around Tarangire were from the poorest segments of society,<sup>84</sup> but village and urban based elites were involved under the guise of resident hunting or farm protection. It was impossible to quantify the full scale of the off take but recent wildlife declines suggested it was a major cause. The Tanzania People's Defense Force (TPDF) hunted in Kimotorok using trucks.<sup>85</sup> Soldiers aggressively responded to villagers in Emboreet that it was their right to shoot wildlife. The TPDF controlled massive areas of wildlife habitat throughout Tanzania as training grounds. During an official AWF visit to a training ground with senior TPDF officers in 2003, a soldier was enthusiastic to hunt until an officer instructed him to contain his enthusiasm (*pers. Obs.*), suggesting that this unit hunted regularly for meat. This has led to arguments that poaching represented the primary threat to Tarangire's wildlife, not agricultural conversion (TNRF 2005b).

Poaching constituted 6 percent of total estimated wildlife benefits in Emboreet from 2001 to 2005 (Table 4.10); from participation in resident hunting guiding, meat sales and commercial meat poaching. Understandably, villagers were secretive about these activities. Poaching data was obtained through key informants, as well from my research assistants who interviewed the people involved. Two respondents poached impala at

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<sup>82</sup>“*Dodoma ilikuma inawanyama, lakini wamekula; huoni bata panya wala kobe*” (Dodoma Region used to have wildlife, but they have eaten it all; you don't even see a rat or a tortoise), recorded interview, KS, former Chairman, Kimotorok, 5 July 2005; Simanjiro DGO to Tarangire-Manyara Ecosystem Working Group, Arusha, 21 September 2004; Recorded interview, EL, DNRO, Orkesumet, 20 July 2005.

<sup>83</sup> Discussions, GM, RN, KK, Arusha, 2005.

<sup>84</sup> Former TNP CPW (TNRF 2005b).

<sup>85</sup> Discussion, MM, Kimotorok, 6 July 2005.



night using a torch and a motorcycle horn (to dazzle and distract the animal) selling the meat in Emboreet sub-village. Several villagers guided resident hunters, or colluded with motorized poachers in exchange for payment and the meat which they sold for extra income. None of the poachers interviewed were Maasai.

Two villagers operated a quasi-legal game meat venture. A buffalo license for a citizen cost approximately US\$ 5.50. Villagers could earn US\$ 200 from meat sales in Arusha of one buffalo.<sup>86</sup> A Regional Game Officer (RGO) put this into perspective: “What is 6,000 shillings? It’s like buying a cockerel”.<sup>87</sup> Villagers obtained district licenses but overshot their quota. One sold bushmeat worth US\$ 1,667 in 2005,<sup>88</sup> and alleged that DGO Muyengi oversold the district quota to fund construction of his home.<sup>89</sup> Two individuals engaged in zebra skin poaching.<sup>90</sup> Villagers used district farm protection licenses to poach when the hunting season ended. Thus, resident and farm protection licenses provided a measure of legitimacy for poachers, but the lack of regulatory enforcement meant that district based resident hunting served as a cover for wildlife poaching.

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<sup>86</sup> Interview, JK, Villager, Emboreet 22 November 2003.

<sup>87</sup> Manyara RGO to SWF meeting, Emboreet, 2 October 2004.

<sup>88</sup> Discussion, JK, Emboreet, 25 February 2005.

<sup>89</sup> A researcher suggested that 97 percent of SDC resident licenses involved corruption. Discussion, DL, Mweka student, Orkesumet, 9 June 2005.

<sup>90</sup> In 2004, 44 skins sold for US\$ 57 each in Arusha.

## Land Use Planning and Land Loss

*“Ukitaka Maasai atapike, usimpe dawa, mwongee mambo ya “conservation””* (If you want a Maasai to vomit, do not drug them, talk to them about conservation)

—DEO, Emboreet, 23 June 2006

Having considered the policy context of wildlife management in the previous chapter, and observed the disconnection between wildlife revenues, villager benefits and conservation outcomes, we are now in a position to consider in more detail some local responses to other conservation initiatives. This is important both for understanding village politics, and, as I will argue later, for understanding village land use plans.

In the late 1990s, the government mainstreamed Land Use Planning (LUP) to transfer more control over resources to villagers through village development plans (Kooiman 1997). Theoretically, LUP supported democratic and ‘bottom up’ poverty alleviation processes (SDC No Year). In order to legitimate a LUP, the SDC had to approve it ensuring that it was a centrally dictated process. But villagers were suspicious. LUP, with good reason, was seen as a way of zoning land for conservation by conservation agencies and the district.<sup>91</sup> In 1989, a district land committee meeting in Terat discussed Tarangire’s plan to expand due to scientific advice. Evictions and habitation and farming restrictions were described in the minutes in LUP terms. A notion developed that LUP intended to impose village land use restrictions. In the late 1990s, the NGO OIKOS developed a set of “participatory” LUPs for Simanjiro villages. Many of these LUPs

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<sup>91</sup> Interview, JM, acting DGO, Orkesumet, 26 May 2006.

were inaccurate and exacerbated confusion.<sup>92</sup> People were suspicious about LUP due to its association with TANAPA, MAA, AWF and OIKOS.<sup>93</sup> When WMAs were rejected these organisations identified LUP as a way of influencing the WMA zoning process. TANAPA and AWF's participation in LUP was concealed from villagers lest they believe that TNP was being expanded through LUP.<sup>94</sup>

The process started afresh when the government mandated the completion of village land use plans in the early 2000s. Different organisations supported LUP at a village level in order to expand their conservation, pastoralism or agricultural development agendas.<sup>95</sup> The confusion of organisations with different ideologies conducting LUP necessitated a district level forum to coordinate the diverse inputs.<sup>96</sup>

The perceived uncontrolled expansion of farming in the plains concerned TANAPA, SDC and AWF. These organisations embarked upon LUP in seven villages adjacent to TNP. They viewed LUP as a means of regulating agriculture in key dispersal areas (Igoe and Brockington 1999, Muyengi 2003).<sup>97</sup> An AWF-SDC contract illustrated their logic:

“It is no doubt that expansion of human activities especially cultivation threatens existence of wildlife not only in Tarangire National Park but also in surrounding areas such as Lolkisale Game Controlled Area and Simanjiro Plains. Proper land use planning is the only available solution in hand to

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<sup>92</sup> Interview, ML, GIS Database Specialist, TNP, 30 June 2005.

<sup>93</sup> Letter, DED-Simanjiro to Villages introducing a TANAPA, OIKOS, MAA and AWF LUP team, Ref. HMW/SMJ/V/03/89, 1 April 1999.

<sup>94</sup> Recorded interview, PM, NGO Employee, Orkesumet, 21 July 2005.

<sup>95</sup> Interview, SM, Outreach Warden, TNP, 28 January 2005.

<sup>96</sup> Recorded interview, RA, NGO Director, Arusha, 22 April 2005.

<sup>97</sup> Recorded interview, EL, DNRO, Orkesumet, 20 July 2005; Interview, PK, District Lands Officer, Orkesumet, 26 May 2006.

control utilisation and management of natural resources for sustainable use”  
(AWF and SDC 2003).

The joint exercise started in Loiborsirret ward, considered more receptive than other villages in the wildlife dispersal area. AWF and SDC considered Loiborsoit ‘A’, Emboreet and Terat problematic; expected to be “inspired through multiplier effect” once Loiborsirret ward was finalised (AWF and SDC 2003). However, LUP here was suspended in 2003 due to threats of violence from local people who feared expansion of the park.<sup>98</sup> Villagers were suspicious that the LUP process was a pre-cursor to WMAs. AWF documentation suggested this was indeed the intention:

“The process ends with demarcation of the land-use zones, mapping and preparation of by-laws which government (*sic*) the implementation of the land-use plan itself. The process identifies the CBNRM area which is the area usually made into a WMA...Therefore even though Simanjiro was not selected as a pilot WMA, it will be better qualified once it has the LUP in place with an earmarked CBNRM area...to qualify for WMA status by 2005 when the WD will decide on the next lot of WMAs”.<sup>99</sup>

The association of LUP in 2003 with AWF and TANAPA incensed local people. The SDC admitted that involving a visible presence from conservation organizations scuttled initial efforts to encourage LUP.<sup>100</sup> By 2005, only Msitu Wa Tembo village had a district approved LUP.

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<sup>98</sup> Interview, SC, District Town Planning Officer, Orkesumet, 25 May 2006; Interview, JM, acting DGO, Orkesumet, 26 May 2006.

<sup>99</sup> E-mail from JK, AWF-Coordinator, to AWF, ILRI & FAO staff, dated 15 June 2004.

<sup>100</sup> Interview, PK, District Lands Officer, Orkesumet, 26 May 2006.

Anxieties about land use planning existed in a climate of land loss. The history of this we reviewed in the previous chapter, but it is also a contemporary experience. When Tarangire resurveyed its boundaries in 2004 controversy erupted between Kimotorok village,<sup>101</sup> a remote pastoral community south of Emboreet, and the demarcation of TNP and Mkungunero GR.<sup>102</sup> TANAPA and SDC claimed that parts of Kimotorok lay within Tarangire's 'new' boundaries,<sup>103</sup> and other parts were within Mkungunero which had been gazetted in 1996 (TNRF 2005b, URT 1996b).<sup>104</sup> Many villagers were not aware that Mkungunero had even been gazetted until 2004 when Government agencies claimed part of Kimotorok lay within it. However, some WaIrangi farmers were evicted from Mkungunero GCA in 1983 by Kondo District.<sup>105</sup>

Since the 1980s, Tarangire's border at Kimotorok had occasionally shifted. Villagers developed the village center, including a school, dispensary, and teachers houses adjacent to TNP in order to block park expansion.<sup>106</sup> TANAPA funded some of this infrastructure, on land that it later claimed (Masara 2005).<sup>107</sup> In 2004, TANAPA placed new beacons marking the park boundary cutting through the village center,<sup>108</sup> and a district team told people to move out of Mkungunero.<sup>109</sup> In March 2005, an SDC and Kiteto District team, an armed DGO Muyengi at the helm, informed people they had to move out of Tarangire.<sup>110</sup> They registered household names and measured houses for

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<sup>101</sup> Kimotorok's annual budget was approximately US\$ 1,900 from a hunting hand out. Recorded interview, KK, Chairman, Kimotorok, 6 July 2005.

<sup>102</sup> Interview, TS, *Korianga*, Emboreet, 10 February 2005; recorded interview, WE, commercial rancher, Loiborsirret, 19 April 2005.

<sup>103</sup> Letter from P.E. Kiboma, Ag. DED – SDC to VEO-Kimotorok, Ref. LA/SIM/501/35 dated 22 March 2005; Interview, SM, Outreach Warden, TNP, 28 January 2005.

<sup>104</sup> Recorded interview, EL, VEO, Kimotorok, 5 July 2005.

<sup>105</sup> Recorded focal group, Kisandoku sub-village, Indindirri village, Kondo District, 7 July 2005.

<sup>106</sup> Interview, JS, former Chairman, Kimotorok, 7 July 2005.

<sup>107</sup> Recorded interview, KK, Chairman, Kimotorok, 6 July 2005.

<sup>108</sup> Recorded interviews, LM, *kitongoji* chairman & KS, former chairman, Kimotorok, 6 July 2005.

<sup>109</sup> Recorded interview, EM & PA, villagers, Kimotorok, 7 July 2005.

<sup>110</sup> Recorded interview, KK, Chairman, Kimotorok, 6 July 2005; Recorded interview, KS, former Chairman, Kimotorok, 6 July 2005; Recorded interview, AI, *Mswabili*, Kimotorok, 7 July 2005.

possible compensation as part of a “resettlement process”. Tension and resentment ran high; villagers armed with spears and shields boycotted the meeting which district staff promptly ended. Local people were bitter that government agencies had not collaborated or compromised with them before initiating evictions.<sup>111</sup> The TNP boundary claims affected 102 households comprising perhaps up to 800 people.<sup>112</sup> Villagers felt ignored and mistreated by government agencies; made worse by the threat that Kimotorok might not have enough households to qualify as a village after the proposed evictions. Villagers feared evictions could occur at any time.<sup>113</sup>

The conflict at Kimotorok was multi-dimensional. Its background originated in 1993 when Loiborsirret village was divided to form Kimotorok, and Kiteto district was divided to form Simanjiro District (URT 1993c). The TNP boundary conflict predated village sub-division; by 1997, there were significant differences in the titled land area of Kimotorok and what villagers claimed (TCP 1997a).<sup>114</sup> Further complicating the issue was political boundary confusion between Manyara and Dodoma Regions and Kondoia and Simanjiro Districts.<sup>115</sup> Mkungunero’s gazettelement placed it firmly within Kondoia District (URT 1996b), but a subsequent analysis revealed that 8 percent of it actually lay within Kiteto District (URT 2006b: 3). Multiple contradictory maps at a district and regional level and at TANAPA confused villagers (Masara 2005).<sup>116</sup>

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<sup>111</sup> Recorded interview, AI, *Mswabili*, Kimotorok, 7 July 2005.

<sup>112</sup> Focal group – 8 Maasai elders, Kimotorok, 7 July 2005; Recorded interview, LM, *kitongoji* chairman, Kimotorok, 6 July 2005; Recorded focal group, Kimotorok, 7 July 2005.

<sup>113</sup> Recorded interview, KM, villager, Kimotorok, 6 July 2005; Recorded focal group, *Waswabili*, Kimotorok 7 July 2005.

<sup>114</sup> Kimotorok Village title deed number AR/KIJ/505 granted in 1993.

<sup>115</sup> Recorded interview, EL, VEO, Kimotorok, 5 July 2005; Recorded interview, KK, Chairman, Kimotorok, 6 July 2005; Recorded interview, EL, DNRO, Orkesumet, 20 July 2005; Recorded interview, PM, NGO Employee, Orkesumet, 21 July 2005; Recorded interview, SC, DTPO, Orkesumet, 25 May 2006; Recorded interview, EM & PA, villagers, Kimotorok, 7 July 2005.

<sup>116</sup> Recorded interview, OL, youth leader, Kimotorok, 6 July 2005; Letter, Photomap Ltd to LAMP, Ref. J1234, 17 March 2000; Recorded focal group, Indindirri village, 7 July 2005

The Manyara Regional perspective was that “villagers had trespassed in conservation areas”; and once correct boundaries were set, villagers lost claim to the affected lands (Masara 2005). Tarangire managers were emphatic that the park reclaimed land that imprecise survey methodology had overlooked in the past;<sup>117</sup> that the key issue was the political boundary not the PA.<sup>118</sup> TNP replaced old beacons with new ones in response to their error. To local people this confirmed that the park had expanded into village land leading some to remark that TANAPA was damaging relations for a relatively small amount of real estate (Sachedina 2006).<sup>119</sup>

**Figure 4.12: A TNP beacon uprooted in Kimotorok by villagers**



<sup>117</sup> Interview, SM, Outreach Warden, TNP, 28 January 2005.

<sup>118</sup> Interview, LM, GIS Database Specialist, TNP, 30 June 2005.

<sup>119</sup> Recorded interview, DP, tour operator, Arusha, 15 April 2005.

The net result of these dismal relations between conservation agencies and Maasai villagers is visible in the constant conflict and strife played out at the local level. Some of these are typical ‘weapons of the weak’ (Scott 1985, Scott 1990). People employed a variety of overt and covert resistance tactics in Kimotorok. They boycotted meetings; refused resettlement and compensation; placed infrastructure like the school in the park as a buffer; bribed parks staff; and lobbied political leaders and NGOs for support. More directly they also threatened violence, to poison wildlife; and people uprooted or destroyed park beacons (Figure 4.12). Other forms of villager resistance in the Maasai Steppe involved threats to burn down tourist lodges, road blockages, and harassment of staff. Villagers even ritually cursed the entire Board of Trustees of TANAPA.<sup>120</sup> Increasingly, pastoralists incorporated more organized and formalized forms of political action into their everyday forms of resistance (Neumann 1995: 378).

## Discussion

*“Haja ya mja hunena, muungwana ni kitendo”* (Actions speak louder than words)

— Former President Benjamin Mkapa, national radio address, 31 March 2005.

Wildlife may be the oil of the Tanzanian state and its government. It might be the oil of the nation. But, to extend the analogy, villagers in Emboreet sit atop the oilfields and adjacent to the refinery but receive very few benefits and experience damaging pollution. This chapter has shown that Tarangire generates millions of dollars of revenues, only a small proportion of which reaches local people. It has shown that schemes which are

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<sup>120</sup> Interview, JK, Emboreet, 6 May 2004.



designed specifically to provide direct benefits to local residents from wildlife are more likely to benefit a few leaders who are able to appropriate the benefits for themselves. In short, therefore, the real benefits of wildlife have not trickled down to a household level. Yet Emboreet and neighbouring villagers continue to experience demands on its land for conservation.

It is important now to examine precisely how villagers pursue their livelihoods in these chaotic institutional environments and how these decisions affect land use.

## Chapter Five

### Livelihoods in Emboreet

#### Introduction

Having described the flows of wildlife revenue at a village level, this chapter examines the current livelihoods of people in Emboreet village. The chapter contains a quantitative overview of Maasai and non-Maasai livelihood strategies at a household level. The analysis is based primarily on data collected from a broad-scale survey (n=226), a repeat-round survey (n=37), archival material collected from district and village staff, and interviews and discussions with agro-pastoralists. The data are presented in the context of people's reliance upon livestock production and increasing human population density in the Maasai Steppe. I then discuss the importance of agriculture for villagers in Emboreet followed by a comparison of different sources of off-farm income. Finally, I examine people's expenditure at markets and how they are illustrated in a household diet. Therefore, these data have been collected with an emphasis on contrasting how different livelihood activities are combined at a household level and how wildlife revenues manifest in household livelihood strategies.

Several questions frame this analysis:

1. What are the livelihoods of local people now?
2. Which activities are most important to households?
3. How does wildlife revenue at a household level compare with livestock, agriculture, and mining?

#### 4. How do livelihoods in Simanjiro compare with pastoral livelihoods elsewhere?

Statistics presented in the sections on livestock and agricultural production and off-farm income were developed in collaboration with Pippa Trench.

#### **Introduction: The Crash of 1986**

National livestock census figures in Tanzania are notoriously unreliable. Censuses are infrequent (held in 1978, 1984 and a sample count in 1997). Furthermore cattle populations are itinerant. Nevertheless, some general patterns can be ascertained from their consultation. The livestock population in mainland Tanzania is the third largest in Africa, after Sudan and Ethiopia (URT 1998a). Tanzania has approximately 18.8 million head of cattle, 13.5 million goats and 3.6 million sheep (Ihucha 2008b). About 98 percent of the Tanzanian national cattle herd is comprised of Short-Horned Zebu (*Bos indicus*). The importance of agro-pastoral production systems is evident in that 95 percent of Tanzania's livestock are maintained under this system. Pastoral populations maintain about 20 percent of Tanzania's livestock (Woodford 2001). The majority of livestock (99 percent) in Tanzania is owned by small holders. The livestock sector, however, only contributes six percent of Gross Domestic Product (GDP) (VETAID et al. 2005). Over the last twenty years, human population growth outstripped livestock population growth resulting in reduced per capita livestock ratios (Table 5.1).

Simanjiro District is connected by livestock corridors to Dodoma Region to the south and as far north as Kenya (Owens and Stem 1999). The livestock population estimated in 1978 for Naberera and Moipo Divisions (which later comprised Simanjiro District) in Kiteto District was 154,294 cattle, 42,139 goats, and 20,019 sheep (URT 1983).

Simanjiro District contained approximately 285,000 cattle in the 1997 census<sup>1</sup> (SDC 2003), but estimates range as high as 600,000 (LAMP 2005).

**Table 5.1: Rural human and livestock population trends (in millions) in Tanzania from 1962-2002**  
(Sources: (FAO 2005, Voeten 1999)<sup>2</sup>

	Year							Annual growth rate %	
	1962	1971	1980	1990	1995	2000	2002	1980-1990	1990-2000
<b>Population</b>	9.7	12.8	17.9	20.4	22.7	23.6	23.7	2.4	1.5
<b>Cattle</b>	8.3	10.4	12.6	13	13.9	16.7	17.4	0.4	2.5
<b>Shoats</b>	7.5	7.3	9.5	12.1	13.7	15.4	15.8	2.5	2.4

Declining per capita livestock ratios have been exacerbated by the prevalence of tick-borne diseases (TBDs) in northern Tanzania. Prior to 1984, the central government provided free dipping services in rural Tanzania. As part of structural adjustment, dipping services were transferred under the mandate of district councils after which they collapsed totally in 1985. Government provided dipping services limited livestock exposure to TBDs. Once the dipping stopped, virtually entire cattle populations in northern Tanzania were naïve to the range of TBDs.<sup>3</sup> Herds dramatically declined (Owens and Stem 1999).<sup>4</sup>

It is possible that TBDs represented the majority of mortality before 1986, but no data were found to support this. Respondents reported that up until the 1970s, primary livestock diseases in Simanjiro were Anaplasmosis, Rinderpest, Anthrax, Trypanosomiasis, Malignant Catarrhal Fever (MCF) and Nose Bot.<sup>5</sup> In the 1980s, TBDs such as East Coast Fever (ECF), Babesiosis and Heartwater; and bacterial diseases such

<sup>1</sup> Interview, District Veterinary Officer (DVO), Orkesumet, 25 May 2006.

<sup>2</sup> Official censuses were not conducted during each of these years. Data was Interpolated which is problematic.

<sup>3</sup> E-mail, RA, NGO employee, Arusha, 14 April 2005.

<sup>4</sup> Interview, BK, SDC Employee, Orkesumet, 24 March 2004; Interview, OL, Emboreet, 13 April 2004.

<sup>5</sup> Interview OL, Community Animal Health Worker (CAHW), Emboreet, 21 November 2003.

as Contagious Bovine Pleuro-Pneumonia and Contagious Caprine Pleuro-Pneumonia were introduced from other regions and caused significant mortality (Table 5.2).<sup>6</sup> In Simanjiro, TBDs and Trypanosomiasis accounted for 70 percent of livestock mortality (SDC 2003: 9). ECF became the major cause of calf death amongst East African indigenous cattle (Homewood et al. 1987, Homewood et al. 2006). In Tanzania it was estimated that 43 percent of reported annual cattle deaths were from ECF (Kambarage 1995). In Emboreet, villagers referred to ECF as a pandemic: “the HIV/AIDS of cattle”.<sup>7</sup>

**Table 5.2: Percent of cattle deaths from TBDs (1987 to 1991) in Tanzania** (Source: (URT No Date: 8)

Year	Grand Total of Deaths	Deaths due to TBDs	% Death due to TBDs
1987/88	44,260	30,770	70
1988/89	44,150	21,081	73
1989/90	52,335	41,049	78
1990/91	42,069	31,549	75

TBDs can be controlled by regular dipping which kills disease vectoring ticks. However, State and local capacity to provide veterinary services in pastoral regions was constrained (Ihucha 2008b, The Citizen 2006). Only six percent (121) of the total dips in Tanzania (2,014) were in use in 2002 (URT 2002a: 6) The lack of disposable income and access to credit made it difficult for herders to manage communal dips on a sustainable basis (Woodford 2001).<sup>8</sup>

Despite livestock production being a major livelihood activity in Simanjiro District, there were few operational dips across the district. In Emboreet, the absence of a functional dip resulted in some herders spraying acaracide on their cattle in their *bomas*. However, the high cost of acaracide and need for regular spraying meant that few households

<sup>6</sup> Discussion, OL, CAHW, Emboreet 10 November 2004; Interview, MM, Livestock Field Officer (LFO), Emboreet, 9 December 2004.

<sup>7</sup> Discussion, OL, CAHW, Emboreet, 12 September 2004.

<sup>8</sup> Interview, EM, DLO, Terat, 19 May 2004.

regularly dipped, preferring instead to expose cattle to ticks to build immunity to diseases like ECF, and treat them when they fell ill (Figure 5.1, Table 5.14).

**Figure 5.1: Tick load on a bull in Esilalei sub-village**

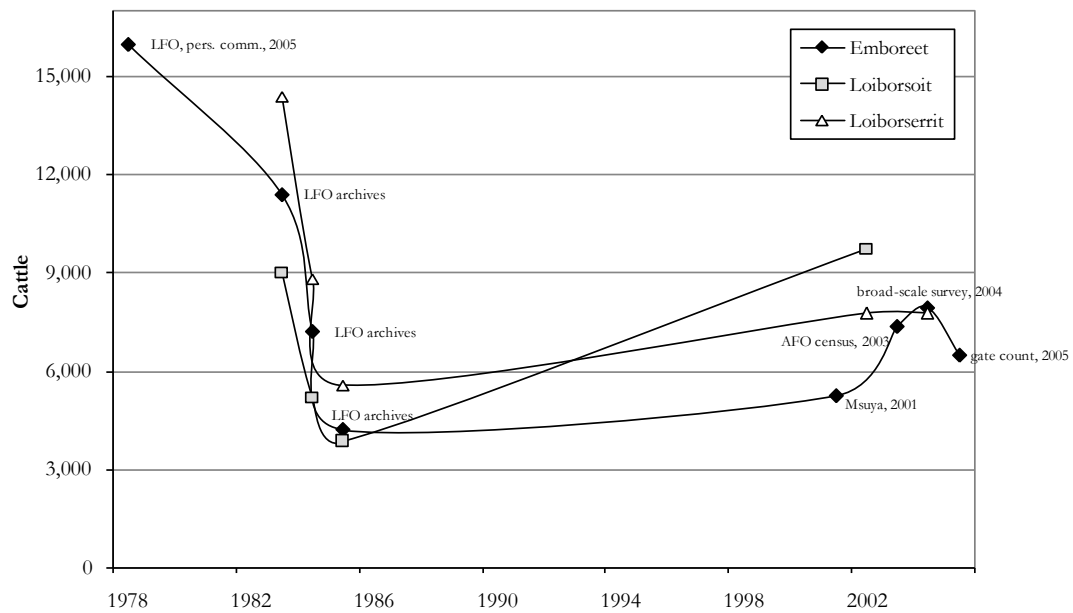


It was a challenge to obtain reliable livestock census data in Emboreet. Ward agricultural and livestock officers kept inconsistent and informal archives.<sup>9</sup> The last official livestock census in Emboreet was in 1984. But I compiled, at a village level, a cattle census data profile for Emboreet from different sources during the time span 1983 to 2005 (Figure 5.1). In 1978, Emboreet reportedly contained 16,000 cattle but by 2004 the population had declined to approximately 7,000 cattle.<sup>10</sup> Villagers reported large cattle declines from the mid-1980s; subsistence needs could not be met by livestock and hunger (*Maa: esumaye*) resulted. Data on cattle numbers were not available from the mid 1980s to 2002. Census data from 2002 suggests that cattle populations seemed to have slightly increased since the mid-1980s (Figure 5.2).

<sup>9</sup> The District Council charges ward livestock and agricultural officers to collect data. These officers are often under-resourced. Ward census figures for a 2002 district livestock census were allegedly estimated by the agricultural field officer due to a shortage of fuel to complete the census.

<sup>10</sup> Interview, MM, Livestock Field Officer (LFO), Emboreet, 9 December 2004.

**Figure 5.2: Cattle Census in Emboreet, Loiborsoit and Loiborsirret 1983-2005** (Sources: Emboreet Livestock Field Officer (LFO) (1978), LFO Archives (1983-1985); (Msuya 2001); Emboreet Agricultural Field Officer livestock census for SDC (2002), broad-scale survey (2003); this study census, 2004).

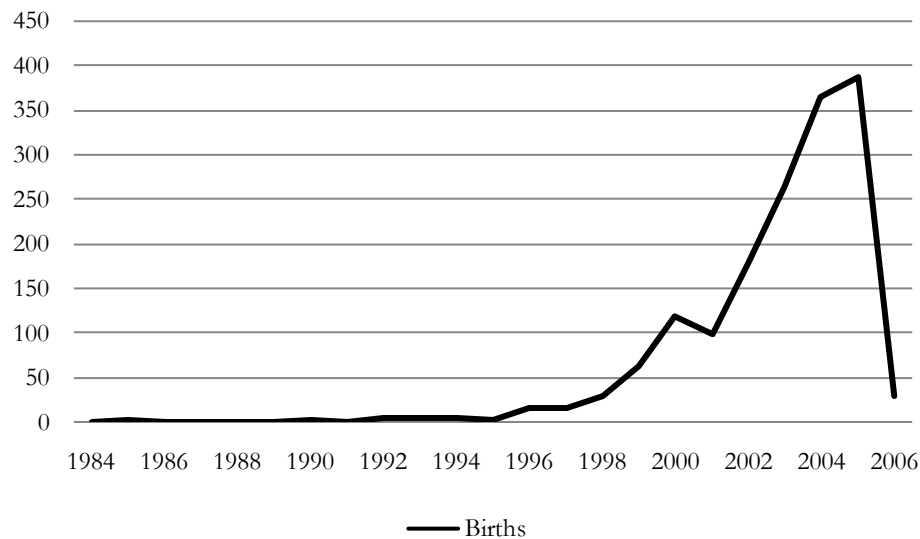


The decline in livestock likely coincided with the failure of Emboreet's dip in 1986.<sup>11</sup> The apparent increase in 2002 might have been related to increased resistance to ECF. When exposed to ECF as calves, some survive and build up immunity to ECF (Homewood et al. 2006, Igoe and Brockington 1999, VETAID et al. 2005).

### Cattle Life Histories

In order to explore whether livestock production was indeed constrained in Emboreet I analyzed the life histories of 538 individual cattle (2,169 named cattle) following Brockington's (1998) methodology (Appendix VIII). I counted how many calves were born to listed mothers (Figure 5.3).

<sup>11</sup> Interview, MM, LFO, Emboreet, 24 August 2005.

**Figure 5.3: Number of calves born to listed mother in Emboreet (1984-2006)**

There is clear evidence that informants had problems remembering cattle before 2000. This is visible in the lack of male cattle born before 2000. Given that sex ratios are meant to be approximately even at birth I rejected data before 2000, and disregarded 2006 as this was an incomplete data year. I then calculated years at risk of giving birth. If a cow is present in any year then it can give birth once it is two years old. In the year it becomes fertile it is fertile for 6 months and is present for 6 months the year it dies (Table 5.3). A number of cattle had an unknown birth dates as well as unknown dates of demise. For the cattle with complete data, I calculated their average fertile life span (3.3 years) and distributed those years in proportion with the other cattle producing the following table (disregarding pre 2000 data).

**Table 5.3: Cattle fertility in Emboreet**

Year	Births	Definite cow years at risk of giving birth	'n' (Definite + estimated)	Fertility
2000	120	339.5	392.3	0.31
2001	99	403	465.7	0.21
2002	179	453	523.4	0.34
2003	264	495.5	572.5	0.46
2004	365	539.5	623.4	0.59
2005	387	600.5	693.9	0.56



I then compared Emboreet's fertility rates with those recorded elsewhere (Table 5.4). Fertility rates were generally lower in Emboreet. Herders here were no better off, and potentially somewhat worse off than comparable pastoral populations. Lower fertility rates in earlier years may have been due to poor recall. However, they might also have been related to TBD mortality. Note that fertility rates increased from 2002 to 2005 which might have corresponded to increasing rates of ECF resistance.

**Table 5. 4: Cattle fertility at Mkomazi and elsewhere** (Source: reproduced from Brockington 1998;<sup>a</sup> Bekure et al, 1991; Homewood, 1992;<sup>b</sup> Homewood and Lewis, 1987;<sup>c</sup> Homewood et al ,1987;<sup>d</sup> Brockington, 1998)

Year	Place	Fertility	n	Place	Fertility	n
1981-3	Kajiado <sup>a</sup>	0.6	120	NCA <sup>c</sup>	0.61	153
1982-3	Baringo pre-drought <sup>b</sup>	0.83	68	-	-	-
1983-4	Baringo drought	0.69	76	-	-	-
1988	Same <sup>d</sup>	0.47	8.5	Lushoto <sup>d</sup>	0.52	34.5
1989	Same	0.7	11.5	Lushoto	0.46	44
1990	Same	0.33	15	Lushoto	0.52	51.5
1991	Same	0.29	25	Lushoto	0.31	61
1992	Same	0.46	35	Lushoto	0.4	80.5
1993	Same	0.59	44	Lushoto	0.47	105
1994	Same	0.67	58	Lushoto	0.51	125
1995	Same	0.7	68	Lushoto	0.57	135
1996	Same	0.71	35	Lushoto	0.37	65.5

I calculated Emboreet's calf mortality (Table 5.5), and compared it with mortality rates elsewhere (Table 5.6). Note that 2005 deaths were low in part because I completed my fieldwork. There was a further problem with the data in that I had more than eighty calves for which the death date is unknown. I distributed their deaths in proportion to known death dates. This gives an upper estimate of calf mortality.

**Table 5.5: Calf mortality in Emboreet**

Year	Births (n)	Total lower	Total inc. estimated	Mortality (lower)	Mortality (upper)
2000	120	6	16	0.05	0.14
2001	99	19.5	25	0.2	0.25
2002	179	23	45	0.13	0.25
2003	264	17.5	59	0.07	0.22
2004	365	50	71	0.14	0.19
2005	387	32	36	0.08	0.09
<b>Grand Total</b>	<b>1606</b>	<b>171</b>	<b>252</b>		

In comparison to calf mortality elsewhere (Table 5.6), Emboreet's mortality clearly lay in between Brockington's (1998) two samples, but closer to the less healthy one. Generally, Emboreet's calf mortality was worse off on a par with other populations in East Africa. Note that Brockington's (1998) sample had a high calf mortality and a high fertility rate, but Emboreet seems to have the worst of both worlds.

**Table 5.6: Calf mortality at Mkomazi and elsewhere** (Source: reproduced from Brockington 1998, \*within 18 months only)

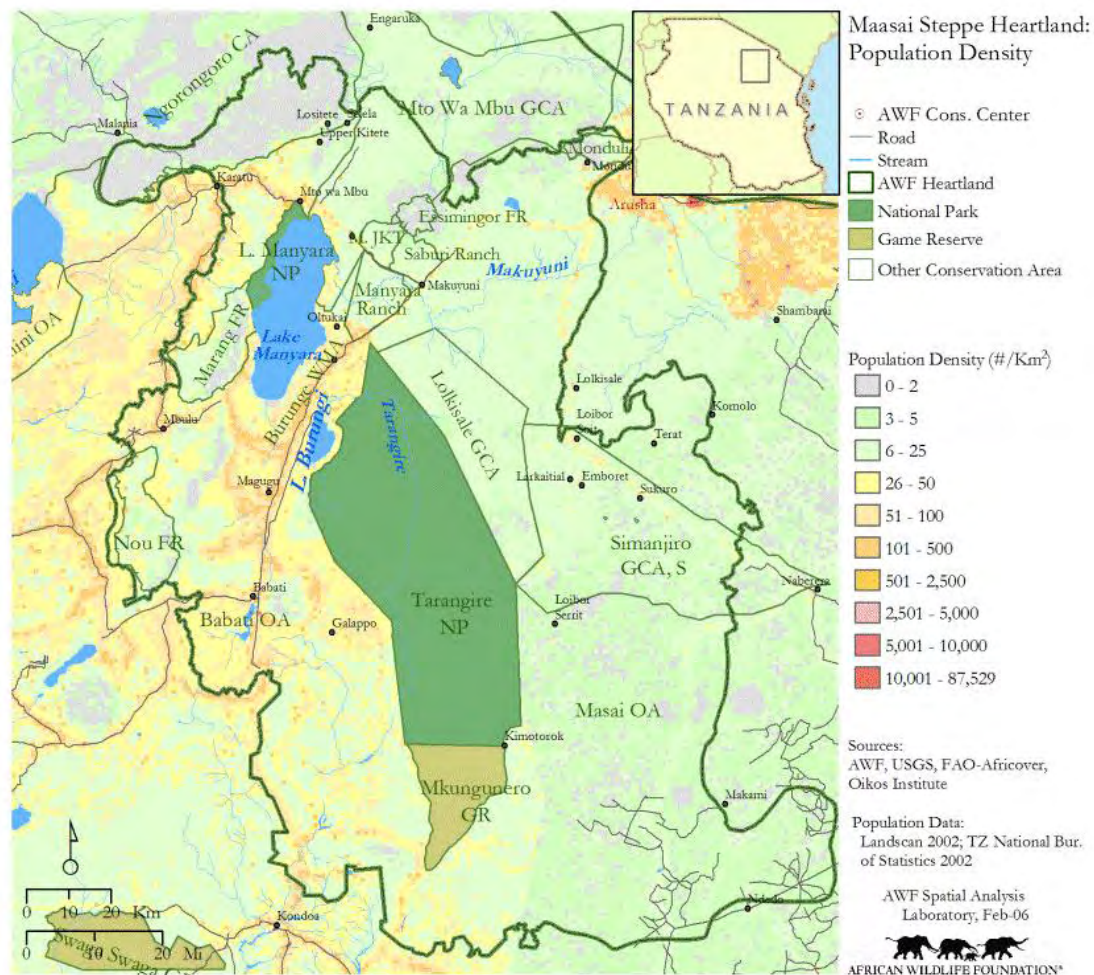
Year	Place	n	Mortality within 2 years	Place	n	Mortality within 2 years
1981-3	Kajiado	678	0.09*	NCA	no data	0.26
1983-4	Baringo - drought	no data	0.89	-	-	-
1988	Same	6	0.17	Lushoto	29	0.17
1989	Same	13	0.15	Lushoto	32	0.06
1990	Same	12	-	Lushoto	34	0.12
1991	Same	12	0.25	Lushoto	27	0.04
1992	Same	20	0.20	Lushoto	33	0.09
1993	Same	28	0.36	Lushoto	50	0.18
1994	Same	39	0.28	Lushoto	65	0.06
1995	Same	47	0.19*	Lushoto	77	0.18*

## Human Populations

In terms of human populations, Emboreet in 1978 contained just over 700 people. The 2002 census listed the population as 3,702 people (LAMP 2005, URT 1983). Overall, population density in Simanjiro remained relatively low, except for the mining community of Mererani (Figure 5.4). Similar to other pastoral areas in Tanzania which experienced rapid human population growth compared with livestock increases, Emboreet's per capita livestock reduced from the mid 1980s. The average number of adult units (AU) per household in Emboreet was 5.41 per household. The average Tropical Livestock Units (TLU) per AU equivalent in Emboreet Village in 2004 was 3.82; in 2003 the figure was 4.53 TLU/AU. The number of TLU per capita in Emboreet was

lower than other pastoral studies in Tanzania (Figure 5.5), though its average was slightly higher than TLU per capita across Simanjiro District.

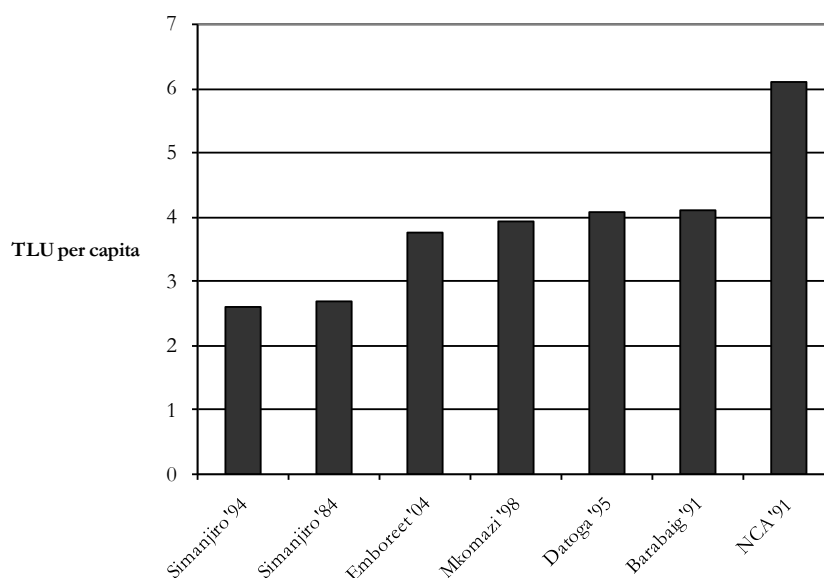
Figure 5.4: Population density in Simanjiro District relative to other areas in the Maasai Steppe



Brockington (1998) describes how predictions of the minimum number of TLU *per capita* required for subsistence varies greatly. At the upper end Dahl and Hjort estimate 9.1 TLU as the minimum herd for subsistence (Dahl and Hjort 1976) to 8.7 TLU/AU, not counting donkeys (Harris (1980) in Brockington 1998). Muir (1994) references a “pastoral survival minimum” of approximately 5.5 ILCA livestock units per capita. Pratt and Gwynne (1977) cited in Brockington (1998) estimate 4.5 TLU *per capita* in arid lands with minimum estimates dropping to 4.3 TLU per capita (Kjaerby 1979). I adopt ILRI’s

definition of minimum subsistence needs of 5 TLU/AU. In 2004, eighty percent (n=181) of households surveyed owned less than 5 TLU/AU in Emboreet.

**Figure 5.5: Comparison of TLU per capita between Emboreet and other pastoral areas in Tanzania** (Sources: This study; (Brockington 1998, Homewood and Rodgers 1991, Lane and Pretty 1991, Muir 1994, Sieff 1995)



The decline in per capita livestock ratios has been one of the fundamental drivers to diversify livestock based economies (Owens and Stem 1999).<sup>12</sup>

### Livestock Production in Emboreet

Emboreet's productive rangeland in the Simanjiro Plains (Maa: *Tukuta*) historically attracted livestock keepers.<sup>13</sup> Livestock continued to be a primary livelihood strategy in Emboreet despite pressures on the livestock economy. Livestock, pastoralism and pastoral ideals still infuse Emboreet society. Of the broad-scale sample, only twenty

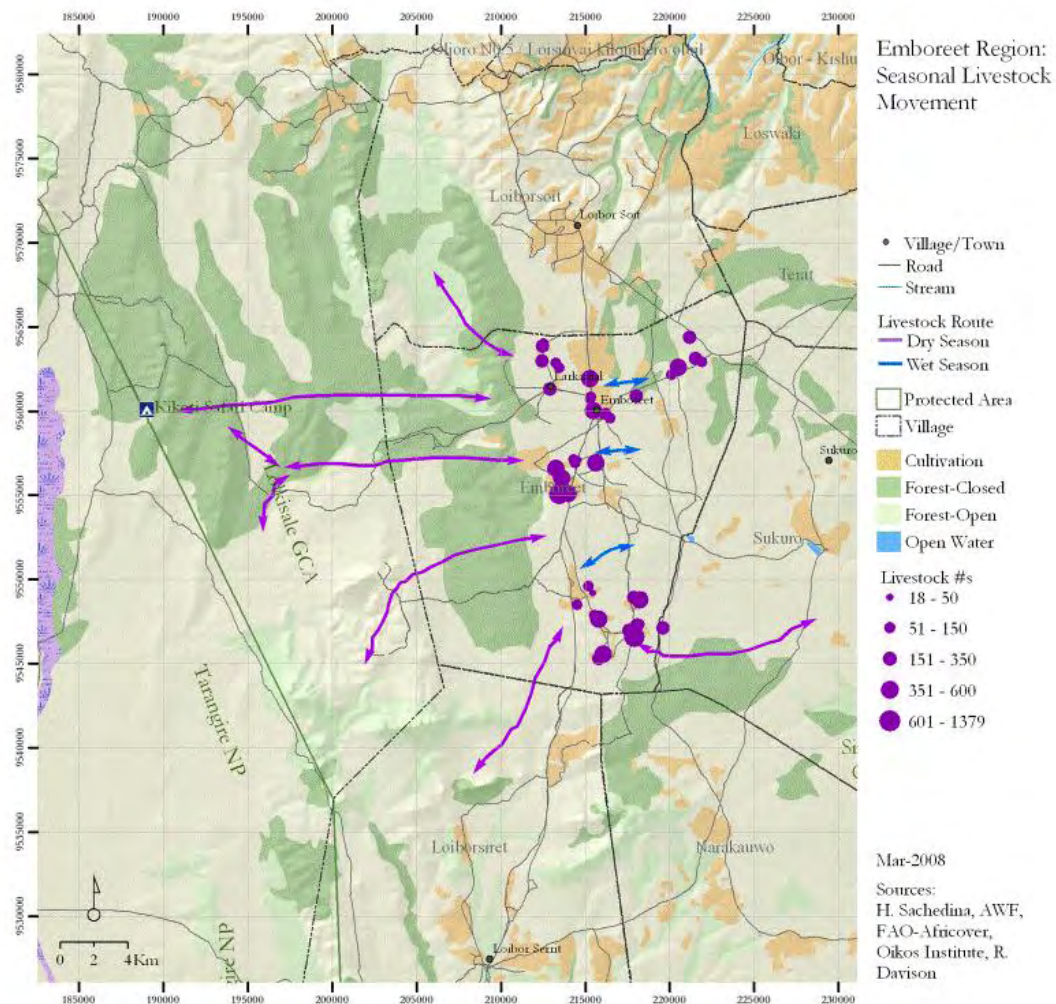
<sup>12</sup> Interview, BK, SDC Employee, Orkesumet, 24 March 2004; Interview, OL, Emboreet, 13 April 2004.

<sup>13</sup> Interview, KL, Emboreet, 18 November 2004; Interview IO, Kikoti, 1 July 2005.

households (nine percent) kept no livestock at all, of which twelve were non-Maasai agriculturalists. Of Maasai households, 96 percent kept livestock.

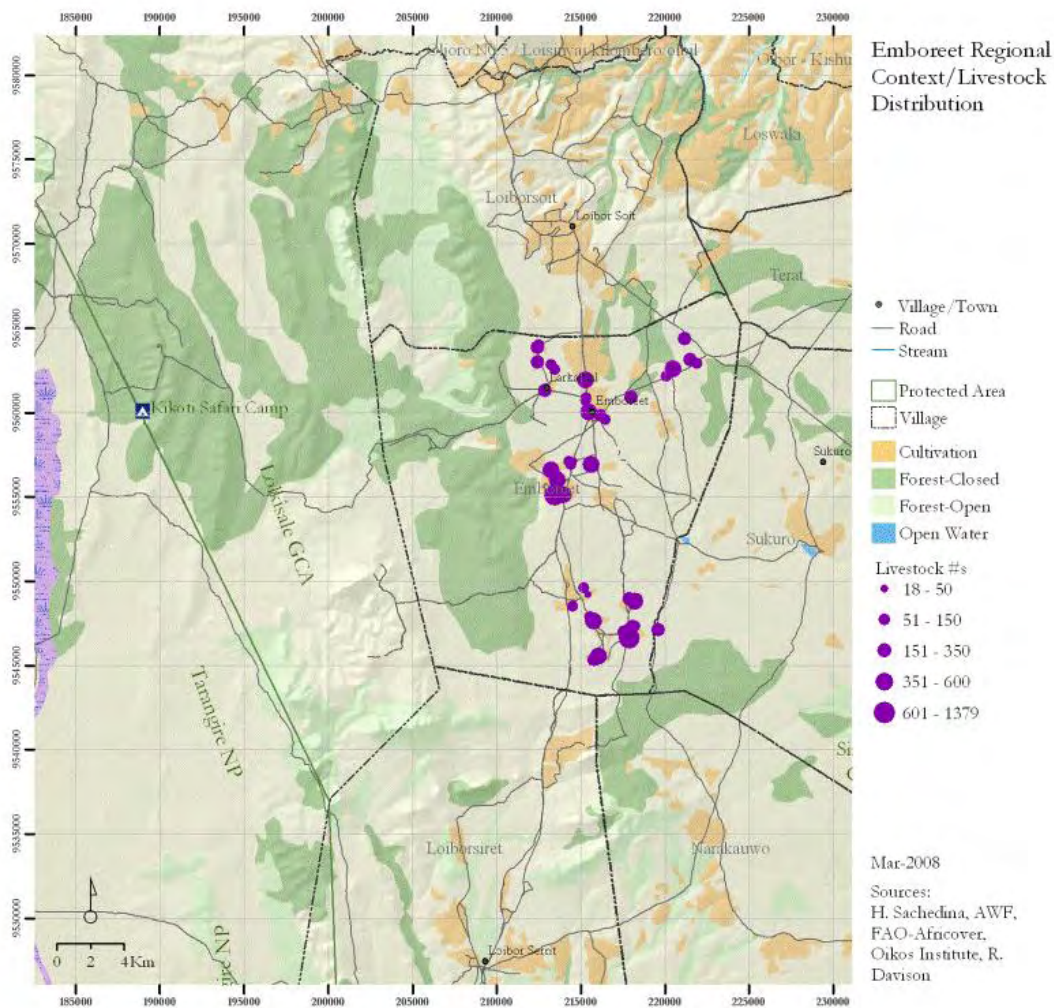
At Emboreet, livestock management was transhumant. Herders had permanent homesteads but seasonally moved livestock. Rangelands were subject to traditional reciprocal rights of control and access meaning that herders moved cattle beyond village boundaries depending on graze and water conditions (Potkanski 1997). In addition to seasonal water and pasture requirements, transhumance patterns were also influenced by disease avoidance (Figure 5.6).

**Figure 5.6: Emboreet Village Seasonal Livestock Movements** (Source: Interviews, Emboreet villagers and CAHW, 2005)



*Acacia-commiphera* woodland in the east of Emboreet harboured tsetse fly (*Glossina spp.*), the vector of trypanosomiasis, while MCF was vectored by wildebeest and nose bot disease was vectored by gazelles on the Simanjiro Plains in the wet season. Respondent reported that livestock mortality was highest in the wet season, probably due to higher tick loads and dilution of acaricide due to rain leading to avoidance of the plains during the long rains in March through to May. The spatial location of *bomas* illustrated Maasai spatial preferences of sedenterization. There seemed to be a preference for homesteads to be located close to or within the plains, and in two distinct clusters (Figure 5.7).

**Figure 5.7: Livestock distribution and density by sub-village in Emboreet** (Source: gate-count, 2004)



The first included the five sub-villages of Esilalei, Meleleki, Ingung, Laarkaitial and Emboreet located close to the social services and water supplies in Emboreet sub-village towards the northern end of the village. The second cluster comprised Kati Kati and Lenaitunyo sub-villages towards the southern end of Emboreet village. *Bomas* tended to be located near major tracks to market centres and avoided tsetse harbouring woodland as well as the Lolkisale GCA to the east. Villagers knew that the Lolkisale GCA was contested government property and Emboreet's tourism contracts specified that no farming could occur in these concessions.

A total village dry-season livestock census using the gate count method that I conducted in 2004 provides a break-down of livestock by sub-village (Table 5.7). In the dry season livestock range over large distances which meant that livestock may have been outside of the village when the census was conducted.

**Table 5.7: 2004 Livestock census in Emboreet by sub-village**

<b>Sub-village</b>	<b>Cattle</b>	<b>Sheep</b>	<b>Goats</b>	<b>TLU</b>
Kati Kati	98	60	113	99
Emboreet	362	735	513	469
Esilalei	662	232	294	559
Laarkaitial	608	1,035	957	770
Meleleki	1,054	1,896	1,342	1,299
Ingung	1,582	593	1,188	1,426
Lenaitunyo	1,691	1,394	1,252	1,650
<b>Totals</b>	<b>6,057</b>	<b>5,945</b>	<b>5,659</b>	<b>6,273</b>

Herd sizes varied considerably according to wealth rank and ethnic group (Table 5.8). Overall, non-Maasai agricultural and agro-pastoral households had significantly fewer livestock than their Maasai counterparts (ANOVA,  $F=6.9$ ,  $df: 219,2$ ,  $P<0.0001$ ). Livestock holdings among the Maasai were significantly higher for wealthy, than for middle and poorer households ( $F=19.4$ ,  $df: 187,2$ ,  $P<0.001$ , Tamhane's post hoc test

P<0.001), but there was no significant difference among the non-Maasai households based on wealth rank. There was, however, considerable variation in livestock numbers within each wealth rank, confirming the fact that livestock wealth was not the only factor influencing wealth status.

**Table 5.8: Livestock holdings (TLU) per adult unit equivalent** (Source: broad-scale survey)

Ethnic Category		Mean TLU	N (households)	Std. Deviation
<b>Maasai</b>	Rich	8.1	45	7.9
	Middle	5.3	64	5.3
	Poor	2.2	81	2.2
	<i>Total</i>	<i>4.6</i>	<i>190</i>	<i>5.6</i>
<b>Other Agro-pastoral</b>	Rich	1.8	3	1.8
	Middle	1.1	6	1.4
	Poor	0.7	9	0.8
	<i>Total</i>	<i>1.0</i>	<i>18</i>	<i>1.2</i>
<b>Agricultural</b>	Rich	3.6	2	4.1
	Middle	0.1	2	0.1
	Poor	0.4	10	0.8
	<i>Total</i>	<i>0.8</i>	<i>14</i>	<i>1.8</i>

Livestock ownership was skewed in Emboreet as elsewhere in Maasailand (Bekure and Chabari 1991, Graham 1989, Thompson 2002), with most livestock concentrated in fewer hands. A comparison of livestock holdings held by the wealthiest twenty percent of households and the poorest fifty percent of households between Emboreet and Kenyan group ranches illustrated that livestock distribution was more skewed in Emboreet. More livestock were concentrated in fewer households, and fewer livestock in the hands of the poorest households. The wealthiest twenty percent of households in Emboreet (n=41) owned 66 percent of livestock. The poorest fifty percent of households (n=113) owned ten percent of livestock (table 5.9).

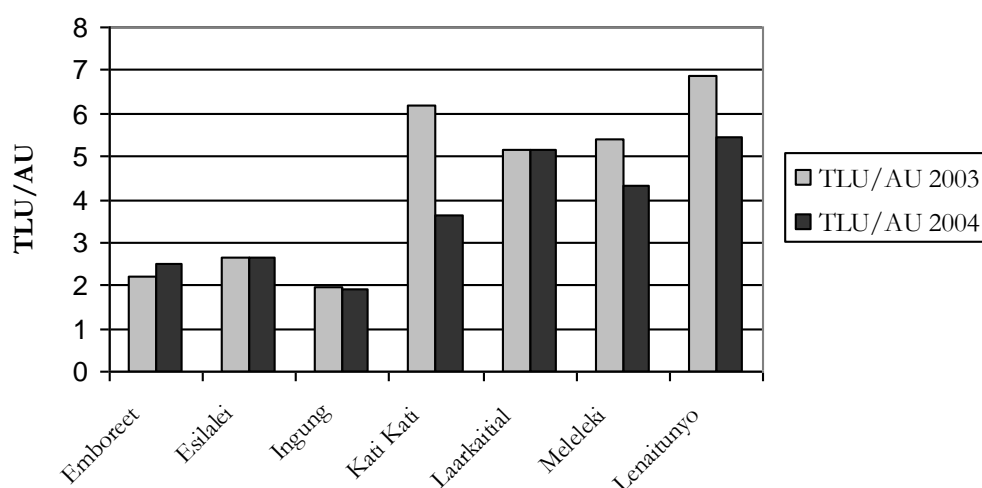


**Table 5.9: Comparison of Emboreet livestock wealth in 2004 with Kenyan Group Ranches** (Sources: (Bekure and Chabari 1991, Graham 1989, Thompson 2002)

	Emboreet (2004)	Bekure <i>et al.</i> (1991)	Graham (1989)	Siana Thompson (2002)	Aitong Thompson (2002)	Talek Thompson (2002)	Nkorinkori Thompson (2002)
<b>Top 20 % own:</b>	66%	60%	N/A	48 %	51%	49%	43%
<b>Poorest 50 % own:</b>	10%	N/A	10%	20%	17%	19%	23%

There were also differences in livestock holdings per capita between sub-villages (Figure 5.8 and Table 5.10),<sup>14</sup> with the highest TLU/AU in Lenaitunyo sub-village (mean: 6.8, N=37, sd. 5.2).

**Figure 5.8: Mean Tropical Livestock Units per Adult Unit Equivalent in Emboreet sub-villages** (Source: broad-scale survey)



The sub-villages with the lowest TLU/AU were Emboreet (mean: 1.9, N=59, sd. 2.2) and Ingung (mean: 1.9, N=15, sd. 1.3). The differences between these three sites were statistically significant even after taking ethnicity into account by examining Maasai only households (ANOVA  $F=3.0$ ,  $df\ 183,6$ ,  $P<0.05$ ).<sup>15</sup>

<sup>14</sup> Calculation of TLU follows Grandin (1988) where 1 cattle = 0.71 TLU, and 1 shoat = 0.17 TLU. There are other measures: Brockington (1998) follows Little's (1985) measure of 1 TLU = 1 bovine or 6 small ruminants.

<sup>15</sup> When using ANOVA tests I used Levene's Test for homogeneity of variance.

**Table 5. 10: TLU per Adult Unit equivalent in Emboreet sub-villages 2003 & 2004** (Source: broad-scale survey)

	Mean AU per HH	Dependency Ratio <sup>16</sup>	TLU/AU 2003	TLU/AU2004
Emboreet	4.57	1.25	2.22	2.49
Esilalei	5.85	1.23	2.63	2.67
Ingung	5.28	1.18	1.94	1.92
Kati Kati	6.19	1.28	6.17	3.64
Laarkaitial	5.75	1.23	5.14	5.14
Meleleki	5.2	1.25	5.41	4.34
Lenaitunyo	6.01	1.21	6.85	5.43
<b>Totals</b>	<b>5.41</b>	<b>1.23</b>	<b>4.53</b>	<b>3.82</b>

### Milk Yields

In Emboreet, men controlled the disposal of livestock, proceeds of livestock sales, land, crop sales, and wildlife revenues. Women controlled the milk economy, household food purchases, poultry, and the sale of small commodities such as tobacco and tea. An indication of the importance of livestock to household food security needs is the amount of milk available to the household. I analysed 835 individual milk yields from people's livestock (Table 5.11). The average weight of total milk availability per household per day was 2,299 grams, or 462 grams per AU per day. This amount was relatively lower compared with the rate of 809 g/AU of mean milk intake in Ngorongoro Conservation Area in 1981 (Homewood and Rodgers 1991: 220).

Figure 5.9 illustrates that mean monthly milk availability per household was highest during the long rains (March to May). By June, the rains had stopped but abundant forage meant that milk yields were still quite high. Milk yields peaked again slightly during the short rains of October and dropped significantly during the dry period from

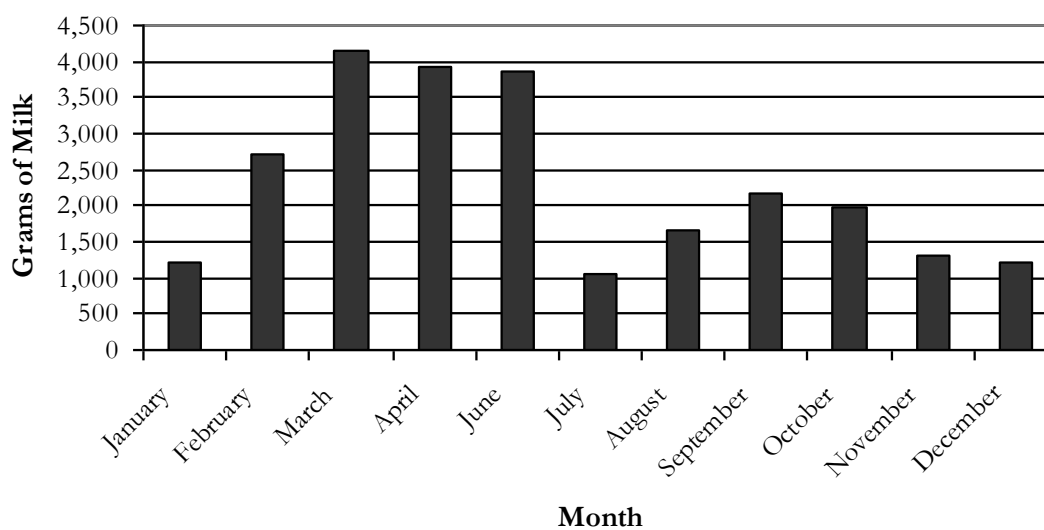
<sup>16</sup> A dependency ratio was calculated for each household as consumers/workers, such that all consumers equal all household residents, workers equal all residents above 5 years of age (Fratkin 1989).

November to January.<sup>17</sup> Mean wet season milk availability per household was 3,991 grams (St. Dev. 151.1) while in the dry season (July-August, then November to January) it was 1296 grams per household per day. Milk availability per AU in different seasons was 647 g/AU per day in the wet season and 307 g/AU per day in the dry season.

Table 5.11: Mean monthly milk availability by household per month (Source: RR survey)

Month	Grams	Grams per AU/Day	Grams per household/day
January	52,503	245	1,221
February	21,700	545	2,713
March	66,600	836	4,163
April	86,557	791	3,934
May	no data	no data	no data
June	120,184	779	3,877
July	4,275	215	1,069
August	58,570	336	1,673
September	38,820	433	2,157
October	41,310	395	1,967
November	19,744	264	1,316
December	28,830	241	1,201
<b>Mean Grams</b>	<b>49,008</b>	<b>462</b>	<b>2,299</b>

Figure 5.9: Mean milk availability in Grams per household per day by month (Source: RR survey)



<sup>17</sup> Wealthier households purchased imported powdered milk during the dry season from the Mission shop.

Grandin (1988) and Homewood and Rodgers (1991) reported that rich and poorer households tend to take similar amounts of milk from the herds; even though the rich have many more animals. In Emboreet, I generally found that wealthier sub-households took the most milk from their herds (as they had more animals) and were able to subsist almost entirely on milk in the wet season. Poorer sub-households rarely had enough milk to subsist on, and frequently lacked any milk in the dry season. Both poor and wealthy sub-households engaged in the milk economy (Table 5.12). This included milk sales, as well as gifts given or received of milk. These transactions were important to women's economies by providing petty cash for household needs, and a mechanism with which to cement social relations.

**Table 5.12: Revenue to repeat-round (RR) households from weekly milk sales**

<b>RR HH identifier</b>	<b>Total Grams</b>	<b>Total</b>	<b>Number of weeks sold</b>	<b>Mean revenue per week</b>	<b>Wealth Ranking</b>	<b>Sub-village</b>
6:1	27,500	\$35.31	5	\$7.06	wealthy	Laarkaitial
6:3	13,000	\$14.23	5	\$2.85	wealthy	Laarkaitial
28	13,500	\$6.86	5	\$1.37	Poor	Laarkaitial
4:1	9,000	\$5.93	2	\$2.97	wealthy	Laarkaitial
13:2	8,000	\$3.52	2	\$1.76	wealthy	Esilalei
6:4 & 5	5,000	\$1.95	1	\$1.95	wealthy	Laarkaitial
3:1	6,000	\$1.39	1	\$1.39	middling	Esilalei
30:1	2,000	\$0.46	1	\$0.46	middling	Lenaitunyo
1:2	750	\$0.28	1	\$0.28	Poor	Esilalei
30:2	1,000	\$0.28	1	\$0.28	middling	Lenaitunyo
<b>Totals</b>	<b>85,750</b>	<b>\$70.20</b>	<b>24</b>			

The bulk of milk sales occurred in Esilalei (16.7 percent) and Laarkaitial (75 percent); the two sub-villages closest to the non-Maasai milk market in Emboreet sub-village. Households in Lenaitunyo sold milk the least (8.3 percent of sales) despite a higher TLU/AU. But overall the wealthy dominated milk sales, able to sell surplus milk for longer during the year: the poor had more incidences of single wet season surplus sales.

The mean revenue per week from milk sales per household was US\$ 2.04 (St. Dev. = 2.01).

Brockington found that women from poorer households sold more milk because they had to resulting in not enough milk being left over for household subsistence needs (Brockington 1998, Brockington 2001). I observed the opposite: wealthy households sold the most milk as they had a surplus. The wealthy accounted for 73 percent of the volume of milk sold and 87 percent of the total revenue of all households who sold milk in the repeat-round (RR) survey (Table 5.12).

It was interesting to note how few sub-households were selling milk. However, rich sub-households represented 42 percent of those selling milk, while poor and middling sub-households constituted 11 and 12 percent respectively of sub-households selling milk (Table 5.13). Overall, 18 percent of sub-households sold any milk during the RR survey.

**Table 5.13: Proportion of sub-households selling milk by wealth class** (Source: repeat-round survey)

	SHHs selling milk	No. of SHHs by wealth	% Within wealth class	% of total sample
Poor	2	19	11%	4%
Middling	3	26	12%	5%
wealthy	5	12	42%	9%

### Livestock Economic Valuations

Given the long recall intervals and possibility of respondent error in the broad-scale survey, I chose to focus my examination of livestock production on the shorter interval periods in the repeat-round survey. The net value of livestock trading of repeat-round households was calculated as the income from livestock sales converted into US dollars

(Table 5.14). The mean revenue by sub-village for cattle and shoat sales was higher than means reported by Thompson in Mara Group Ranches in Kenya (cattle: US\$ 886.41 in Emboreet versus US\$ 718.49 in Kenya).

**Table 5.14: Annual livestock sale income per household** (Source: repeat-round survey)

	<b>Esilalei</b>	<b>Laarkaitial</b>	<b>Lenaitunyo</b>
Mean cattle sale income per HH/year	\$771.56	\$650.39	\$1,237.29
<i>St. Dev.</i>	1,019.25	749.81	1,239.95
<i>n</i>	11	9	16
Mean shoat income per HH/year	\$181.97	\$292.99	\$171.25
<i>St. Dev.</i>	250.63	242.76	386.10
<i>n</i>	11	9	16

Livestock purchasing in different sub villages is shown in Table 5.15. This figure included cattle and shoat purchases for each RR household during the course of the year. Cattle were sold at distant markets such as Meserani (also known as ‘Duka Mbovu’) in Monduli District close to Arusha, as well as local markets in Sukuro and Terat villages.

**Table 5.15: Value of cattle purchased per household** (Source: repeat-round survey)

	<b>Esilalei</b>	<b>Laarkaitial</b>	<b>Lenaitunyo</b>
Mean expense on Cattle per household per year (US\$)	\$947.85	\$248.88	\$1,232.69
<i>St. Dev.</i>	1,255.20	589.37	1,590.29
Mean expense on shoats per household per year (US\$)	\$173.11	\$256.50	\$186.48
<i>St. Dev.</i>	230.50	276.35	275.19

The net value of livestock production per household per year was calculated in Table 5.16. This data included the value of livestock transactions in the RR households whenever livestock were used as a means of currency and ‘left’ the herd. The data included cattle and shoat sales, exchanges of livestock for other livestock, gifts of livestock by households, livestock slaughters, and bride wealth payments of livestock.

Subtracted from these values were veterinary expenses per household per year. Not included in this data are the value of transactions in which livestock ‘entered’ the herd such as through purchases, debt payments, gifts, bride wealth payments, exchanges, the value of milk, and donkey transactions. The main rationale for not trying to compute *net* livestock income was because the other ILRI sites did not have the data that would have been comparable with them (Sachedina and Trench Forthcoming).

**Table 5.16: Adjusted net annual livestock values per household and per capita per sub-village**  
(Source: repeat-round survey)

Sub-village	Livestock US\$/HH/year	Number of People	Total	Livestock US\$ Per Capita/year
Laarkaitial	\$ 1,466.51	98	\$ 14,665.07	\$ 149.64
<i>St. Dev</i>	2,706.85			
<i>N=</i>	10			
Esilalei	\$ 3,208.39	128	\$ 35,292.321	\$ 275.72
<i>St. Dev</i>	3,153.94			
<i>N=</i>	11			
Lenaitunyo	\$ 3,654.17	135	\$ 58,466.67	\$ 433.09
<i>St. Dev</i>	3,121.11			
<i>N=</i>	16			

The mean value of all livestock transactions over a 12 month period was calculated from the repeat-round data. The mean value of livestock transactions per household over the course of the year was US\$ 2,930.38 (Std. Dev. 3,083.10). However, the amount per capita was significantly less: livestock transactions represented US\$ 300.34 per person per year.<sup>18</sup> The mean value of livestock at a household and per capita level in the sub-villages showed considerable variation (Table 5.16). The value of livestock per capita in Lenaitunyo was 65.5 percent higher than in Laarkaitial and 36.3 percent higher than in Esilalei illustrating the relative strength of the livestock economy in Lenaitunyo. These data include debt payments received and given of livestock, sales, purchases, bride wealth

<sup>18</sup> Per capita not per adult unit equivalent.

payments received and given, slaughter, gifts into and out of the herd, milk sales and donkey transactions. I subtracted the cost per household of veterinary drugs to generate a net value of livestock production adjusted to include milk and in-kind transactions.

The net value of livestock trading (cow, calf, sheep and goat purchases) and livestock production (income from sales, and the value of livestock slaughtered or gifted out) was calculated from repeat-round households as \$846 and \$1,286 respectively (N=36). The *combined* net value of these two measures of livestock production per household varied by wealth class (Table 5.17).

**Table 5.17: Mean combined net livestock values (trading and production) by wealth class (n=36)<sup>19</sup>**

	Livestock transactions
<b>Poor</b>	\$1,971
<b>Middle</b>	\$2,924
<b>Rich</b>	\$7,295

In order to combine data from my repeat-round and broad-scale surveys, only 27 RR households had also been covered in the broad-scale survey. The net livestock value was therefore calculated so as to be an equivalent, and comparable to, the agricultural value of production in the broad-scale survey. Taking only those 27 RR households which were included in the broad-scale survey, wealthier households predictably receive a greater income as well as higher levels of production than poorer households (ANOVA F=8.2, df: 2,22, P<0.05 for sales only; F=5.0, df: 2,22, P<0.01 for production) (Table 5.18).

<sup>19</sup> N=36 as one of the RR households was a woman without any livestock production activity.



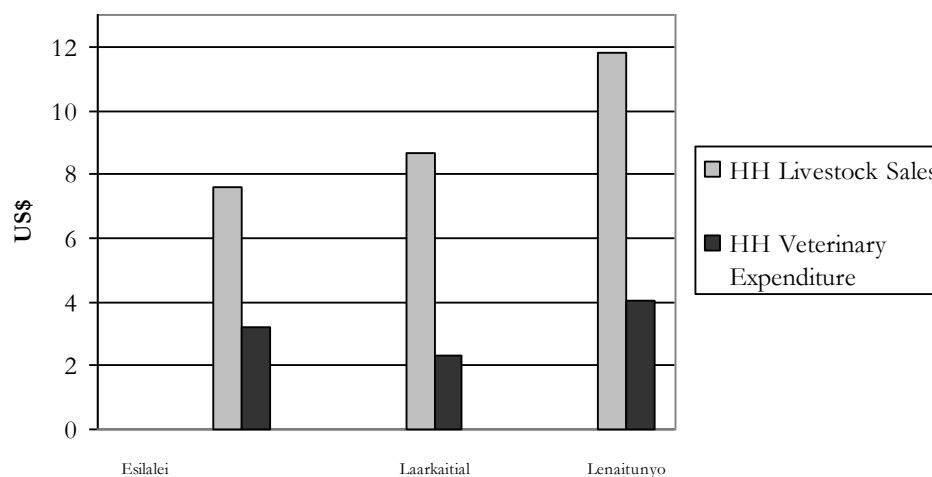
Table 5.18: Annual livestock sale income per household by wealth class

	<i>Rank</i>	<i>N</i>	<i>Mean</i>	<i>Std. Deviation</i>	<i>Median</i>
Income from cattle and shoat sales	Rich	5	\$2,013	993	2,011
	Middle	11	\$983	992	808
	Poor	11	\$229	212	172
	<i>Total</i>	<i>25</i>	<i>\$901</i>	<i>1,014</i>	<i>411</i>
Value of cattle and shoat production (sales, slaughtered and gifts out)	Rich	5	\$2,925	2,041	2,487
	Middle	11	\$1,495	1,665	1,129
	Poor	11	\$429	359	309
	<i>Total</i>	<i>27</i>	<i>\$1,325</i>	<i>1,613</i>	<i>781</i>

### Pastoral Veterinary Inputs

There was a strong positive correlation between investment in veterinary care and mean monthly income from livestock sales per month to the household (Spearman's rank correlation:  $Rho=0.632$ ,  $n=37$ ,  $p=0.01$ ). The wealthiest households could afford to invest in protecting their livestock assets and increase their income accordingly (Table 5.19). Lenaitunyo sub-village has the highest monthly mean household livestock income and expenditure on veterinary medicine (Figure 5.10).

Figure 5.10: Mean monthly household livestock income and veterinary expenditure by sub-village in Laarkaitial, Esilalei and Lenaitunyo sub-villages (Source: repeat-round survey)



**Table 5.19: Mean monthly income from livestock sales by rank correlated with veterinary expenditure rankings** (Source: repeat-round survey)

RR HH identifier	Mean Monthly Income	Sub-village	RR H'hold	Mean Monthly Expenditure	Sub-Village
17	\$0.00	Esilalei	22	\$0.00	Lenaitunyo
12	\$0.00	Esilalei	28	\$0.05	Laarkaitial
28	\$0.00	Laarkaitial	1	\$2.82	Esilalei
14	\$0.00	Laarkaitial	14	\$3.01	Laarkaitial
30	\$0.00	Lenaitunyo	9	\$4.36	Esilalei
31	\$18.91	Lenaitunyo	8	\$4.67	Esilalei
5	\$20.85	Laarkaitial	20	\$5.47	Esilalei
1	\$23.46	Esilalei	36	\$5.57	Lenaitunyo
15	\$25.23	Laarkaitial	11	\$5.87	Laarkaitial
2	\$43.77	Esilalei	5	\$8.29	Laarkaitial
20	\$50.60	Esilalei	17	\$11.04	Esilalei
18	\$67.51	Esilalei	37	\$11.12	Lenaitunyo
9	\$70.96	Esilalei	15	\$14.13	Laarkaitial
11	\$80.79	Laarkaitial	2	\$15.50	Esilalei
3	\$93.45	Esilalei	4	\$19.95	Laarkaitial
4	\$96.34	Laarkaitial	16	\$21.70	Laarkaitial
26	\$105.10	Lenaitunyo	31	\$23.09	Lenaitunyo
36	\$111.21	Lenaitunyo	18	\$23.63	Esilalei
8	\$114.88	Esilalei	19	\$25.84	Esilalei
19	\$120.48	Esilalei	25	\$26.74	Lenaitunyo
16	\$121.42	Laarkaitial	3	\$29.12	Esilalei
24	\$124.31	Lenaitunyo	24	\$29.84	Lenaitunyo
22	\$137.73	Lenaitunyo	33	\$32.03	Lenaitunyo
7	\$139.46	Laarkaitial	30	\$32.90	Lenaitunyo
37	\$155.70	Lenaitunyo	26	\$32.99	Lenaitunyo
10	\$163.11	Laarkaitial	6	\$37.92	Laarkaitial
33	\$168.31	Lenaitunyo	34	\$39.77	Lenaitunyo
6	\$179.56	Laarkaitial	10	\$42.55	Laarkaitial
34	\$242.82	Lenaitunyo	35	\$43.56	Lenaitunyo
35	\$243.28	Lenaitunyo	29	\$51.98	Lenaitunyo
27	\$246.76	Lenaitunyo	12	\$53.85	Esilalei
23	\$247.68	Lenaitunyo	7	\$56.26	Laarkaitial
32	\$289.91	Lenaitunyo	32	\$81.09	Lenaitunyo
13	\$347.14	Esilalei	23	\$95.34	Lenaitunyo
29	\$439.09	Lenaitunyo	27	\$145.39	Lenaitunyo
21	\$451.31	Lenaitunyo	13	\$225.58	Esilalei
25	\$466.64	Lenaitunyo	21	\$264.50	Lenaitunyo

Mean veterinary expenditure per household per year was US\$ 9.72. The mean monthly expenditure by household on livestock dipping was just US\$ 0.75. Veterinary drug purchases fell into 2 categories: prophylaxis and treatment (Table 5.20). Prophylaxis accounted for 23 percent of veterinary purchases whereas treatment accounted for 77

percent of veterinary expenses. Acaracide accounted for the bulk of preventative treatment (17 percent). The two main diseases treated for in Emboreet were ECF and Trypanosomiasis. A vaccine for ECF existed but its cost acted as a deterrent to herders (Homewood et al. 2006: 220).<sup>20</sup> Vaccination expenses accounted for six percent of expenditure. These data are consistent with reports from villagers that livestock care in Emboreet tended to centre on treatment rather than prevention of diseases.

**Table 5.20: Distribution of veterinary drugs purchased over 12 months** (Source: repeat-round survey)

	Condition	Drug Type	Percent	Sub-totals
<i>Prophylaxis</i>	<i>ECF, Heartwater</i>	Acaracide	17.0%	
	<i>ECF, CBPP</i>	Vaccinations	6.3%	
		Vitamins	0.1%	<b>23.4%</b>
<i>Treatment</i>	<i>Anti-biotic</i>	Tetracyclin	19.3%	
	<i>Trypanosomiasis</i>	Berenil	18.9%	
	<i>Anti-biotic</i>	OTC	17.6%	
		Worm drugs	11.8%	
	<i>ECF</i>	Parvexon	6.8%	
	<i>ECF</i>	Butalex	1.3%	
		Drugs Other	0.7%	
	<i>Anti-bacterial</i>	Penstrep	0.3%	<b>76.7%</b>
<b>Total</b>			<b>100.1%</b>	

### Agricultural Yields

The total value of agriculture to households was calculated from the value of maize and beans given away, retained for consumption and sold by individuals households, drawn from the broad-scale survey (n = 226) (Table 5.21).<sup>21</sup> Farming represented a mean per household income of US\$ 381 in 2003 and US\$ 414 in 2004. These data included households that cultivated and whose crop failed. Of the households that cultivated land, the harvest failed for 15% households in 2003 and 11% households in 2004. These data

<sup>20</sup> Recorded interview, RA, NGO employee, Arusha, 22 April 2005.

<sup>21</sup> I encountered under-reporting of maize yields by respondents similar to livestock numbers.

also illustrate the effect that supply has on commodity prices: in 2003 a higher crop of beans resulted in a lower price and in 2004 an increase in maize drove down prices.<sup>22</sup>

**Table 5.21: Maize and bean income per household in 2003 and 2004** (Source: broad-scale survey)

	<i>Mean value of household production (US\$)</i>	<i>Minimum</i>	<i>Maximum</i>	<i>N</i>	<i>SD</i>
Beans 2003	115	0	3,184	172	391
Maize 2003	352	0	6,134	185	723
<b>All crops</b>	<b>381</b>	<b>0</b>	<b>8,773</b>	<b>223</b>	<b>876</b>
Beans 2004	71	0	2,364	160	287
Maize 2004	424	0	6,848	191	719
<b>All crops</b>	<b>414</b>	<b>0</b>	<b>6,848</b>	<b>223</b>	<b>771</b>

These figures already suggest a far lower return to the household economy from agriculture as compared to livestock, when considering gross income. There were also differences between households from different wealth ranks, with households from the wealthiest rank earning on average more than three times that of their poorer counterparts (Table 5.22)

**Table 5.22: Gross agricultural income by wealth rank in 2003 and 2004** (Source: broad-scale survey)

<i>Wealth rank</i>	<i>Mean</i>	<i>N</i>	<i>Std. Deviation</i>	<i>Median</i>
Rich	\$ 791	52	1301	344
Middle	\$ 328	71	532	141
Poor	\$ 241	100	426	118
<b>Total</b>	<b>\$ 397</b>	<b>223</b>	<b>780</b>	<b>167</b>

Taking only those households that were involved in the repeat-round survey (of the original 37 households in the repeat-round surveys, 27 were also in the broad-scale survey), and therefore directly comparable to the livestock sales data described above, the mean returns to agriculture are even lower: \$202 in 2004 and \$192 in 2005, with no significant difference between the wealth ranks.

<sup>22</sup> One bag (*gunia*) equals approximately 120 kilograms, and is the standard market unit in Tanzania.

I analysed various land use returns in order to test the hypothesis that the returns from wildlife (high value photographic tourism and hunting) and livestock production combined outweigh the returns from agriculture in Emboreet (Table 5.23). In 2003 and 2004, farming yielded the highest consistent financial returns per km<sup>2</sup>. Photographic tourism through Kikoti Safari Camp yielded the second highest return per km<sup>2</sup> in 2004 (US\$ 1,176), slightly higher than livestock production per km<sup>2</sup> (US\$ 1,060). Dorobo Safaris had a significantly larger concession and much lower revenues; when the total tourism revenues for both areas were averaged, the return per km<sup>2</sup> for photographic tourism dropped to US\$ 311 in 2004.

**Table 5.23: Returns in US\$ per km<sup>2</sup> for land use activities in Emboreet Village**

Activity	Mean Returns Per Km <sup>2</sup>	
	2003	2004
<b>Farming (maize and beans)</b>	\$1,760	\$1,862
<b>Livestock Production</b>		\$1,060
<b>Tourism</b>		
<i>TPTS (36.1 km<sup>2</sup>)</i>	\$482	\$1,176
<i>Dorobo (123.7 km<sup>2</sup>)</i>	\$48	\$52
<i>TPTS and Dorobo Mean (159.8 km<sup>2</sup>)</i>	\$238	\$311
<i>Tourist hunting (165.7 km<sup>2</sup>)</i>	\$41	\$23
<i>Photographic and hunting</i>	\$279	\$334
<b>Seed Been farming (Circle H Ranch)</b>		\$74,100

Tourist hunting returns to Emboreet were calculated for the Lolkisale GCA portion of Emboreet (165.7 km<sup>2</sup>). In actuality, tourist hunting concessions covered the entire village but activities were generally focused in the Lolkisale GCA portion. Similarly, livestock production was calculated for the village title deeded area. This may not have been accurate area due to avoidance of certain areas due to disease but as much of the village was used at various times for grazing I incorporated this approximation. While

subsistence and commercial agriculture are not comparable, I include for reference the returns of a commercial seed bean grower for export in Narakauo village (Table 5.23).<sup>23</sup>

In both years, the returns of agriculture per km<sup>2</sup> exceeded the *mean* combined photographic and tourist hunting returns in Emboreet. In 2004, the mean returns per km<sup>2</sup> of both livestock and tourism combined amounted to US\$ 1,394 per km<sup>2</sup> compared with agriculture's returns of US\$ 1,862 per km<sup>2</sup>. In spite of the large increase in revenue from Kikoti Safari Camp's concession from 2003 to 2004, the mean of tourism was relatively low due to the low returns from hunting and Dorobo safaris across extensive areas. The returns for tourism were calculated from the concession sizes of TPTS (36.1 km<sup>2</sup>) and Dorobo safaris (123.7 km<sup>2</sup>). Combining hunting contributions to Emboreet using just these concession sizes (when in actuality hunters used the entire GCA), wildlife generated US\$ 334 per km<sup>2</sup>. Livestock production valuations per km<sup>2</sup> were also problematic. I approximated that livestock primarily used the village and Lolkisale GCA areas, though they sometimes ranged further in periods of drought.

These data illustrate that high value (or volume) tourism in a small area (such as in the case of Kikoti Safari Camp) combined with livestock grazing in an extensive area can yield substantial returns in pastoral areas. Currently though, given that the bulk of tourism revenues do not impact individuals, agriculture is a significantly more valuable use of the plains to villagers than livestock and wildlife. What matters most to villagers is the returns per household. Returns per km<sup>2</sup> will always be a slightly abstract measure. In the cases of farming and livestock these returns were realised at a household level, but those of wildlife tourism generally were not.

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<sup>23</sup> Recorded interview, GH, commercial farmer, Arusha, 20 April 2005.

## Off Farm Income

Off-farm income refers to income at the household level that is not from farming crops or livestock herding. Of a sample size of n=223 respondents from the broad-scale survey, 35 percent (n=77) reported no sources of off-farm income (2 households were excluded from further analyses, due to concerns about the validity of their responses). Mean household income per activity was calculated only for households who reported that source of income. The “salary” category included paid jobs that were not related to the tourism or wildlife industries, such as teaching or casual labour. Livestock brokering and income from leasing land were included in the business category. Remittances came mainly from coffee estates in Karatu District where a number of *murran* had sought work as watchmen, and from friends, family and clan mates at weekly markets. Remittances from Mererani were included in the mining category (Table 5.24).

**Table 5.24: Income per household from off farm economic activities (n=221)**

Activity	US\$/HH/Year	Std. Dev.	% of Households (N=221)	Median
Wildlife	\$1,065	1,675	8%	445
Mining	\$1,008	4,349	29%	500
Salary	\$720	1,858	25%	334
Business	\$561	537	7%	334
Remittance	\$336	489	8%	93
Petty trade	\$250	297	3%	93
<b>Overall</b>	<b>\$961</b>	<b>1742</b>	<b>65%</b>	<b>445</b>

The mean annual income per household from all off-farm income sources was US\$ 961 (Std. Dev. 1,742). The highest mean household off-farm income source came from wildlife related sources, followed by mining (Table 5.24), although wildlife related sources provided an income for just 8 percent of households in the sample, compared to mining which provided an income for 29 percent of households in the sample. Wildlife related

revenues were based largely on salaries and tips of employees of Kikoti Safari Camp and Dorobo Safaris.

The mean values for off-farm income mask large variation in income values accruing to individual households. In nearly all cases, a few households earning a high income from these sources are inflating the average. There was no significant difference between mean incomes from the three different wealth ranks for each individual activity, largely due to the high variation within each wealth rank. However, once all off-farm income was accumulated into one total, wealthiest households earned significantly more (mean: US\$ 1,766, median: US\$ 1,112) than the poorest households (mean: US\$ 527, median: US\$ 204) ( $F=5.9$ ,  $df=2$ ,  $141$   $P<0.01$ ). Comparing the proportion of households with income from different off-farm activities, wealthy and middle rank households are significantly more likely to receive an income from wildlife related sources (14 percent and 11 percent of households) than poor households (2 percent of households) ( $\text{Chi Sq.}=8.4$ ,  $df=2$ ,  $P<0.01$ ) and poorer households are significantly more likely to receive remittances (13 percent of households) than middle and wealthy households (4 percent and 2 percent of households) (although this does not include remittances from mining activities in Mererani) ( $\text{Chi Sq.}=7.6$ ,  $df=2$ ,  $P<0.05$ ). For all other activities, there is consistency in involvement in different types of activities across all wealth ranks.

Taking only those households that were involved in the repeat-round surveys and the broad-scale survey ( $n=27$ ), mean gross income is comparable across the two sets of data, although more households reported off farm income during the repeat-round survey (25/25) than had done so during the broad-scale survey (18/25), suggesting an under-reporting of off-farm income in the broad-scale survey.



Table 5.25 below describes income for the 25 households involved in the repeat-round survey with off farm income. Wildlife income in the repeat-round surveys is half that of the broad-scale survey, although in this case it very close to the median suggesting the repeat-round surveys did not include households with disproportionately high income from wildlife related sources. By far the largest source of off farm income among the repeat-round households was from tanzanite mining, although the median was far lower suggesting once again that a few households were inflating the mean (Table 5.25, 5.26). In both surveys, off farm benefits from tourism and wildlife were higher than off farm income from livestock brokerage, included in the business category.

**Table 5.25: Mean off farm income per household** (Source: repeat-round survey)

	Mean US\$	% of Households	Std. Deviation	Median
<b>Wildlife</b>	556	15	528	551
<b>Mining</b>	1,192	41	1,859	297
<b>Salary</b>	115	19	102	128
<b>Business</b>	149	37	134	92
<b>Remittance</b>	163	56	230	93
<b>Petty Trade</b>	33	4	.	33
<b>Total off-farm</b>	<b>736</b>	<b>100</b>	<b>1250</b>	<b>306</b>

Data collected in the repeat-round survey could be considered higher resolution than the broad-scale as visits were more frequent, as were opportunities for cross checking responses. However, our analyses have consistently shown the impact of a few households earning very high incomes that inflate the mean values for the community as a whole. The smaller sample size in the repeat-round survey makes it less likely to capture these outlier households.

**Table 5.26: Distribution of off farm income by source and amount** (Source: repeat-round survey)

<b>Economic Activity</b>	<b>Total \$</b>	<b>Percent</b>
Tanzanite Mining	\$20,829.10	76.59%
Remittance	\$2,607.14	9.59%
Wildlife	\$1,635.59	6.01%
Livestock Broker	\$1,495.83	5.50%
Casual Labour	\$397.13	1.46%
Mission Employee	\$101.95	0.37%
Land Lease	\$64.87	0.24%
Tobacco	\$64.87	0.24%
<b>Totals</b>	<b>\$27,196.48</b>	<b>100.00%</b>

Perhaps even more remarkable is the distribution of mining revenue by sub-village and by household in the repeat-round survey. Lenaitunyo reported over 98 percent of off farm mining revenue in the repeat-round survey (Table 5.27). Mean household returns from mining in Lenaitunyo were US\$ 1,861 over a 13 month period in contrast to low mining returns from Esilalei (US\$ 102) and Laarkaitial (US\$ 56). Contrasted with tourism returns in the same survey, mean household income reported from wildlife tourism was US\$ 409 (n=4) over the 13 month period.

**Table 5.27: Mining revenue by sub-village and household** (Source: repeat-round survey)

<b>Sub-village</b>	<b>HH N=</b>	<b>Total \$ per Sub-village</b>	<b>Mean \$ by HH</b>	<b>Percent</b>
<b>Esilalei</b>	3	\$ 307.32	\$ 102.44	1.48%
<b>Laarkaitial</b>	1	\$ 55.61	\$ 55.61	0.27%
<b>Lenaitunyo</b>	11	\$ 20,466.17	\$ 1,860.56	98.26%
<b>Totals</b>	<b>15</b>	<b>\$ 20,829.10</b>		<b>100.00%</b>

In the broad-scale survey, there were 65 households which reported mining related activities. These households generated US\$ 110,405 from mining related revenue, or

approximately US\$ 1,698 per household per year. Based on this figure, Emboreet's 437 households would have generated US\$ 213,482 per year from tanzanite; more than quadruple the total contribution from wildlife streams.<sup>24</sup> In the broad-scale survey, only 17 households (7.5 percent) reported receiving wildlife revenues (either wages or remittances). The total annual amount collected by this group of households was US\$ 18,101. This translates into an average per household annual contribution from wildlife tourism of about US\$ 1,065. The total amount of reported off-farm income from all sources was US\$ 185,258. Table 5.28 illustrates that revenue from mining represented about sixty percent of the total off-farm household income and impacted more households than wildlife revenue.

**Table 5.28: Comparison of number of households benefiting from wildlife and mining revenues in Emboreet Village in 2004** (Source: broad-scale survey)

Activity	N=	Sample Sub Total	% of Total off-farm income	Emboreet Total	Amount per HH/year
<b>Mining</b>	65	\$110,405	59.6%	\$213,482	\$1,699
<b>Wildlife</b>	17	\$18,101	9.8%	\$35,001	\$1,065

There seemed to be a direct correlation between wealth at a sub-village level and the number of households reporting mining benefits. Lenaitunyo, the richest sub-village, reported the highest number of households with active mining benefits (26.2 percent), whereas the poorest sub-village of Esilalei reported the second lowest number of households affected by mining (9.2 percent).<sup>25</sup> In terms of livestock holdings, mining households possessed significantly higher TLU than non-mining households. Table 5.29

<sup>24</sup> The data included an outlier which reported an annual income from mining of US\$ 111,214. His report almost doubled the per HH contribution from mining. The same HH borrowed money from the village council to support his brokerage activities. He was reportedly in debt US\$ 27,800 in Mererani. I adjusted his data down to US\$ 1,500 from US\$ 9,268 per month as his response seemed embellished.

<sup>25</sup> Ingung was the lowest probably due to it having the lowest sub-village population.

illustrates that households with mining benefits owned over 200 percent more livestock than households without mining benefits in 2003 and 2004.

**Table 5.29: Mean TLU for households with (n=65) and without mining benefits (n=161) in 2003 and 2004**

Year	Non-miner TLU	TLU Mining HHs	% Difference
2003	4.26	13.98	228.3%
2004	4.16	12.78	206.9%

### Commoditization and Markets

Weekly men's market data from the repeat round survey illustrated the key commodities men were spending money on (Table 5.31). This data illustrates that maize purchases were the highest household expenditure item (33 percent). The extent of commoditization is illustrated by the high expenditure on travel and mobile phones after medical expenses. Mean household expenditure per week was US\$ 43.

Table 5.30 illustrates market expenses by wealth class as a proportion of off-farm income. It illustrates that the poor were dependent on off farm income to a larger extent for food and market expenses than the wealthy.

**Table 5.30: Market expenses as a proportion of off-farm income by wealth class** (Source: repeat-round survey)

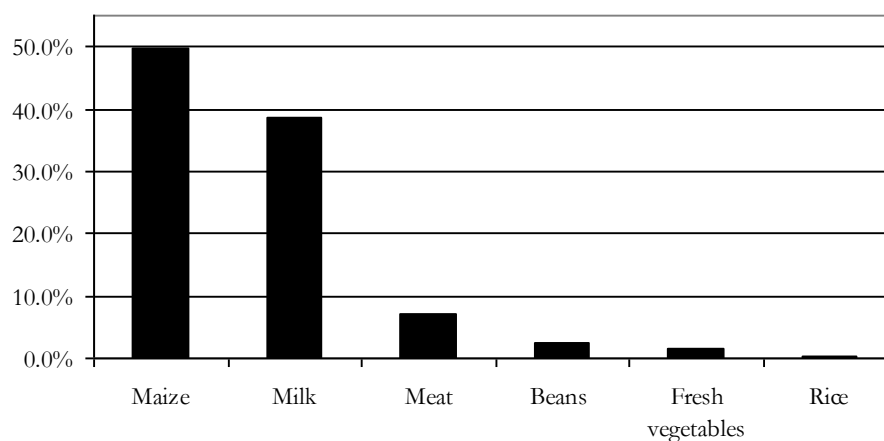
	Market expenses	Off-farm income	% of Off-farm income
<b>Poor</b>	\$32	\$201	16%
<b>Middle</b>	\$50	\$560	9%
<b>Rich</b>	\$51	\$1,184	4%

**Table 5.31: Total expenditure on commodities by repeat round households at weekly markets**  
(source: repeat round survey)

Market Item	US\$	Percent	Expenditure Rank
Maize	\$1,928.27	32.74%	1
Medical	\$1,230.49	20.89%	2
Travel	\$962.37	16.34%	3
Mobile Phone	\$462.84	7.86%	4
Remittance	\$316.59	5.37%	5
Sugar	\$298.66	5.07%	6
Clothes	\$177.94	3.02%	7
Cooking Oil	\$102.87	1.75%	8
Grind Maize	\$86.28	1.46%	9
Beans	\$84.34	1.43%	10
Rice	\$79.70	1.35%	11
Tobacco	\$53.43	0.91%	12
School Fees	\$32.44	0.55%	13
Water	\$25.02	0.42%	14
Meat	\$24.00	0.41%	15
Alcohol	\$9.64	0.16%	16
Simi (machete)	\$8.34	0.14%	17
Salt	\$3.34	0.06%	18
Miscellaneous	\$3.61	0.06%	19
<b>Totals</b>	<b>\$5,890.18</b>	<b>100.00%</b>	

In terms of diet, maize and beans constituted the highest mass of food consumed (52 percent), while livestock products accounted for 46 percent of total household consumption (Figure 5.11).

**Figure 5.11: Percentage of food consumed by weight for 37 repeat-round households.**



Over 80 percent of households in Emboreet surveyed owned less than 5 TLU/AU. These households did not meet the minimum subsistence requirements for livestock per capita; depending on cultivation and other sources for food security. The extent to which Maasai in Emboreet depended upon agriculture for food intakes is illustrated in Table 5.32. It illustrates the proportion of food intake from different sources from a food survey conducted during the repeat-round survey. Approximately 53 percent of dietary food intake by volume was from agricultural sources within Emboreet such as maize, beans and leafy vegetables.

**Table 5.32: Total dietary intake by weight for 37 households over a 15 month period** (Source: repeat-round survey)

Foodstuff	Kgs	Percent of total	Total
<i>Livestock</i>			
Milk	521.83	38.6%	<b>45.7%</b>
Meat	95.35	7.1%	
<i>Agriculture</i>			
Maize	673.96	49.9%	<b>54.3%</b>
Beans	34.80	2.6%	
Leafy vegetables	4.6	0.3%	
Other*	21.25	1.6%	
<b>TOTAL</b>	<b>1,351.79 Kgs</b>		

*\*Other refers to rice, tomatoes, cabbage and potatoes generally transported to Emboreet*

Table 5.33 shows the amount of revenue generated from Emboreet grown maize and bean sales in 2003 and 2004, as well as average revenue generated per household by crop sales. Table 5.33 illustrates that the average contribution per household per year from combined maize/bean sales was US\$ 225. The total amount of revenue generated from crop sales in the village was much higher (revenue figures were for a 51 percent sample).

**Table 5.33: Aggregate of maize and beans sold by households in Emboreet, 2003-2004 plus average crop sales revenue per household** (source: broad-scale survey)

Year	Total Kgs Sold	Kgs Sold per HH	Crop Revenue US\$	Crop Sales per HH
2003	267,860	1,185	\$51,375	\$227.30
2004	392,290	1,736	\$50,298	\$222.60
<b>Totals</b>	<b>927,159 Kgs</b>	<b>4,249 Kgs</b>	<b>\$142,901</b>	<b>\$655.01</b>

### The Relative Importance of Different Income Sources

*“Shamba ni nusu ya maisha yangu”* (Farming is half of my life)

— *Landisi* man, Meleleki, 2004

One definition of pastoralism is a household in which 50 percent of total income comes from livestock principally grazed on commonly managed rangelands (Swift 2004). A household with 25-50 percent of income from pastoralism typically is defined as agro-pastoral (Swift 2004). Taking these details on different activities together, and bearing in mind the high variation that exists within as well as between wealth ranks, Figure 5.12 shows the relative importance of different activities for households in each wealth rank.

Livestock production was most important relative to the overall household economy for wealthiest households compared to the middle and poor ranking households (Figure 5.13). Mining played a significant part in the household economy for wealthy and middle ranking households and is almost insignificant for the poorest households, while other off farm income is of greatest significance to the poorest households. Relative to total income, wildlife related income, while valuable to those households that take part, is of relatively low value to the community as a whole. Cultivation is of greatest significance to the household economy overall among the poorest households that farm relatively

small areas (although as we shall see poorer households farmed a smaller area of land than wealthy households).

Figure 5.12: Proportion of income from different livelihood sources (N=27)

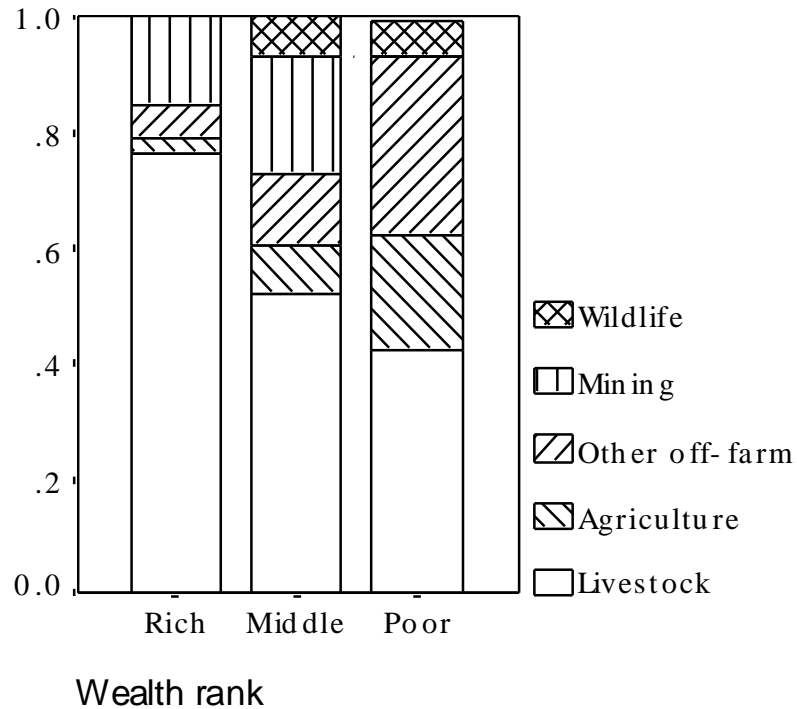
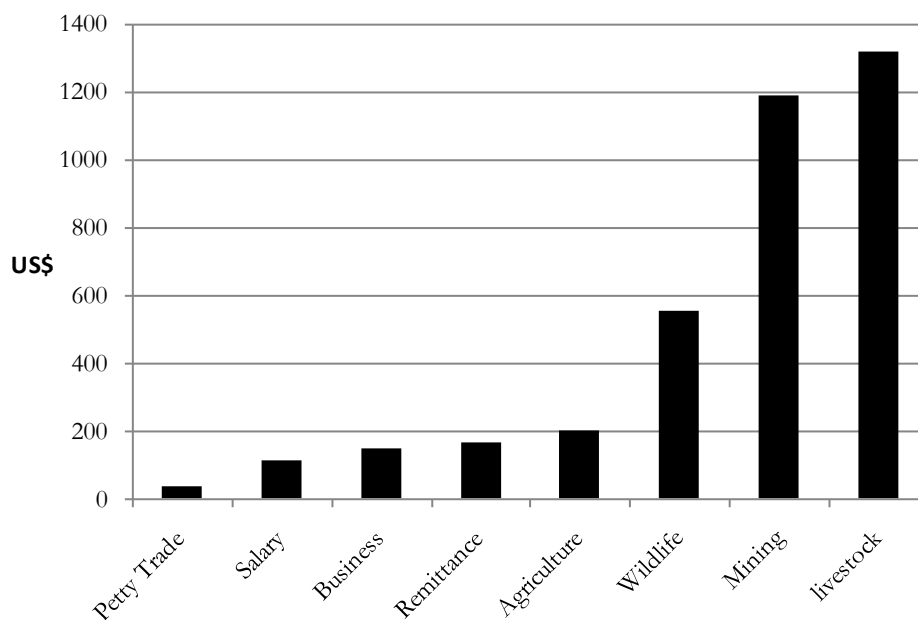


Figure 5.13: Livelihood strategy proportions by household (Source: Repeat-round survey)





In the 27 households in the repeat-round surveys linked to the broad-scale survey there is a strong positive correlation between mining income and the value of livestock purchase (Pearson: 0.828,  $P < 0.01$ ) and also between mining income and acres under cultivation (Pearson: 0.66,  $P < 0.05$ ), suggesting households are investing income from mining into both livestock and cultivation. On average, households with mining income owned 6.3 TLU/AU equivalent compared to households with no mining income, which owned 3.0 TLU/AU.

### **Discussion**

Excisions of land limited pastoral mobility and livestock production strategies. Evictions from Tarangire NP and forced relocation due to *Ujamaa* disrupted Maasai livelihood strategies (Igoe and Brockington 1999). A further fracture occurred in 1985 with closure of government dipping services in pastoral areas making cattle more prone to tick borne diseases. Following structural adjustment in the mid 1980s grazing lands and key water resources continued to be excised from pastoral use by commercial agricultural investments, mining and an expansion of the wildlife estate (Lama 1998, Mwalyosi 1991). Combined with an increase in human populations, higher cattle mortality and increased cattle sales to meet cash needs resulted in a decline in herds over the last forty years (Muir 1994); as well as an increase in the dependence on farming. However, farming profits fluctuated significantly at a household level.

After examining the relative importance of wildlife and other livelihoods, it is apparent that mining plays an important role in household economies. I now explore the role of tanzanite mining in land use, livelihoods and politics in Simanjiro.

## Chapter Six

### **Brokers of the Birthstone: Tanzanite and Maasai Diversification**

#### **Introduction**

The mining sector in Africa has been a source of intense controversy, with particular attention paid to its environmental impacts (Hilson et al. 2007, Kitula 2006, Miranda et al. 2003), social impacts (Chachage 1995, Godoy 1985, Hilson and Potter 2005, Hilson and Nyame 2006, Hodges 1995, IUCN and ICMM 2004, Yelapaala and Ali 2005), and macro-economic impacts (Figueroa and Calfucura 2003). A number of authors have examined the social impacts of artisanal mining and its policy framework (Banchirigah 2006, Hilson and Potter 2003, Hilson 2005, Hilson and Potter 2005, Hilson and Nyame 2006, Hilson et al. 2007, Hilson and Yakovleva 2007, Kitula 2006, Mutagwaba 2006), and argued that mineral deposits may potentially alleviate local level poverty (Hilson 2005, Hodges 1995, Kitula 2006).

It became apparent to me shortly after beginning my fieldwork that tanzanite mining might have a significant impact on pastoral livelihoods and diversification. Villagers pointed out vehicles, satellite dishes, farms, livestock herds, and modern homes in Simanjiro villages that supposedly resulted from mining revenue. Given the strong growth of the Tanzania mining sector in recent years and apparent impacts of tanzanite mining across Simanjiro District, I wanted to address the following questions:

1. How does tanzanite affect natural resource management in Simanjiro?
2. What are patterns of reinvestment strategies of tanzanite revenues in Simanjiro?
3. Who benefits from tanzanite and how does this affect Maasai identity?
4. What are the links of tanzanite to wildlife conservation politics in Simanjiro?

### **Mererani: Stateless within a State**

“*Uvumilivu wako uwe mwangaḟa wa mwongoḟo wako*” (Your perseverance will be your guiding light)

—Graffiti signed ‘Bob Ally’, which uplifted and encouraged tanzanite miners on the trudge up to Block ‘D’ in the Mererani Controlled Area

When approaching Mererani township in Simanjiro District, one immediately becomes aware that this is no ordinary Tanzanian town. Graphite-stained miners (*mwanaapollo*, Singular; *wanaapollo*, plural) in tatters mingle with Maasai dressed in *shukas* (cloth) in this township dedicated solely to the mining of the precious gemstone tanzanite. Artisanal miners strap cheap torches onto their heads with rubber tubing before venturing underground into, what may be for them, labyrinths of poverty.

Multiple mobile phone towers sit astride wide, dusty avenues heavily rutted by numerous trucks and buses; motorcycles aggressively rule the road and one sees pockets of wealth interspersed amongst the sprawl: ornate houses, walled hotel complexes, and bars bustling at all hours. The facilities are usually owned by a *fogo*— a wealthy mine owner who has used their newly-found wealth to influence land use, party politics, and livelihoods throughout northern Tanzania. Much of the expansion of the town is into neighbourhoods nicknamed ‘Zaire’, ‘Cairo’ or ‘*Chaka*’ (bush). The mining zones are

nicknamed *'porini'* (wilderness), *'milimani'* (mountainside) and 'OPEC' by miners, evocations of resource extraction or stateless places. However, despite a global industry worth an estimated US\$ 500 million per year, many of Mererani's residents live in extreme poverty and thousands of the miners are children (Pearson 2006).

**Figure 6.1: Young miners sifting through mine tailings in Mererani** (© Richard Human)



Mererani is the sole place on earth where economically viable deposits of tanzanite are found. Due to its geographic restriction, tanzanite is ranked at least a thousand times rarer than diamonds.<sup>1</sup> With its deep blue-purple hue, it is fast becoming a gem of choice, with demand driven by Tiffany and Company of New York, the Hollywood jet-set and gemstone dealers in Thailand and India. It would be difficult for jewellery buyers in the air-conditioned, sanitized boutiques of the United States, or even nearby Arusha, to imagine the chaotic mining industry in Mererani and the social transformation that it is fuelling in northern Tanzania.

<sup>1</sup> <http://www.tanzaniteone.com/tanzaniteone-tanzanite-stone.asp> accessed 28 September 2006.

The frontier-like atmosphere and demand for manual labour means that Mererani absorbs large numbers of people irrespective of ethnicity, education, or criminal backgrounds. Miners were exclusively male and approximately 90 percent non-Maasai, with only the poorest Maasai—Maasai have an aversion to manual labour, especially to digging the earth (Jacobs 1965)—drawn underground.<sup>2</sup> An estimated 95 percent of brokers were male.<sup>3</sup> Servicing them were women drawn to the mines—many selling food and sex. A thriving bar and guesthouse sector has resulted in Mererani having one of Tanzania's highest HIV prevalence rates (Daily News 2006a, Pearson 2006).

Fortunes were earned and lost on a daily basis in Mererani. Themes captured by graffiti (shown later in this chapter) encouraged miners to spend as much money as they made because death was probably around the corner.<sup>4</sup> When miners hit a tanzanite vein, it was obvious: they went on a spending spree, staying above ground until they ran short of money.<sup>5</sup> The chaotic and unregulated nature of Mererani did not engender a consistent international supply of tanzanite. Illicit mining, theft, smuggling and erratic recoveries resulted in a volatile market with over-supply by 1997.

Mining attracts very specific human capital, with low technological spill over to other sectors of the economy (Ferguson 2006, Figueroa and Calfucura 2003). Crime rates in mining areas of Tanzania are higher than areas without mining (Maliyamkono and Bagachwa 1990). Crime was reportedly high in Mererani—its culture shaped by violence and limited State law enforcement capacity to police thousands of itinerant male miners. Tanzanite dealers in Arusha were also the targets of considerable crime (Mganga 2007).

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<sup>2</sup> Interview, RN and TN, former brokers, Emboreet, 22 September 2004.

<sup>3</sup> There were a few Maasai women brokerage groups, but largely from ethnically diverse Moipo in western Simanjiro.

<sup>4</sup> Mining accidents claimed approximately 100 deaths a year (Joseph 2007, Masayanyika 2007, Ngereza 2008).

<sup>5</sup> Discussions, RN and TN, former brokers and miners, Emboreet, 2004 and 2005.

But tanzanite's positive benefits probably outweighed its perceived drawbacks to Arusha. Tanzanite was one of the gemstones that drove urbanization in Arusha and turned it into Tanzania's gemstone trading hub. Tanzanite's influence was visible in gemstone dealership-lined streets, the prominent 'Triple A' nightclub and radio station,<sup>6</sup> car washes, real estate, restaurants, hair salons, and tourism investments. Tanzanite contributed to a redrawing of class lines within the Tanzanian and expatriate bourgeoisie, in which even uneducated pastoralists could access and affect urban economies.

Artisanal and small-scale miners worked in dangerous and risky conditions underground and usually for the lowest financial gain.<sup>7</sup> They were indentured by a stratum of claim holders and pit owners: elites who operated in a landlord-like fashion. Generally, expatriates and Tanzanian Asians dominated the trade. This dominance, in turn, resulted in the emergence of a class of commission-earning brokers (Chachage 1995), a role which the Maasai were well-placed to assume. Trading in rough tanzanite was usually conducted in fragmented and unregulated transactions between low-wage miners and brokers. Brokers sold stones on to 'master dealers' in Arusha.<sup>8</sup> Dealers sold directly to tourists or exported tanzanite from comfortable offices distanced from the bustle of Mererani.

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<sup>6</sup> Triple A refers to the highest quality of tanzanite.

<sup>7</sup> Internationally agreed upon common definitions for small-scale or artisanal mining are obtuse. In this chapter, small-scale refers to licensed underground mining operations while artisanal refers to licensed as well as illicit miners eking out a living in sand pits close to the surface.

<sup>8</sup> Over 80 percent of rough stones sold to Arusha dealers were exported to Jaipur, India, for cutting and polishing before onward shipping to final markets (Forrest 2006). The tanzanite industry was believed to employ up to 20,000 cutters in Jaipur (Ihucha 2007b).

The poverty of the mining class made them vulnerable to exploitation.<sup>9</sup> Payment for these miners was in food (Muir 1994), and after a vein strike, in shards of tanzanite once the pit-owner had selected the largest stones.<sup>10</sup> Generally, brokers and dealers gained the most from the tanzanite industry, while miners were ensnared in a cycle of poverty. Tanzanite was thus an example of an intensification of capitalist accumulation corresponding with traditional elite capture and a new bourgeoisie at its centre.

As I will demonstrate, a significant number of unlicensed brokers are Maasai villagers from Simanjiro District, driven by the lure of profits and declining livestock economies in their home villages. Simanjiro residents are not the only group to be attracted to this frontier town: Mererani has attracted Maasai from other districts (See Goldman 2006 for Monduli District) and Tanzanians from all over the country, as well as Kenyans, Zambians, and Congolese, to name a few, all hoping to make a fortune through tanzanite. Partly driving the rush is the knowledge that the supply of tanzanite is limited. Experts estimate that viable streams of tanzanite will be exhausted in 15 years (Larenaudie 2007).

Mererani's influence extended to the remotest villages in Simanjiro, where some brokers' lives have been transformed. The wealthiest brokers controlled several village governments, with decisions and appointment made only with their endorsement. The economic influence of tanzanite extended to other sectors, evidenced by investments in farming and livestock production. A fleet of Land Rover taxis and vehicles linked Mererani with weekly markets (*mnada*) across Simanjiro. Brokers used gemstone cash for livestock, grain, social networking, and family remittances.

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<sup>9</sup> An estimated 4,000 child labourers are employed in the mines (Pearson 2006).

<sup>10</sup> Interview, RN, Emboreet, 12 November 2004.

## The Background of Mererani

“*Riziki ni kama ajali*” (Success is like an accident)

—Mererani graffiti underscoring the lottery-like nature of tanzanite wealth.

Before tanzanite was discovered, Mererani ward was predominately agro-pastoral. Mererani is now the largest town in Simanjiro District.<sup>11</sup> While the official district administrative capital is Orkesumet, realistically Mererani is the *de facto* economic and political capital. Mererani village (53.9 km<sup>2</sup>) is directly 60 km from Emboreet village, but over 110 km by road (Figure 6.2). The actual mines are located about four km to the northeast of Mererani township in Naisinyai village. The gemstone belt is located in the Lelatema Mountains in an area of predominately *Acacia-Commiphera* bush with scarce water (Muir 1994).

The ‘rush’ to Mererani is generally believed to have begun in 1967 (Chachage 1995). The bulk of the initial claims were small-scale but by 1970 production had reached several hundred kilograms of tanzanite per year. Production figures varied widely due to the perennial problem of unofficial tanzanite exporting, mainly through Kenya.<sup>12</sup> The high value and easily portable nature of gemstones make them a ready commodity for smuggling and unofficial/illegal trade.

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<sup>11</sup> Mererani is also known as *Mbuguni* to local people.

<sup>12</sup> Asian jewellery stores in Nairobi were awash with affordable tanzanite during the 1970s (interview, EK, American expatriate, 17 March 2007).



Figure 6.2: Location of Mererani



The government attempted to control and profit from the mining sector through the establishment of the State Mining Corporation (STAMICO). In 1972, the tanzanite mines were nationalized and controlled by STAMICO until 1983. Nationalisation, however, did not stop the operations of unofficial miners. The Arusha Regional Miners' Association (AREMA) was established in 1983 by government in an attempt to limit licensed prospectors (Chachage 1995, Muir 1994). STAMICO's failure in 1986 heralded a major influx of small-scale and artisanal miners to fill the void in Mererani. Tanzanite's continued price growth led to more demand, increased labour demands and therefore population growth. Approximately 80 percent of Mererani's population of

approximately 50,000 people are immigrants (Daily News 2006b, Kulindwa 2002). About 30 percent of the total Simanjiro district population resides in Mererani.

In 1990, the Government cleared all local miners from Mererani in the belief that large-scale companies would be easier to control. The Mererani Controlled Area (MCA) was demarcated into 4 blocks: A through D; measuring 5 km by 2 km in total. Block A was awarded to Kilimanjaro Mines Limited, Blocks B and D to AREMA. The largest concession, Block C, was acquired in 2004 by a South African firm named the TanzaniteOne Group. Block C is estimated to contain two-thirds of the world's known deposits of tanzanite.<sup>13</sup> The slopes of Block D are densely carved up with corrugated iron shacks and ladders marking small-scale deep mining shafts. Block A contains hundreds of shallow pits in the sand in which poorer miners mine near the surface (Figure 6.3). Closer towards the township, a large metal fence, gate and towering silo mark the entrance to TanzaniteOne's compound.

**Figure 6.3: Artisanal miners in Block A, MCA** (© Richard Human)



<sup>13</sup> Including the world's largest tanzanite mined in 2005. At over 16,800 carats (3.4 kg), it is worth over US\$ 15 million raw or US\$ 130 million polished at 2006 rates.

### Tanzanite is not Forever: Representations of Rarity

*“Kila sekunde ipitayo ni ukaribio wa mwanadamu na mungu wake”* (Each second that passes brings a person closer to their God)  
 — Mererani Graffiti embodying fatalism and encouragement to live and spend recklessly

Tanzanite was discovered in 1965 in Mererani (Chachage 1995). Different stories abound concerning the discovery of the stone: from Maasai herders who found some crystals after a bush fire, to Africans and Asians claiming credit for the first finds. However, there is no doubt that tanzanite’s present day popularity is largely due to marketing campaigns by Tiffany and Company. Shortly after its discovery, Tiffany’s hailed it as the find of the century, sought exclusive marketing rights, and coined the name ‘tanzanite’. Tiffany’s believed that an allusion to the country of origin was crucial to marketability.

Tanzanite is the mineral zoisite in gemstone-quality form.<sup>14</sup> Zoisite is also found in Morogoro in Tanzania, southern Kenya, and Norway. However, the only economic deposits of blue zoisite are located in Mererani (Chachage 1995). The gem’s restriction to a single geographical location is its unique selling point. Marketers promote tanzanite as an ‘investment’, pointing out its limited mining supply of 15 years.<sup>15</sup> Tanzanite’s defining quality from other zoisites is its trichroism. Once polished, it radiates a spectrum of colours. Skilful marketing has made it an internationally coveted gemstone. At a local and global level, prices have continued to rise. For example, one gram of

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<sup>14</sup> Zoisite belongs to the epidote group of minerals.

<sup>15</sup> No one is sure of the supply of tanzanite, though 20 years is generally believed to be the limit of underground supply.

rough tanzanite of exceptional quality that sold for US\$ 300 in Mererani in 1999 was worth \$600 in 2004.<sup>16</sup> The price in 2006 was about US\$ 900 per gram.<sup>17</sup> High quality tanzanite retailed in the US for about US\$ 1,000 per carat or US\$ 5,000 per gram (Larenaudie 2007).

The main aim of TanzaniteOne was to develop a De Beers like monopoly of the tanzanite market (EastAfrican 2005). TanzaniteOne focused on a marketing campaign designed to position the tanzanite 'brand' alongside diamonds and sapphires. Part of this strategy is to market tanzanite as 'the' birthstone in the West, given to celebrate a birth; similar to the De Beers 'a diamond is forever' campaign, which turned diamonds into 'the' engagement stone. Compared with De Beers' US\$ 100 million per year marketing budget, TanzaniteOne's US\$ 3 million dollar marketing budget was modest. However, by marketing the gem as an 'investment' by focusing on its 'rarity', TanzaniteOne hopes to stimulate demand of a luxury product with limited supply (Larenaudie 2007).

TanzaniteOne currently controls about 35 percent of the tanzanite trade compared with De Beers historic 70 percent diamond market share (Larenaudie 2007). Its marketing strategy has been critiqued for creating a myth around tanzanite (Schroeder 2008, Vegter 2006). It has a competitive advantage over small-scale miners with its modern mining technology and access to capital and international dealers. TanzaniteOne aims to ensure that the global price of tanzanite increases by 14 percent per year (Larenaudie 2007). So far, prices have increased and TanzaniteOne's marketing could enhance demand. TanzaniteOne's growth has been impressive: in 2005, total revenue grew 153 percent to US\$ 41 million from US\$ 16.2 million in 2004 (EastAfrican 2005). TanzaniteOne's

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<sup>16</sup> Rough stones are sold in grams in Mererani and retail in carats to the end user. 5 carats equal 1 gram.

<sup>17</sup> Interview, MS, tanzanite dealer, Arusha, 18 March 2006.

success led to the company being listed on the Alternative Investment Market of the London Stock Exchange in 2004 (EastAfrican 2005).

However, TanzaniteOne's focus on increasing its monopoly may come at the expense of local miners (Shayo 2007). TanzaniteOne pushed for artisanal and small-scale mining to be more regulated by the government. Local miners would probably benefit from increased tanzanite prices, but not if they are locked out of the market by TanzaniteOne. Additionally, TanzaniteOne is positioning itself as a broker for rough tanzanite mined in other blocks. This would theoretically increase TanzaniteOne's control over miners' livelihoods and potentially reduce the supply of rough stones available to Maasai brokers. This is believed to be the first time a coloured gemstone has ever been controlled in a De Beers cartel-like fashion (Larenaudie 2007).

TanzaniteOne's concerns mirrored those of the State. Tanzania lost significant foreign exchange earnings through gem smuggling and trading of synthetic tanzanite (Lyimo 2005, Wangwe 1996). Tanzanite earns the Tanzanian Government roughly US\$ 20 million per year (Ihucha 2006).<sup>18</sup> Between 1995 and 2000, recorded sales realized only US\$ 64 million, or about one-sixth of the estimated actual value of production. About 80 percent of gemstones are believed to be exported unofficially (Chachage 1995). TanzaniteOne wanted to impose regulations to control smuggling and tax evasion which undermined its business.

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<sup>18</sup> The royalty is calculated at 5 percent of the found tanzanite value.

## Tanzanite's Trichoisim: Poverty, Power, and Globalisation

*"Kutesa kwa zamu"* (Take turns to suffer)

—Mererani graffiti

Like other luxury products, the global gemstone trade is sensitive to consumer perceptions. Consumers are sensitive to associations between luxury products and events that may be distasteful. A case in point are 'blood diamonds' (Walt 2006).<sup>19</sup> The US accounts for over 80 percent of global tanzanite sales. Tanzanite suffered a similar perception backlash following the events of September 11<sup>th</sup>, 2001. The Wall Street Journal alleged that tanzanite served as a front for terrorism funding for Al-Qaeda (Block and Pearl 2001, Simpson and Block 2002, Zimmerman 2001). The price of tanzanite fell by 40 percent overnight (Stauffer 2002).<sup>20</sup> The terrorism link claims were dismissed by the US Government and trading of tanzanite resumed in May 2002 (Block 2002, Zimmerman 2002). Tanzanite's price growth suggests that it did not suffer a stigma.

Due to the capital required in mining investments, operations in developing countries are likely to be controlled by multi-national firms (Hodges 1995, Kabelwa 2003). Tension between corporate mining firms and small-scale/artisanal miners affected Mererani for decades (Chachage 1995, Mirondo 2007, Shayo 2007). Since 2000, foreign investors pressured the Government to clear blocks of Mererani of artisanal miners in favour of foreign investors. Fences were erected and violent confrontations and legal battles escalated between mining unions and TanzaniteOne (Daily News 2006b, Smith 2005). The TanzaniteOne case illustrated the clash between transnational capital and local

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<sup>19</sup> At its height, blood diamonds controlled by rebels in Sierra Leone, Liberia, Angola and DRC accounted for 15 percent of the US\$ 60 billion a year diamond industry (Walt 2006).

<sup>20</sup> In a well-publicized move, Tiffany's boycotted tanzanite for some time following the articles.

miners in which conflicts are rooted in control and competition over tanzanite and ultimately, livelihoods in Mererani.

The tanzanite industry is bound by often-impenetrable networks of secrecy, similar to other gemstone industries (Macfarlane et al. 2003); clan or ethnic links or connections to a *fogo* ('mining baron'<sup>21</sup>) were important. The high value and easily portability of gemstones make them a ready commodity for smuggling and unofficial/illegal trade, with all the attendant secrecy and risks. Only a handful of individuals became wealthy and powerful *fogos*, but an estimated 30 percent of Mererani's population lived on less than US\$ 1 per day (Pearson 2006).

### Chasing the Tanzanite Dream: Tanzanite and Diversification

*"Zimwi la mawe halifi"* (The tanzanite ghost never dies)

—Mererani graffiti, meaning that a tanzanite strike was possible to anyone at any time

Maasai involvement in mining is part of a more general pattern of diversification. A range of sources cite Maasai diversification into mining in Simanjiro (Chachage 1995, Goldman 2006, Igoe 2000, Lama 1998, Muir 1994, PRDP 1998). But data is sparse on the socio-economic and political impacts of gemstone mining in northern Tanzania.

A recent account by Goldman showed the increasing pervasiveness of tanzanite in Maasai livelihoods in Monduli district: 40 percent of *bomas* sampled in two villages had a person working in Mererani (Goldman 2006). Monduli Maasai perceived Simanjiro

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<sup>21</sup> Use of the term 'baron' is my own translation.

Maasai as wealthy and powerful due to Mererani and higher cattle numbers.<sup>22</sup> Mererani affected disputes over resource rights: in 2003, a bloody conflict between Maasai and WaIrangi agriculturalists in Kiteto District escalated when Mererani vehicles collected warriors from villages in Simanjiro to fight the WaIrangi.<sup>23</sup> Witnesses reported that it looked like mobilization for a war.<sup>24</sup> Another local perception concerned Simanjiro's inclusion into Manyara Region in 2002. Villagers alleged that the gazettelement was engineered by then Prime Minister (PM) Sumaye (MP for Hanang in Manyara Region) so that Simanjiro's wildlife and gemstone wealth fell into a region over which he would have more influence.<sup>25</sup>

Mererani economically impacted many Maasai brokers. As the link between exporters and peasant miners, some were able to amass wealth on a timescale not seen previously in Simanjiro. The Maasai were ideal middlemen for gemstones; using herds and farms as collateral, they mobilized capital through livestock and grain sales and social networks for loans. People claimed that almost every able man tried to make their fortune in Mererani at some point.<sup>26</sup> Goldman points out that Maasai skills in livestock brokering were transferable to the gemstone business (Goldman 2006). Those who were successful were able to influence land use, livelihoods, and politics in villages and across the district on a previously unprecedented scale. Party politics and tanzanite were intertwined. It was believed that *fogos* fronted for powerful politicians who engaged in the tanzanite trade.

A few individuals, including some Maasai, owned mines, brokerage firms, and stone-cutting establishments. This vertical integration has resulted in some individuals

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<sup>22</sup> Interview, NS, Monduli Maasai, 13 September 2004.

<sup>23</sup> Interview, LL, *Seuri*, Emboreet, 2 March 2005.

<sup>24</sup> Recorded interview, WE, Loiborsirret cattle rancher, Arusha, 19 April 2005.

<sup>25</sup> Interviews, MP and DEO, Emboreet, 11 October 2004; EN, Mining Company Manager, Arusha, 1 May 2006.

<sup>26</sup> Interviews, JL, Oiborkishu village, 21 May 2004; JO, Emboreet, 23 November 2004.



amassing fantastic amounts of personal wealth and political influence. Evidence of mining wealth seemed to be everywhere: tractors, cars, motorbikes, modern homes, satellite dishes, and large-scale farms. However, broker earnings were unpredictable. It depended on supplies of rough stones from the mines, access to capital, skill, and luck.

Constraints in the livestock sector and erratic returns from agriculture drove some men to turn to brokerage. However, failure in Mererani compounded their poverty (Ibrahim and Ibrahim 1995, PRDP 1998, Ruppert and Schrufer 1995). Generally though, the influence of tanzanite permeated all levels of society in villages, including language. An elder in Emboreet described the potency of a medicinal plant to me in Kiswahili as “*inagramu sana*”, literally translated as “it weighs many grams”.<sup>27</sup>

Respondents credited Mererani with increasing the monetization of Simanjiro.<sup>28</sup> Villagers believed mining’s commoditisation of the district increased the cost of living (citing transport costs as an example).<sup>29</sup> Mererani’s monetization most likely contributed to land subdivision and privatization throughout Simanjiro.<sup>30</sup> Brokers returning from Mererani accelerated their land acquisitions by paying village leaders to obtain land to farm in Emboreet.<sup>31</sup> Brokers cleared swathes of rangeland for large-scale farms as they were able to pay for casual labour and tractors on an intensive scale.

It is important to note the voluntary dimension to pastoral proletarianization into gemstone brokers. In contrast to Waller’s suggestion that new strategies of wealth

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<sup>27</sup> Interview, YK, Emboreet, 31 January 2005.

<sup>28</sup> Recorded interviews, WE, cattle rancher, Arusha, 19 April 2005; RA, NGO employee, Arusha, 22 April 2005.

<sup>29</sup> Interview, RN and OL, Emboreet, 18 November 2004.

<sup>30</sup> Recorded interviews, GH, commercial farmer, Arusha, 20 April 2005; MM, hunting outfitter manager, Arusha, 21 April 2005.

<sup>31</sup> Sales of village land by individuals lack legitimacy so in these cases the sale price was probably a bribe. Interviews, KN, *Korianga*, Emboreet, 7 April 2005; RN, *Landisi*, Emboreet, 29 January 2006.

accumulation threatened pastoralism, the development of a pastoral brokerage class was a reversible process (Waller 1999). Men of different age-sets shifted fluidly between pre-capitalist livelihood strategies and mining using tanzanite profits to invest into livestock and farming. For some, farming and mining became primary livelihood strategies, with symbolic investments into livestock.<sup>32</sup> Farming was seen as a mechanism to “rescue oneself” (*Kujiokoa*), greatly helped by technological developments like tractors (some of which were owned by brokers) and improved seeds.<sup>33</sup> Brokers initiated large-scale farms in the plains, or leased land from poorer households.<sup>34</sup> Wealthy and poor households alike depended on remittances from Mererani to subsidize agro-pastoral production strategies.

Maasai men diversifying into mining is a recent phenomenon. Muir suggested that in 1994 “...most brokers are from outside the district, only a few Maasai men are trading stones” (Muir 1994: 18, 54). Chachage (1995) reported that brokers were “...almost all Africans from Tanzania or neighbouring countries”. Respondents reported that Maasai started to make money in Mererani from 1996.<sup>35</sup> Figure 6.4 illustrates that the bulk of Maasai in Emboreet started to broker gems in the mid-1990s. In 2006, Maasai brokers estimated that the ratio of brokers was approximately 75 percent Maasai, followed by Kenyan Wajaluo (10 percent) and mixed ethnicities representing 15 percent.<sup>36</sup> There is a steady increase of Maasai becoming involved in gemstones from the mid-1990s. People entering the gemstone trade spiked in 1998. This year coincided with heavy rainfall due to the El Niño oscillation, producing an estimated fivefold increase in rainfall (Galvin *et al.* 2001). But 1997 and 1999 were considered the worst drought years on record (WFP

<sup>32</sup> Interview, CT, *Seuri*, Emboreet, 12 November 2004.

<sup>33</sup> Interviews, TP, *Korianga*, Emboreet, 17 November 2004 and TO, *Landisi*, Emboreet, 22 March 2005.

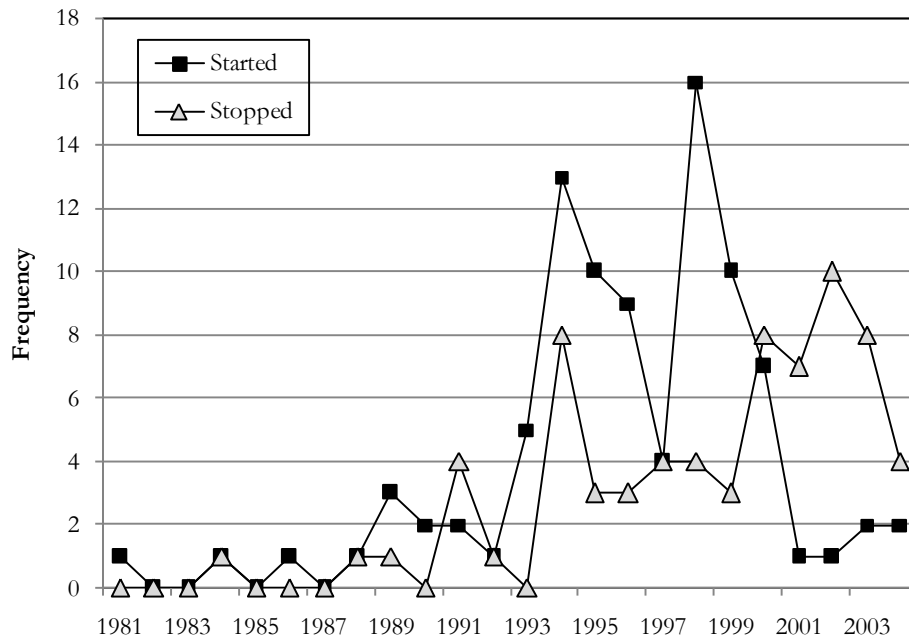
<sup>34</sup> Interview, MA, *Landisi*, Emboreet, 24 November 2004.

<sup>35</sup> Interviews, RN and TN, former miners and brokers, Emboreet, 9 June 2004 and 22 September 2004.

<sup>36</sup> Interviews, RN and TN, former miners and brokers, Emboreet, 9 June 2004, 22 September 2004 and 5 August 2005.

2000),<sup>37</sup> so the combination of drought shock and rain glut probably constrained agricultural development and possibly acted as a catalyst to diversification. The number of gemstone starts has increased since 2003.

Figure 6.4: Year in which household heads in Emboreet began and ended mining activities



Gemstone brokering dropped off sharply after 2001 due to supply issues in Mererani and the Al-Qaeda-related sanctions. People frequently stopped livestock brokering to go into tanzanite brokering. Common reasons given for brokerage stopping were low profits and labour requirements in Emboreet for livestock and farming.

I speculate, based on interview data, that mining fuelled crop agriculture. Men of the Korianga age-set reported that mining revenues were sought in order to farm in Emboreet.<sup>38</sup> They perceived agriculture as a secure and more modern investment than livestock. Many still aspired to own livestock for cultural reasons, but perceived mining

<sup>37</sup> [http://www.wfp.org/newsroom/in\\_depth/Kenya.asp?section=2&sub\\_section=2](http://www.wfp.org/newsroom/in_depth/Kenya.asp?section=2&sub_section=2) accessed 5 July 2007.

<sup>38</sup> Interview, LO, *Korianga*, Arusha, 10 September 2004.

and farming as their best economic options.<sup>39</sup> A wealthy tanzanite broker stated that even if he owned 1,000 cattle, he would still farm due to livestock mortality from disease.<sup>40</sup> A poor *Landisi* equated farming with masculinity: “*Nikilima bekari hamsini, nitakuwa mwanaume*” (“If I farm fifty acres, I’ll be a real man”).<sup>41</sup> Agriculture was seen as a panacea as livestock continued to be problematic and Mererani’s returns were viewed as unstable.<sup>42</sup>

### Tanzanite and Maasai Identity

Brokers mainly comprised younger age-sets: specifically *Korianga* and *Landisi*. The *Makaa* age-set and above were less involved in tanzanite.<sup>43</sup> Respondents reported several reasons for this: firstly, younger age-sets inherited fewer cattle; secondly *Korianga* were deployed by families to Mererani as labour to earn remittance revenue; and lastly, leading up to *Eunoto*, many *Korianga* wanted to marry but needed a bride payment of 6-8 cattle and 300,000 Tshs.<sup>44</sup> Mererani economically empowered these younger age-sets. Table 6.1 illustrates the distribution by age-set of household heads who reported mining benefits (earnings and remittances) compared with the distribution by age-set of respondents in my broad-scale survey. The frequency of most age-sets reporting mining benefits closely correlated with the distribution of age-sets that I interviewed. However, a higher proportion of *Korianga* (22 percent) reported mining benefits than were represented in the broad-scale survey (12 percent), suggesting how mining benefits are possibly accumulating in this age-set.

<sup>39</sup> Interviews, OL and TR, Emboreet, 27 November 2004.

<sup>40</sup> Interview, KR, *Landisi*, Emboreet 6 April 2005.

<sup>41</sup> Interview, SK, *Landisi*, Emboreet, 13 December 2004.

<sup>42</sup> Interview, MN, *Makaa*, Emboreet, 3 January 2005.

<sup>43</sup> Recorded interview, KS, former Chairman, Kimorotok, 5 July 2005.

<sup>44</sup> Equivalent to US\$ 278 (Exchange rate 1\$=1,079).

**Table 6.1: Frequency of different age-sets reporting brokerage and remittance benefits** (source: Broad-scale survey)

<b>Age-set</b>	<b>Mining Frequency</b>	<b>Mining %</b>	<b>Broad-scale Frequency</b>	<b>Broad-scale %</b>
<i>Korianga</i>	14	22%	27	12%
<i>Landisi</i>	29	45%	98	43%
<i>Il Kishumu</i>	15	23%	53	23%
<i>Seuri</i>	5	8%	18	8%
<i>Nyangusi</i>	0	0%	2	1%
<i>Il Terito</i>	1	2%	2	1%
Non-Maasai	1	2%	26	12%
<b>Totals</b>	<b>65</b>	<b>100%</b>	<b>226</b>	<b>100%</b>

When distribution is further broken down by age-set, it further illustrates the dominance of the *Korianga* and *Landisi* age-sets in active mining brokerage. Table 6.2 illustrates that *Korianga* and *Landisi* constituted 61.8 percent of brokers in Emboreet.

**Table 6.2: Frequency of different age-sets in active mining brokerage** (source: Broad-scale survey)

<b>Age-Set</b>	<b>Frequency</b>	<b>Percent</b>
<i>Korianga</i>	7	20.6%
<i>Landisi</i>	14	41.2%
<i>Il Kishumu</i>	9	26.5%
<i>Seuri</i>	1	2.9%
Non-Maasai	3	8.8%
<b>Totals</b>	<b>34</b>	<b>100.0%</b>

Labour demands in Emboreet were cited as a major constraint by brokers.<sup>45</sup> Groups of brokers formed business alliances, often defined by age-set, to pool capital and to manage brokerage activities which they called by the English word ‘mob’. Mob members shared gemstone profits and made mutual investment decisions with their partners in Emboreet. For example, mob members invested in tractors to farm their own farms and lease to others in Emboreet.<sup>46</sup> Within Mererani, respondents stuck firmly together: using the same rooms, mobile phone, eating and conducting business together. Being a part of

<sup>45</sup> Interview, LN, *Korianga*, Emboreet, 27 June 2005.

<sup>46</sup> Interview, KA, *Landisi*, Emboreet, 6 April 2005.

a mob facilitated a division of labour between Mererani and Emboreet, which was especially useful during peak labour times related to farming. Age-sets were still an organizing principle of Maasai social relations, but the experience, attitudes, and practices of being an age-set member were changing. This is evidenced by age-set engagement with Mererani: solidarity was built in Mererani living and working together in partnership. These links translated into farming partnerships and political leadership alliances in Emboreet.

Mererani illustrates how “Maasai masculinity is being reforged to uneasily embrace both the ‘traditional’ and the ‘modern’” (Hodgson 2001), and is reshaping conceptions of modernity within Maasai society. How were these notions reconciled with nomadic, pastoral, warrior-like values in the bustling, globally interconnected tanzanite trade? Success in the tanzanite fields became a symbol of virility in Simanjiro. Warriors successful at Mererani demonstrated their prowess and gained respect in the villages. *Landisi* (senior warriors) men who dominated the broker class began to replace older age-sets in leadership at a sub-village and village level across Simanjiro. Tanzanite empowered these younger age-sets, who used their wealth and networks to gain political power. Through this representation, younger, commoditized age-sets made decisions related to village natural resource use.

Certain features of Maasai social organization kept mining remittances flowing back to communities. Brokers maintained strong links with their home villages. Time spent as a broker was regularly interspersed with visits to the village, often depending on labour constraints at the time. Brokers aimed to grow their initial investment into capital to reinvest in livestock and farming. A *Landisi* declared that: “*Wamaasai ni wafugaji, wakulima, na wafanya biashara!*” which, translated from Kiswahili, means “The Maasai are

herders, farmers and businessmen!”<sup>47</sup> In Simanjiro communities rapidly adopting farming like Emboreet, agriculture was a primary reinvestment strategy. In villages like Narakauo and Kimotorok, with considerably less agriculture, brokers accumulated large cattle herds.<sup>48</sup> Villagers resented brokers whose buying power inflated livestock prices in village markets.

In Emboreet, brokers established small businesses. In Lenaitunyo, mobs established a maize grinding business and bought a tractor which was leased to other villagers to plough. Few individuals interviewed indicated a desire to stay in Mererani long term. But it represented a diversification strategy that enabled men to potentially generate profits faster than through wage employment. Mererani also represented independence: brokers were self-employed and controlled their own destinies to an extent, rather than working as security guards, for example.<sup>49</sup> In comparison, wildlife revenues trickled down to households and were subject to manipulation at different levels. But mining revenue was direct making villagers felt very connected to Mererani. Thus, tanzanite revenue was more preferable to households than wildlife revenues.

However, Mererani had a poor image in Emboreet: security was poor; sons and husbands risked degenerating into *Ilmeek* (Maa: ‘savages’), a derogatory term for a non-Maasai; and Mererani was widely viewed as the primary source of HIV in Simanjiro. Some elders claimed that Mererani engendered a loss of respect for elders and rapacious natural resource use.<sup>50</sup> But the risks of disease, loss of identity, and even death did not dissuade Maasai men from making the pilgrimage to Mererani: part livelihood strategy, part test of virility. After a while I was able to tell who had spent time in Mererani; they

<sup>47</sup> Interview, TN, *Landisi*, Emboreet, 12 November 2004.

<sup>48</sup> Interview, L, tanzanite broker and owner of 900 cattle, Kimotorok, 8 July 2005.

<sup>49</sup> Interview, OM, *Landisi*, Emboreet, 27 June 2005.

<sup>50</sup> Interviews, CT (*Senri*), TO (*Landisi*), YK (*Landisi*), Emboreet, 9 December 2004 and 12 November 2004.

spoke better Kiswahili, used slang, and understood quantitative survey questions even if they were illiterate.

Mob management, remittance planning, and labour decisions in the village were facilitated in July 2005, when mobile phone coverage started in Simanjiro. Instantly, *bomas* in Emboreet could communicate with brokers in Mererani to discuss cattle herding and cash and veterinary needs. People no longer waited for *mnadas* for news. Mobile phones made remittances and labour decisions more efficient. An accompanying cottage industry sprung up in Emboreet which offered phone charging, credit, phones, and telephone services. Cell phone vouchers become a unit of currency in the village. In 2006, people in remote *bomas* of Simanjiro could check the internet by cell phone (*pers. obs.*). The profundity of how mobile phones will affect pastoral livelihoods in this part of Simanjiro will take some time to play out.

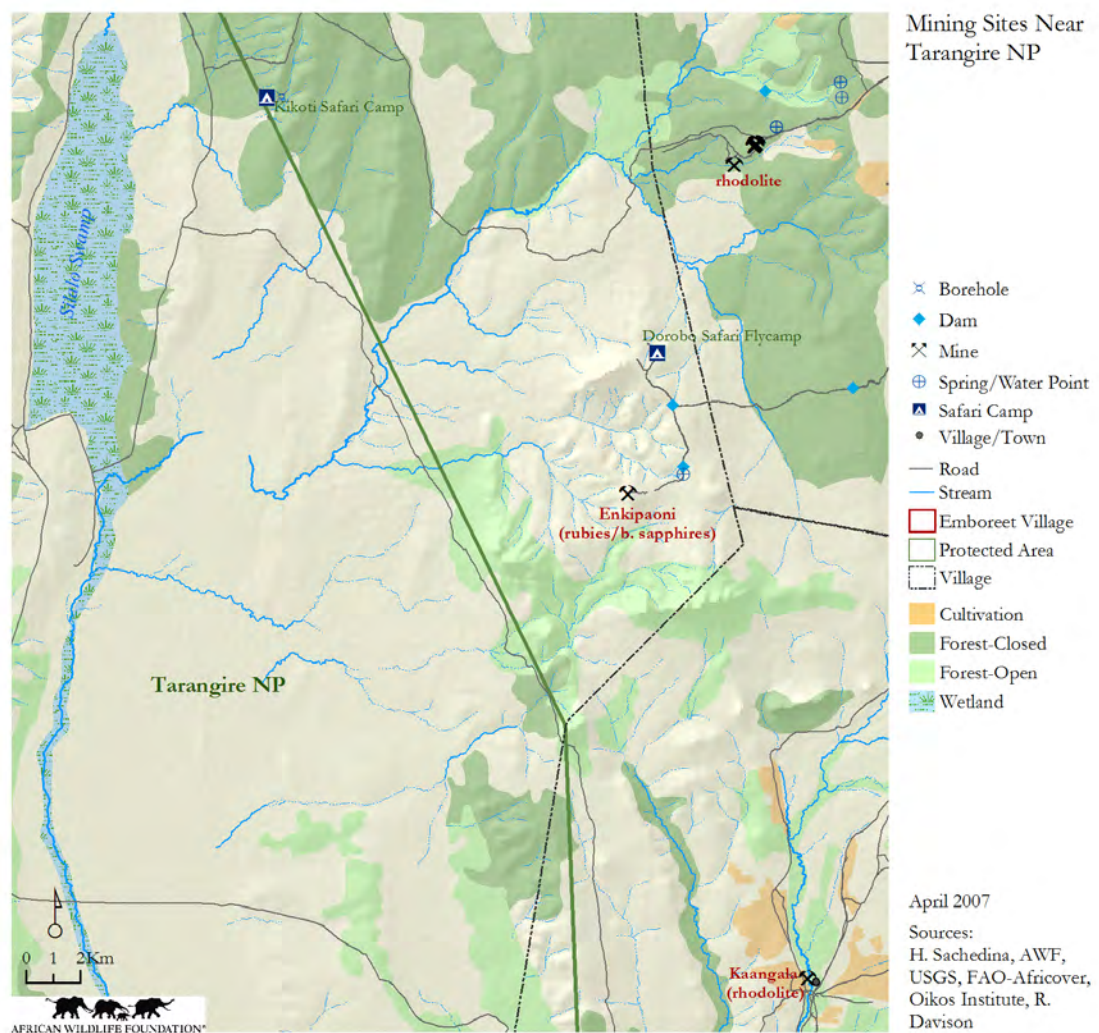
### **Other Mining in Simanjiro**

The success and finite nature of tanzanite stimulated diversification into other gemstones in Simanjiro District. Green garnets, rubies, and sapphires also occur in Simanjiro (Muir 1994, PRDP 1998). Rhodolite (garnet) mines were established in Emboreet, Loiborsoit and Loiborsirret in the mid 1990s (Lama 1998). Small, but active mines are found in the sub-villages of Kati-Kati and Lenaitunyo, though Emboreet received no royalties. High quality rhodolite was found in Kaangala, Loiborsirret. Young men descended upon Loiborsirret, but by 1995 Kaangala had collapsed. Respondents reported that this resulted in immigration of non-Maasai miners to other villages in Simanjiro, where they turned to farming. Thus, the collapse of rhodolite mining could have contributed to an increase in farming in Simanjiro.



In Emboreet, prospectors worked a mine shaft at Enkipaoni in the Lolkisale GCA seeking blue sapphires and rubies. Again, Emboreet village received no royalties or rent indicating the risk regarding property rights should gemstones be found. Silalo swamp in TNP was clearly visible from Enkipaoni (Figure 6.5).

Figure 6.5: Mining sites near TNP



Sapphires, along with rubies, emeralds, and diamonds are much more valuable than tanzanite. Lengai Ole Mako, a tanzanite *fogo*, secured a claim at Enkipaoni in the event

stones were found.<sup>51</sup> Miners at Enkipaoni stated that the area would become like Mererani overnight, with holes everywhere, if sapphires were found.<sup>52</sup> In Colombia, even the remotest gold-mines in the Amazon rainforest experienced gold-rush population booms (Arhem 1988). Were this to happen, it would probably constitute a severe disturbance to conservation in TNP and CBT in Emboreet. Mererani's demand for game meat contributed to motorized poaching in Simanjiro (Arusha Times 2004).<sup>53</sup>

### **Tanzanite and Politics**

Elections of village chairmen, ward councillors, and the parliamentary seat in Simanjiro were heavily influenced by Mererani-based brokers.<sup>54</sup> They decided village leadership from Mererani, a major source of campaign funds. Violent confrontations between parliamentary supporters at campaign rallies in Mererani often set the tone for rallies across the district. In the 2000 parliamentary elections, rioting in Mererani between supporters of different CCM candidates had to be subdued by paramilitary police.<sup>55</sup> In Terat village, another rally was disrupted by gunfire by a Mererani-based broker. In Loiborsirret village, brokers threatened a shoot-out to resolve a tie in the ward councillorship election.<sup>56</sup>

In the 2004-2005 general elections, Mererani affected electoral politics in Emboreet, Sukuro, Loiborsirret, Loiborsoit, and Kimotorok. In Kimotorok, trucks hired by brokers

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<sup>51</sup> Mako also explored obtaining a claim in Morogoro, Tanzania, for an unnamed valuable red gemstone.

<sup>52</sup> The small group of seven miners encountered at Enkipaoni reported that TANAPA rangers harassed them and accused them of poaching. Interview, miners focal group, Enkipaoni, 22 October 2005.

<sup>53</sup> Interview, EM and DGO, Orkesumet, 21 September 2004; Interviews, MM, hunting outfitter manager, Arusha, 21 April 2005; PP, tour operator, Arusha, 11 April 2005.

<sup>54</sup> Interview, MN, *Makaa*, Arusha, 20 November 2004.

<sup>55</sup> Recorded interview, GH, commercial farmer, Arusha, 20 April 2005.

<sup>56</sup> Interview, JT, DEO, Emboreet, 8 July 2005.

transported voters from Mererani to vote in the polls.<sup>57</sup> In Narakauo and Loiborsirret, Mererani-based brokers provided villagers with free water several days before the election. Shortly after winning the seats they returned to Mererani, leaving a power vacuum in the village,<sup>58</sup> again illustrating Mererani's labour constraints.

Incumbent MP Vincent Kone had long cultivated campaign finance contributions from hunting and CBT operators in Simanjiro, who gravitated towards him due to his TANAPA trusteeship. Kone's main competitor for the parliamentary seat, Christopher Ole Sendeka, on his part cultivated wealthy Mererani-based brokers and *fogos*. Sendeka's primary campaign platform was the protection of Simanjiro's land from conservation interests. His financial base in Mererani generally represented villagers who supported the anti-conservation lobby; they were willing to spend more money and time influencing the elections than hunting outfitters and tour operators. Kone was resoundingly defeated by Sendeka after more than a decade in power (see Appendix VII for more details about this political rivalry).

### Case Study of Lengai Ole Mako

*“Tulianza kulima na jembe la ng’ombe... sasa hivi tunalima na matrekta zetu na faida hiyo yote imetoka Mererani”* (We started farming with oxen... now we farm with our tractors and all those benefits came from Mererani)

—Lengai Ole Mako, Arusha, 10 July 2005

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<sup>57</sup> A *Landisi* broker won the Kimotorok Chairmanship. Trucks were also used to transport voters from Kimotorok to Mererani; paid for by brokers using villagers to influence the elections in Mererani (Interview, three *Korianga*, Kimotorok Village, 26 October 2004).

<sup>58</sup> Recorded interview, GH, commercial farmer, Arusha, 20 April 2005.

In order to further explore the linkages between tanzanite and politics, I present the case study of Lengai Ole Mako during my fieldwork. Mako exemplified the ‘tanzanite dream’. A poor, barely literate *Landisi* from Simanjiro, he became one of the wealthiest mining barons in Mererani. He owned expensive homes in Arusha, Mererani, and Sukuro; fleets of personal vehicles;<sup>59</sup> a variety of diversified companies; and cavorted with senior Maasai politicians in Tanzania and Kenya. His networks of political patronage and influence extended from village to district to national levels. How did an individual like Mako achieve the tanzanite dream on such a scale where others had failed?

Mako was born in the village of Kerere, close to Mererani, in 1968. As a boy he was a herder, and when his father died, he moved to Sukuro village at the age of 16. Legend states that Mako was so poor that he started his career selling *ugali* (maize meal) in the Sukuro *mmada*.<sup>60</sup> Mako denied this, stating that he was a livestock broker and farmer in Sukuro. Facing a bleak economic outlook, he started farming with oxen in 1986 (he now heavily invests tanzanite profits into commercial large-scale farming in Sukuro village). By 1995, it became clear to him that he needed to diversify his livelihood strategy. He moved to Mererani when he was 27 years old.<sup>61</sup>

Mako made a strategic decision early on in his gemstone career that transformed his opportunities. In 1998, he was granted an official broker’s license from the Government. This enabled him to start up a legitimate commercial brokerage and a tanzanite dealership in Arusha in 2000. Chachage describes how small-scale and artisanal miners (like pastoralists) see the government as the enemy and shun operating within a legal

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<sup>59</sup> Mako’s personal vehicle, a Toyota Lexus, was rare in Tanzania and oft mentioned by villagers as a symbol of his wealth, modernity, and status.

<sup>60</sup> The story goes that he was so poor he borrowed maize meal on credit from women in the market.

<sup>61</sup> Maasai who worked with him claimed he started out as a *mwanaapolo* before venturing into brokerage. Perhaps for prestige reasons, Mako denied this.

operating environment (Chachage 1995: 87). Ironically, Mako's success and legitimacy came from embracing the socio-political framework in Tanzania. Mako's shrewd manoeuvring, combined with luck, resulted in Mako Mining Ltd owning a multi-million dollar vertical operation from deep-shaft tanzanite mines, a brokerage firm, and cutting and polishing facilities in Arusha. By the age of 37, his estimated worth was US\$ 10 million dollars in liquid assets and untold millions in commercial and fixed assets.<sup>62</sup>

Mako's influence in Mererani was extensive. He introduced himself as: "a famous miner amongst small-scale miners in Mererani, Simanjiro District, Manyara Region" ("*Mchimbaji maarufu katika wachimbaji wadogo wadogo, wilaya ya Simanjiro, Mererani, Manyara*").<sup>63</sup> His celebrity was almost cult-like amongst miners, brokers, and villagers throughout Simanjiro. Government administrators at all levels were also under his network of influence. He was not averse to clambering down a mine shaft and his generosity endeared him as a populist figure amongst miners. To miners, Mako embodied the reckless fatalism of the mining class. He drove his ostentatious vehicles wildly and spent lavishly. Mererani's miners identified with him. They wanted to be like him. Status and popularity were important to Mako; he aspired to be the *fogo* of all *fogos*.<sup>64</sup> But his shrewdness elevated him above the mass of miners.

Amongst villagers, Mako cultivated his populist appeal with public and personal community development grants. As a result, he was viewed with pride in Simanjiro as something of a hero and champion of Maasai rights. Emboreet's richest pastoralist, Ole Sigirr, owned over 5,000 cattle. Villagers sneered at him as a "*tajiri mjinga*" ("ignorant rich person") who, despite his wealth, did not even own a vehicle. Mako, they praised, had

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<sup>62</sup> Interview, EN, Lawyer for Mako Mining Ltd., Arusha, 14 May 2006.

<sup>63</sup> Recorded interview, LM, Arusha, 10 July 2005.

<sup>64</sup> The most famous *fogos* were Papa Kinyi, Kanung'aa, Sunda, and Ole Ngoje.

travelled internationally, was modern, and had powerful networks.<sup>65</sup> This illustrated the change in perceptions of Maasai identity: a wealthy pastoralist was less inspirational to younger Maasai than a *jogo*.

Pastoral societies present themselves as ostensibly egalitarian, where accumulation of wealth is mediated by redistribution (Broch-Due and Anderson 1999: 3). Mako's populist rhetoric included seeing his role as exposing the Maasai to tanzanite's major benefit which was "to open people's eyes to entrepreneurship".<sup>66</sup> He believed that engagement with the market economy would enhance political and economic opportunities for his people.<sup>67</sup> The bulk of Mako's time was spent in Mererani and Arusha, but Mako considered Sukuro village his primary residence. Despite the exposure and opportunities gem trading provided him, Mako's influence amongst villagers increased by staying rooted in Simanjiro and his pastoral identity.<sup>68</sup>

Mako focused his populist appeal towards visible development projects. He founded schools and contributed money to water and health projects across the district at *harambee* (communal fundraising events).<sup>69</sup> Mako proudly claimed that there was not a single *harambee* in Simanjiro District to which he was not invited. However, Mako's public persona may have differed from his private one. Two of his former miners (and clan mates) bitterly complained that Mako exploited miners in Mererani. They described conditions underground as: "*Huko chini ni ukoloni*" ("Underground there it is colonialism").<sup>70</sup>

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<sup>65</sup> Interviews, RN and OL, Emboreet, 17 November 2004.

<sup>66</sup> Recorded interview, LM, Arusha, 10 July 2005.

<sup>67</sup> Representatives from the pastoral NGO and tourism sectors agreed with Mako on this.

<sup>68</sup> Recorded interview, LM, Arusha, 10 July 2005.

<sup>69</sup> Interview, JP, *Makaa*, Emboreet, 22 January 2005.

<sup>70</sup> Foremen allegedly beat miners underground with *fimbos* (wooden sticks). Interviews, RN and TN, former miners and brokers, Emboreet, 7 February 2005.

Tanzanite provided the investment capital for Mako's diversification into activities which sought to capitalise on village natural resources. He owned thousands of cattle and a trucking company; he farmed commercially using his own tractors; and recently diversified into photographic and hunting tourism in Simanjiro. Mako also dabbled in maize hedging—able to affect grain prices across the district by buying up surplus maize after harvest, then reselling it back to the same villagers for a profit in the dry season. Therefore, his community development interventions supported his agenda of capital accumulation.

Mako had few of his own political aspirations. He distinctly stated that he was not interested in the parliamentary seat for Simanjiro, nor the chairmanship of Sukuro. His popularity and wealth made him a strong contender indeed. However, he stayed connected to village politics as a sub-village chairman and self-described “guardian of the village government” (*“Mlinzi wa serikali ya kijiji”*).

Mako regularly gave loans and gifts to individual villagers. These were not altruistic. At election time, he used this influence to pressure voters to vote for his preferred candidates. Challenging Mako's economic activities in Sukuro resulted in Mako mounting a well-funded and successful campaign to replace dissenting leaders with his supporters. For example, although Mako decried the erratic nature of farming, he stated that *“Kilimo kweli ni nzuri kwangu kwa sababu nimeshazoea, na nimeona faida”* (“It is true that farming is good for me because I am familiar with it, and I have profited from it”). In Sukuro, he reportedly owned a plot of 100 acres and leased a 1,000 acre plot for bean

farming. He attempted to obtain a 3,000 acre farm in Sukuro, but village leadership blocked this bid.<sup>71</sup>

Mako thus mounted a bid to oust the Chairman in the 2004 Sukuro village elections. His candidate's supporters were reportedly issued with voter cards and his opponents were not. He allegedly announced in public that anyone who did not vote for his candidate would have to return any financial support he had ever given them in cash or livestock that same day. When warriors blocked the polling stations to protest the rigged elections, he summoned paramilitary police by satellite phone from Arusha to keep the polls open.<sup>72</sup> Similar theatrics were employed in the district councillor elections: every beverage in the market was purchased, with a threat to violently evict any shopkeeper from the village who sold a drink to an opposition voter. Mako's ability to mobilise his supporters and apparent position above the law made this threat very real to villagers. Mako drove his vehicle from *boma* to *boma*, doling out money and calling in previous favours to influence voters.

Across Simanjiro, Mako's endorsement and campaign contributions often decided political outcomes from village to regional levels. Mako functioned as a facilitator and behind-the-scenes power broker for networks beneficial to his business and political interests. He astutely cultivated political and administrative leaders within all levels of government. He had direct access to then PM Edward Lowassa, who as MP for Monduli District regularly called upon Mako to support *harambee* in his constituency. He and his employees boasted of regular presidential access through Lowassa. In effect, he consistently supported high ranking CCM officials throughout their ascendancy with

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<sup>71</sup> Recorded interview, MM, hunting outfitter manager, Arusha, 21 April 2005.

<sup>72</sup> Prior to mobile phones, satellite phones were used in Simanjiro, but at US\$ 750 per handset they were only accessible to the rich.



direct campaign contributions and king-making in order to consolidate CCM's position in northern Tanzania.<sup>73</sup> Thus, Mako operated like a corporate special interest group, allocating his wealth to support political fund-raising, political trips, and individuals hand-outs of strategic value to his political and business interests. Mako summed up his approach towards politicians as:

“... When you break the teeth of a lion, leaving its mouth defenceless, you're able to strangle it with your bare hands” (*Unapovunja meno ya simba, abaki mdomo mtupu, unaweza kumshika na mkono kumnyonga*).<sup>74</sup>

Mako's power-brokering was not always successful. In the 2005 parliamentary elections, despite his best efforts to reinstall incumbent Vincent Kone as MP, a Mererani-based coalition of brokers outmanoeuvred him and Christopher Ole Sendeka was elected.<sup>75</sup> While some of Mako's tactics were crude, he generally would campaign against candidates he suspected of corruption. In this way, Mererani may have positively influenced governance by shaking clan ties and existing systems of loyalty. Support for CCM was a calculated business decision for Mako. His strategies of diversification were directly linked to political patronage. By not entrenching himself in term-limited, front-line political battles, he was able to surf the wave of current administrations and secure preferential business opportunities, prestige, and political influence.

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<sup>73</sup> Mako was a high profile CCM donor in northern Tanzania during the presidential elections. His employees claimed that the connection went back further to when President Kikwete was Minister of Minerals and Gemstones from 1988 to 1994 (Accessed 6 April 2007, <http://www.jakayakikwete.com/tanzania/pages/President>).

<sup>74</sup> Recorded interview, LM, Arusha, 10 July 2005.

<sup>75</sup> Kone was a close ally of PM Lowassa and thus to President Kikwete. Following his defeat as MP, he was nominated Regional Commissioner (Shinyanga) by Kikwete, a post similar in stature to a cabinet minister.

Mako was well aware of tanzanite's finiteness and the need to diversify his business empire. A keen resident hunter, he formed Mako Adventures Limited in 2004, a tourism company providing photographic and hunting safaris. Luke Samaras Safaris Limited had held the rights to Kitiangare-Simanjiro South GCA, which overlapped with Sukuro village, for over two decades.<sup>76</sup> In August 2004, Mako set up a tented camp on his land in Sukuro where he hosted some foreign tourists. Samaras Safaris reported Mako Adventures to the WD for illegally conducting tourist hunting in Samaras's block. The WD promptly dispatched an anti-poaching team from Arusha who allegedly, at gunpoint, gave Mako three hours to dismantle the camp.

Samaras Safaris claimed that Mako had harmed their reputation within the village and at government levels, and that he poached to feed his farm workers in Sukuro. Mako argued that he was on his farm, in his home village, owned a legally registered hunting company, and was a Tanzanian. He accused village leadership of supporting Samaras over him, which contributed to the Chairman's replacement in 2004. Mako alleged that Samaras's hunting camp was on a villager's *shamba* to whom Samaras Safaris did not even pay "5,000 shillings a month in rent".<sup>77</sup> Samaras Safaris claimed that they had been allocated the block by the State and any other tourism venture within their block, irrespective of whether it was in Sukuro, was therefore trespassing.<sup>78</sup> This case highlighted the problems of rights and tenure with regards to wildlife use and tourist hunting on village lands.

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<sup>76</sup> Referred to as 'Masailand' on the company website: <http://www.samarassafaris.com/lss-areas.html> accessed 14 June 2007.

<sup>77</sup> About US\$ 4 per month. Recorded interview, Mako, Arusha, 10 July 2005.

<sup>78</sup> Interview, DEO, Emboreet, 23 May 2005.

After the battle with Samaras, Mako publicly declared that he no longer was interested in Simanjiro South GCA.<sup>79</sup> Mako reportedly met with the PM on various occasions to request his support in lobbying the WD to allocate his company a tourist hunting block. Mako was supposedly told to bide his time until the next block reallocation period.<sup>80</sup> In private he expressed bitterness: he felt that as a Tanzanian, and especially a Maasai, he should be entitled to benefit from tourist hunting in Maasailand, especially in his home village. For the first time, a hunting operation owned by a Maasai villager challenged entrenched tourist hunting interests in Maasailand. Mako's engagement with Samaras Safaris was a battle of equals of sorts: Maasai contested their wildlife management rights, not as victims in this case. Tanzanite enabled Mako to engage head-on as a distinct commercial competitor. While Mako's initial attempt at operating in Simanjiro South GCA was acrimoniously thwarted, it is possible that in future, with his political allies and sound financial footing, he may become the first Simanjiro villager to own a tourist hunting concession in Simanjiro.

## Discussion

While individuals like Mako amassed wealth from mining on an unprecedented scale, a burgeoning middle class of brokers also succeeded in Simanjiro District. Maasai were drawn to Mererani by patterns of decline in the livestock economy in which stable cattle populations were outpaced by growing human populations. This resulted in declining per capita livestock ratios. Tanzanite impacted poverty levels in villages over 100 km away from Mererani and was also a significant driver of village land use change.

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<sup>79</sup> Recorded interview, Mako, Arusha, 10 July 2005.

<sup>80</sup> Interview, EN, Managing Director of Mako Adventures, Arusha, 14 May 2006.

Development theory suggests that a model of rapid growth will involve an expansion of options, economic possibilities, and diversity of skills. This model posits that development would be enduring, contributing to communities' resilience even after the new industry is removed (Freudenburg 1992). The discovery of tanzanite profoundly affected livelihoods in Simanjiro District. But what will happen to pastoral livelihoods when tanzanite is exhausted in 15 years? How will TanzaniteOne's growing monopoly affect Maasai brokers? Maasai who are heavily dependent on tanzanite subsidies have a large amount to lose, and the loss of access to tanzanite could equate to possible future economic problems in Simanjiro.

## Chapter Seven

### Plains of Ochre: The History of Land Use Change in Emboreet

“The plains look like ochre. Where will cattle and wildlife graze?”

—*Nyangusi* elder, gazing upon large-scale farms in the Simanjiro Plains,  
2006

“*Kichwa kimeharibika kwa mabindi*” (My mind is obsessed with maize)

—A Lenaitunyo man of the *Landisi* age-set describes the farming fever  
that gripped Emboreet in 2004

The analysis of agriculture in Emboreet has two key elements to it—historical and spatial. In this chapter I examine the history of, and reasons behind, livelihood diversification and in particular the increase in agriculture. I spatially analyze the dynamics of land use change and how these relate to the broader issues of power and control over resources. The purpose of this chapter is to examine the role of conservation in driving land use change.

I argue that while the rhetoric of opposition to conservation dominates the reasons why pastoralists say they take up farming; there are a variety of reasons behind conversion of land to agriculture. Nevertheless, it is arguable that because farming is seen as a means of saving the land from conservation, such rhetoric is giving farming an added moral authority. This is surprising in a people for whom the ideology of cattle-keeping remains so strong and antipathy to cultivation has been persistent.

## History of Agriculture in Emboreet

Jacobs (1965) encountered little agriculture during his fieldwork in the 1950s, which contributed to his (now discredited) view that pastoralists and farming did not mix. Although the earliest farms were started in 1945, elders observed that in the main farming virtually did not exist in Simanjiro in the 1950s.<sup>1</sup> Food shortages during the Tanzania-Uganda war (1978-1979) spurred a wave of farming in Emboreet.<sup>2</sup> Prior to that, Maasai bought grain from non-Maasai traders in Monduli district and other villages in direct exchange for livestock or cash from livestock sales.<sup>3</sup> A 120 kg bag of grain in the 1960s and 1970s cost close to US\$ 65 in 2004 dollars, not counting for inflation. The price had dropped to roughly US\$ 15 per 120 kg bag for locally farmed maize in 2004. Farming thus began as a way of reducing the sale of livestock (Igoe and Brockington 1999).

Small scale farming began to increase in the 1970s and 1980s, mainly conducted by immigrants using oxen.<sup>4</sup> Maasai began to farm small plots using oxen. By the 1990s, more households had engaged in large scale farming (over ten acres). By 2004, 92 percent of households actively farmed, and the main reasons for the eight percent who did not farm were poverty, lack of land, old age and being purely pastoral. Farming techniques evolved rapidly in Emboreet due to the widespread use of tractors and urban-purchased hybrid seeds. During the tilling season, the plains were lit at night by multiple

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<sup>1</sup> Interview, PK, Emboreet, 10 June 2005.

<sup>2</sup> Interview, OL, Emboreet, 22 November 2003.

<sup>3</sup> Discussion, OL, Emboreet, 12 September 2004.

<sup>4</sup> Interview, PT, DC, Emboreet, 17 September 2004.

tractors ploughing. Over 91 percent of households in 2004 used tractors for land preparation (Table 7.1).<sup>5</sup>

**Table 7.1: Type of land preparation used in 2004** (Source: broad-scale survey)

<b>Land Preparation</b>	<b>Percent</b>
Tractor	83.8%
Tractor/oxen	6.7%
Oxen	5.8%
Hand	2.5%
Oxen/hand	0.4%
Tractor/hand	0.4%
Tractor/oxen/hand	0.4%
<b>Total</b>	<b>100.0%</b>

Villagers employed different models of labour allocation to achieve their farming goals. The very poor worked as farm labourers. Younger age-sets formed *embesi* (Maa: cooperative), which reciprocated labour in individual's fields without payment involved. Women with neighbouring fields also formed cooperative labour groups. Other individuals leased land, sparing them the expense of farming inputs, but resulting oftentimes in obtaining enough grain to ensure food security. Enthusiasm for farming transcended age-set boundaries, with *Nyangusi* and *Seuri* elders proudly claiming credit for being the first to farm in Emboreet, while *murran* also actively engaged in farming.<sup>6</sup> Livestock and farming were interdependent: farming profits were invested into livestock and vice versa.<sup>7</sup>

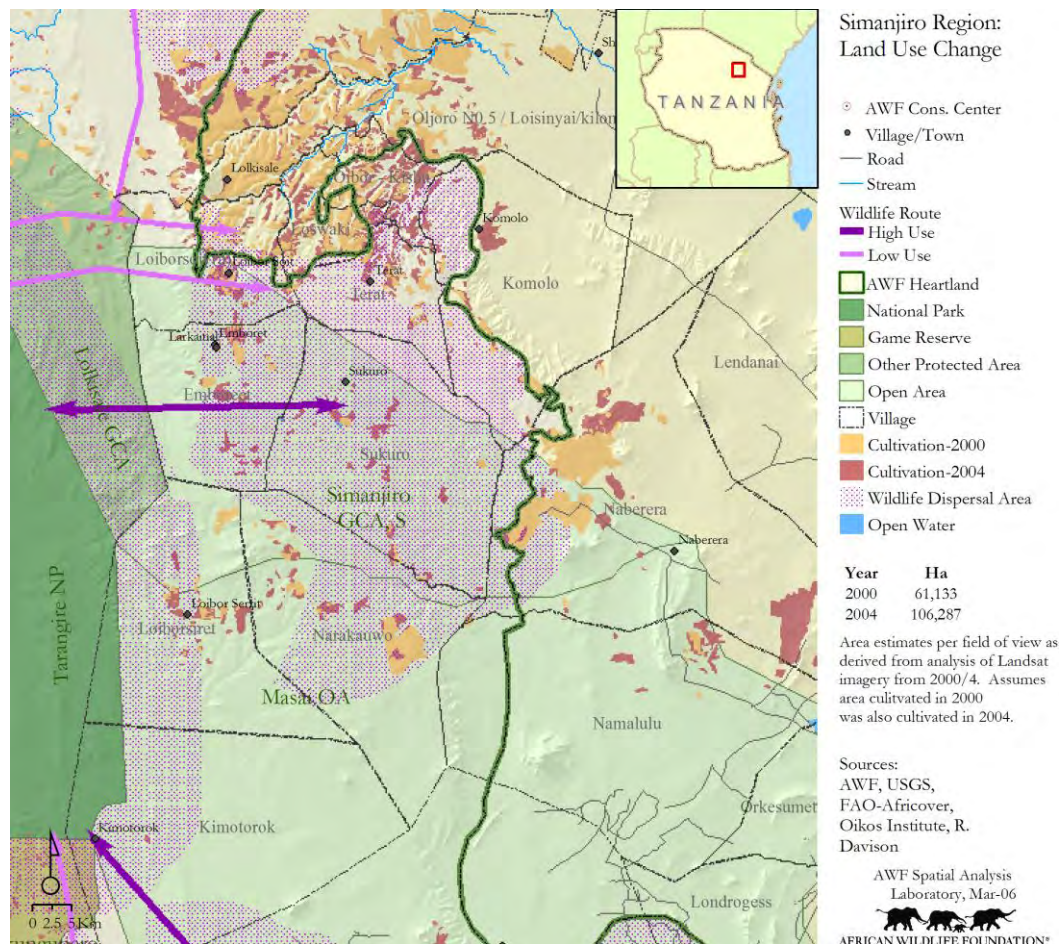
<sup>5</sup> Farms were usually tilled twice—early in the growing season and just before planting—resulting in the combinations of tractors with other forms of land tillage, such as by hand or using oxen. To save money, some households tilled once using a rented tractor and then followed up by oxen or by hand.

<sup>6</sup> In one case, I visited a *boma* where a livestock wealthy *Seuri* stood over a calf that had died from ECF. I gave him my condolences, but he seemed not to care, instead proudly showed me his field of maize.

<sup>7</sup> Interview, MN, Emboreet villager, Orkesumet, 24 March 2004.

The majority of the plains of highest conservation value were located in Emboreet, Sukuro and Terat. Farming increased by 74 percent in Simanjiro between 2000 and 2004, to over 106,000 hectares (Figure 7.1).

**Figure 7.1: Agricultural Change in Simanjiro, 2000–2004**



Farming was visibly more extensive in Emboreet compared with Sukuro and Terat (Figure 7.2), despite Terat's significant agro-pastoral community. Maasai in Terat dominated administrative positions and denied non-Maasai villagers farms in the plains (Intermacco Ltd. 2004). In addition, Terat signed an easement agreement unique in Tanzania which enabled TNP tour operators to pay Terat to conserve its plains, even though they were not used to tourism (Foley 2007, Nelson and Sachedina In Prep). Maasai in Sukuro curtailed leases to external farmers throughout the village. Villagers



there reportedly did not want to plough the rangeland in the plains and certainly did not want outsiders affecting land use in this way. The Village Council blocked commercial farming land allocations to outsiders and even amongst Sukuro's villagers (cf. story on Ole Mako in Chapter 6).

According to reported acreages, it was possible to estimate the total acreage farmed in Emboreet. Approximately 5,501 acres (2,200 ha) were farmed in Emboreet in 2004. This is in broad agreement with satellite imagery which suggested that 6,585 acres (2,634 ha) of land were farmed in 2004.<sup>8</sup> Table 7.2 suggests that Emboreet was actually one of the least farmed villages in the Plains, with less than seven percent of the total gazetted village area farmed.

**Table 7.2: Cultivation in eight Simanjiro villages in 2004 in hectares** (Sources: Rob Davison and David Williams)

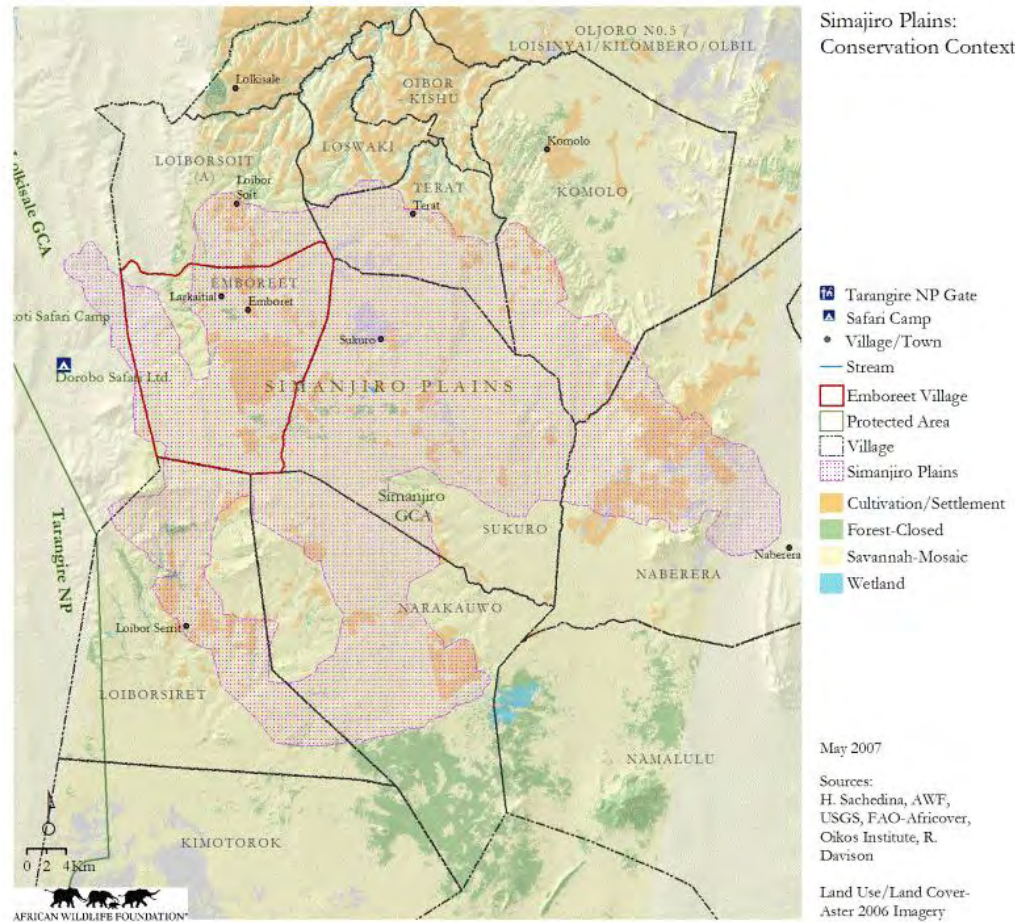
<b>Village Name</b>	<b>Converted (ha)</b>	<b>Village Size (ha)</b>	<b>% of Village</b>
Loswaki	6,906	12,635	54.7
Loiborsoit (A)	5,722	33,134	17.3
Terat	3,313	21,277	15.6
Narakauwo	5,056	68,955	7.3
Emboreet	2,634	38,072	6.9
Loiborsirret	2,833	63,832	4.4
Sukuro	2,536	69,582	3.6
Kimotorok	93	98,096	0.1
<b>Total</b>	<b>29,093</b>	<b>405,583</b>	

Not including Loswaki, a heavily farmed village with low wildlife value, mean cultivation in the seven villages next to Tarangire NP was approximately eight percent of total village lands. However, it is important to note the spatial location of farms in Emboreet and how they relate to land use in the Simanjiro Plains. The bulk of farming in

<sup>8</sup> Landsat imagery (Source: D. Williams). 1 hectare = 2.5 acres.

Emboreet occurred in the Simanjiro Plains, which, being free of trees, were essentially ready to plough (Figure 7.1, 7.2).

Figure 7.2: Spatial location of farming in relation to the Simanjiro Plains



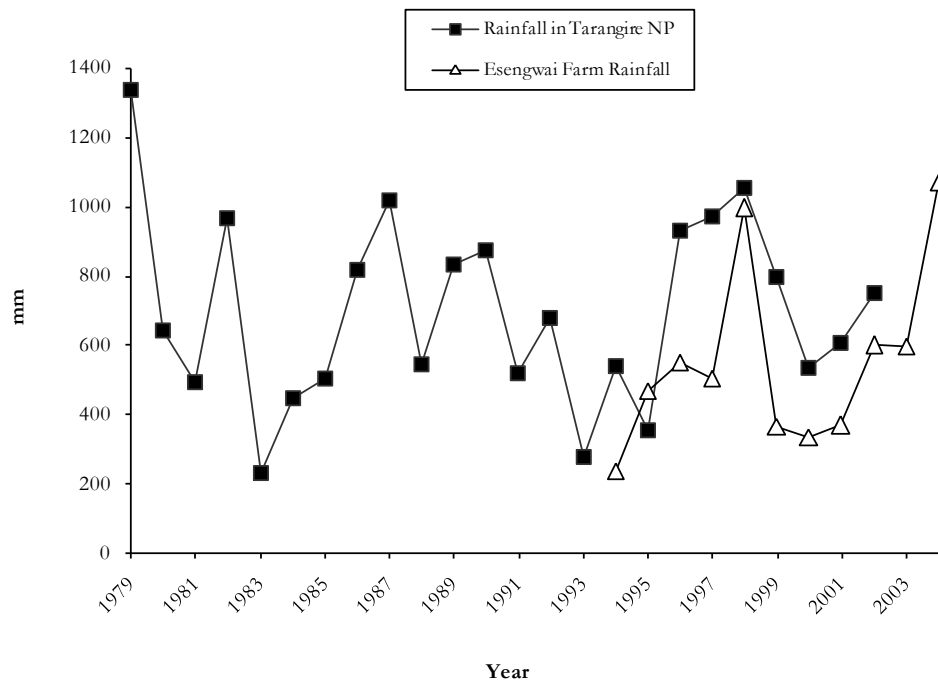
Emboreet's mean area farmed per household increased by eight percent in 2003 from 2002, and by 26 percent in 2004 from 2003. Emboreet's mean of ten acres per household was slightly less than the Simanjiro District average of 10.9 acres per household in 2003 (SDC 2003: 7). Trends were reversible—respondents expanded farms following profitable years, whereas drought resulted in reduced cultivation. As of 2005, at the request of individual villagers, the Village Council had allocated 15,133 hectares of Emboreet to villagers as titled land to farm (that is, 45 percent of the village land surface, though not all had been farmed). Each respondent was asked how many acres they

aspired to farm, resources permitting. The aim of this question was an attempt to qualitatively gauge the potential for future land use change. Was the recent increase in farming a temporary phenomenon, or likely to continue to increase? Respondents in 2004 generally aspired to be large-scale farmers, wishing to farm an average of 109 acres per household (Std. Dev. 255.98), which would mean that 56 percent of the titled village land surface would be farmed. Of 275 plots farmed in the broad-scale survey, respondents planned to increase the size of 232 plots (86 percent) in the 2005 season. However, only 35 percent of households increased the area cultivated between 2003 and 2004, and 11 percent of households actually reduced the area under cultivation (citing financial difficulties as a primary reason).

Given the growth in farming and potential for future increases, how suitable for dryland farming were the Simanjiro Plains? Dryland farming pertains to agricultural production in areas without irrigation and largely depending upon natural rainfall. Primary constraints to dryland farming are shortages of precipitation and uneven distribution of precipitation in time and space. The 500mm rainfall isohyet is significant for dryland agriculture. Areas receiving more than this amount of rain annually are regarded as being suitable for dryland agriculture (Petja et al. 2004). Rainfall averaged 600mm per year based on 30 years of records kept at the Emboreet Catholic Mission (Kametz 1962 in Kahurananga 1979). Rainfall figures from Tarangire NP between 1979 to 2002 averaged 695mm per year (Bevenger 2004), and 552 mm per year in Loiborsirret village from 1994 to 2004 (Figure 7.3). Rainfall exceeded 1,000mm in 1979, 1987 and 1998. Rainfall in the Simanjiro Plains was squarely in the transition zone (650mm  $\pm$ 174 mean annual precipitation) between stable savannas—those which do not need disturbance to maintain open grassland—and unstable savannas which do (Sankaran et al. 2005), and sufficient for dryland agriculture. However, climate change predictions in East Africa

forecast rainfall declines of 10 to 15 percent in the future, which could significantly reduce the viability of farming in Simanjiro (Mjema 2006).

**Figure 7.3: Rainfall in Tarangire NP from 1979-2002** (Source: Bevenger 2004 and Esengwai Farm records, Loiborsirret)



Where did the Maasai of Emboreet see themselves twenty years later? Respondents expressed desires for fewer, but more improved breeds of cattle, rapid increases in farming, and to live in modern cinderblock homes with metal roofs.<sup>9</sup> This vision suggests that the Maasai will likely move more fully towards agro-pastoral livelihoods with its attendant implications on land use change and wildlife habitat compatibility.

<sup>9</sup> Interview, TP, Emboreet, 17 November 2004.

## The Role of the Mission

*“Sijui watasimama wapi wale wanyama...mashamba yanasumbua”* (I don’t know where the wildlife will congregate... the farms are a disturbance)  
 —*Korianga* man viewing new farms in the plains, 2004

One driver of land use change within Emboreet was the Simanjiro Catholic Mission. Funded by the Society of the Divine Word—an international missionary organization based in Rome and staffed by expatriate priests—its aim was ‘primary evangelization’ of the Maasai.<sup>10</sup> When the mission began in Emboreet in the 1960s, Maasai elders tried to constrain their work by placing them in the middle of an area of black cotton soil (Maa: *Ngusero*) which was impassable in the rains. The Mission invested in socio-development projects as part of their outreach—services which formed the nucleus of the village centre in Emboreet sub-village. In the 1980s, priests began the first 100 acre farms, heralding the initiation of farming extensification in Emboreet.<sup>11</sup>

The Mission strove for financial self-reliance and farmed in order to supplement its Rome and donor allocated budget. They rejected livestock production as priests viewed farming as more profitable and central to its outlook on self-reliance (SCM 2004). Farming provided a particular diversification example that the Mission wanted to promote amongst the Maasai,<sup>12</sup> despite priests’ concerns about probable declines in soil fertility within ten years. The Emboreet Mission became a major land leaser of large farms, with three farms in 2005 of about 200 acres total.<sup>13</sup> It also began to lease land back to herders to farm. The church owned large parcels of land in villages across

<sup>10</sup> Approximately 500 villagers were registered Christians. Discussion, TO, Emboreet, 31 January 2005.

<sup>11</sup> Interview, PT, DC, Emboreet, 17 September 2004.

<sup>12</sup> Interview, EM, priest, Emboreet, 18 September 2004.

<sup>13</sup> Discussion, PC, priest, Emboreet, 11 November 2004.

Simanjiro.<sup>14</sup> Priests managed other businesses such as a small shop, water sales, and the hospital, as well as buying and selling maize. The Mission supported the ‘Simanjiro Animal Health Learning College’, a livestock institute for pastoralists. The college ironically invested heavily into farming in the plains to generate revenue. Priests had been vocal critics of conservation since the first Maasai pastors arrived in Emboreet from Ngorongoro in the 1980s,<sup>15</sup> more recently (in 2005) advocating to villagers that an official farming ban in the Simanjiro Plains which originated from Manyara Region (Manyara Region 2005, SDC 2006) was, in fact, a fraud.<sup>16</sup>

### **Politics of Farming and Food Security**

“*Kilimo ni Siasa ya CCM!*” (Farming is the politics of CCM!)

—rallying cry by the ruling party, Chama Cha Mapinduzi, encouraging farming

The purpose of this section is to explore the political factors that facilitated the expansion of farming. Food security had been an issue in Simanjiro since the 1970s. Forced relocations during *Ujamaa* interfered with growing seasons. Food aid had been issued in Emboreet since 1976;<sup>17</sup> received from the SDC, donors or purchased using village funds.<sup>18</sup> Emboreet’s Village Council meeting in 2000 debated whether the Simanjiro Plains should be farmed, to which leaders suggested it was better to farm them

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<sup>14</sup> Village Council meeting minutes, Emboreet, 18 August 2001 (personal notes by CT, councillor).

<sup>15</sup> Interview, PT, DC, Emboreet, 17 September 2004.

<sup>16</sup> Discussion, PC, priest, Emboreet, 2006.

<sup>17</sup> Interview, JO, VEO, Emboreet, 22 March 2004.

<sup>18</sup> LM report to DC – Kiteto, Ref. KK/EM/TN/TMW.5/1, 30 May 1987; Letter from JP, VEO, Emboreet, to Loiborsoit Pentecostal Church, 5 April 1994; Village Council meeting minutes, Ref. KIJ/EMB/352/MIH/1/02/2004, 27 February 2004.

than to ask for food aid.<sup>19</sup> Food aid seems, therefore, to have been a driver of agricultural change and there appeared to be a perception that farming enhanced food security compared with livestock production alone.<sup>20</sup>

Food aid was a complex issue. It probably aided poorer households, but may also have been manipulated by elites for personal gain.<sup>21</sup> Emboreet's tourism revenues meant that the village office could purchase grain as food aid, which it later sold to villagers at a subsidized price.<sup>22</sup> However, similar to tourism revenues, the management of food aid supplies and revenues was not transparent. The process by which food aid was purchased or requested by the village office was not clear, either. For example, villagers and commercial farmers sold surpluses of grain to Terat, Sukuro and Loswaki villages; Emboreet was viewed there as a primary grain source for these villages.

The Village Land Act of 1999 catalyzed land privatization (Celender et al. 2005). A clause in this act particularly of concern to villagers was the power of the President to redistribute land viewed as 'open'.<sup>23</sup> Pastoralists feared that their grazing plains would be viewed by urban bureaucrats from agricultural tribes as unproductive land.<sup>24</sup>

Another factor that spurred land conversion was changing taxation. Crop levies had pitted local farmers against administrators since colonial times (Spear 1997). District councils collected the tax from individuals based on the acreage they farmed. In 1999,

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<sup>19</sup> JT, DEO, Emboreet, in Village Council meeting, 31 January 2000 (personal notes, CT, Village Councillor).

<sup>20</sup> Interview, JO, *Landisi*, Emboreet, 3 October 2004.

<sup>21</sup> Discussions, RN and OL, Emboreet, 2004 and 2005.

<sup>22</sup> Village Council meeting minutes, Emboreet, 1 July 1997 (personal notes, CT, Village Councillor).

<sup>23</sup> Known as the nation's 'Land Bank' for development.

<sup>24</sup> Interview, JO, VEO, Emboreet, 22 March 2004.

the President removed the land tax (*Kodi ya Ardhi*) and cancelled historic debts.<sup>25</sup> For many, the removal of the tax removed a deterrent to expanding their farms.<sup>26</sup>

The Tanzanian Government's universal policy towards small-scale agriculture was that all households should farm a minimum of four acres, even in pastoral areas.<sup>27</sup> Simanjiro District Council (SDC) thus promoted agriculture as a strategy to reduce poverty and increase food security.<sup>28</sup> However, the perceived threat of large-scale farming to Tarangire and pastoral livestock production (Borner 1985, EcoSystems Ltd. 1980a, Igoe and Brockington 1999, Kahurananga 1981, 1997, Kajuni et al. 1988, Lamprey 1964, Peterson 1978, Sachedina 2006, TCP 1998) resulted in the SDC promoting confusing messages, encouraging villagers to farm but discouraging large-scale cultivation.

It is possible that regional food demand contributed to land conversion pressure in Simanjiro. Kenya represented a major market for Tanzanian grain (Daily Nation 2004). The Tanzanian Government stopped the trade due to national food shortages in 2004, but for a time harvest surpluses in Emboreet were purchased by brokers rumoured to be cross-border grain smugglers. The food production system in Emboreet seemed to be dependent upon a few people producing maize surpluses (Table 7.3). The wealthy sold significantly higher amounts of maize in 2004 than the poor ( $F=4.9$ ,  $df: 187,2$ ,  $P=0.000$ ), and retained more maize for home consumption per Adult Unit (AU) equivalent ( $F=2.8$ ,  $df:172,2$ ,  $P=0.003$ ). A high median (1995 kg) suggested that a few commercial producers skewed the mean. But the poor sold more maize per AU equivalent than middling

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<sup>25</sup> The land tax and head tax were officially rescinded in 2003. Interview, GM, NGO employee, Arusha, 28 December 2003.

<sup>26</sup> Interview, JP, Emboreet, 15 September 2004.

<sup>27</sup> Interview, MM, LFO, Emboreet, 9 December 2004.

<sup>28</sup> Letter, LC, SDC Agriculture and Livestock Department to Ward Livestock Field Officers, Ref. KI/SMJ/MK/Vol. 1/1, 26 October 1999.



households, though slightly less than wealthy households ( $F=1.3$ ,  $df:61,2$ ,  $P=0.052$ ), suggesting that poorer households sold a large proportion of their crop for cash needs.

**Table 7.3: Maize consumption and sales by wealth ranking** (Source: broad-scale survey)

Maize Consumption and Sales	Wealth Ranking	N	Mean kg	Std. Deviation
<b>Mean kg sold per HH</b>	Rich	44	3,805	9,149
	Middling	61	1,161	3,475
	Poor	85	908	3,060
	<b>Total</b>	<b>190</b>	<b>1,660</b>	<b>5,333</b>
<b>Consumption/AU 2004</b>	Rich	42	812	1,938
	Middling	57	387	469
	Poor	76	388	393
	<b>Total</b>	<b>175</b>	<b>490</b>	<b>1,027</b>
<b>Sale of Maize/AU 2004</b>	Rich	18	1,897	3,053
	Middling	23	729	1,246
	Poor	23	1,524	2,650
	<b>Total</b>	<b>64</b>	<b>1,343</b>	<b>2,397</b>

### Wealth and Farming

Emboreet simultaneously received food aid and yet sold surpluses to other villages, and maybe even regionally. Given this situation, I was interested to know the relationship between wealth and farming: was farming driven by poverty or wealth? In Kenya, scholars have shown that wealthy elites were more likely to be large-scale farmers in an important wildlife area (Thompson 2002, Thompson and Homewood 2002). The increase in total mean acres per household from 2002 to 2004 was 36 percent. In all years, the mean values were more than double those of the median (Table 7.4), suggesting a few households cultivating large areas are inflating the mean. There was no significant difference between Maasai and non-Maasai in the acreages reported, with wide variation in all groups, although non-Maasai agriculturalist households cultivated on average half the area cultivated by Maasai households (6.9 acres versus 12.5 acres). The increase in acreage between 2003 and 2004 was statistically significant ( $t=-3.09$ ,  $df= 211$ ,

$P < 0.05$ ), but median values remained unchanged, suggesting the main drivers of change are households cultivating the largest plots.

**Table 7.4: Reported acres farmed per household in Emboreet in 2002, 2003, and 2004** (Source: broad-scale survey)

Year	Mean	Minimum	Maximum	Std. Deviation	Valid N	% change
2002	9.3	0	150	16.5	212	
2003	10.0	0	120	15.6	212	8.0%
2004	12.6	0	240	22.9	214	26.0%

I was interested to know how much land large-scale farmers were farming compared with small-scale farmers. Generally speaking, an average household of 5.41 AU in Emboreet needed just 3.8 acres in order to grow enough maize to achieve caloric requirements for the year based on mean reported maize yields in 2003 and 2004. Factoring reported wildlife crop damage of 1,653 kg (4.0 acres) per year (Table 7.16), the mean farm size needed by an Emboreet household per year was 7.8 acres. I speculate that if each household needed to farm only 7.8 acres to achieve food security from just maize, an additional 2,098 acres (38 percent of farmed land) was farmed in 2004 in Emboreet.

Given that the concept of fixed food requirements is a misleading oversimplification (Pacey and Payne 1985 in Homewood and Rodgers 1991), I assumed that a 'large' plot began at ten acres as this was the minimum size of land leased to commercial farmers. Of  $n=253$  plots farmed in 2004 by broad-scale respondents in Emboreet exclusively, 80 plots (31.6 percent) were over ten acres in size. These large farms totalled 2,076 acres (79 percent) of the 2,628 acres broad-scale respondents reportedly farmed in 2004. Eighteen of these large plots (7.1 percent of total plots) were leased by Emboreet villagers to

external commercial farmers, totalling 533 acres. This suggested that Emboreet villagers, not outsiders, farmed 80 percent of Emboreet's large farms.

I examined how much land people in different wealth classes farmed. A comparison of area cultivated by wealth rank shows a significant difference between the wealthiest and the poorer two groups, although variation within each rank is high. Again, the increase in area cultivated by the wealthiest group in 2004 compared to 2003 is considerably greater than that seen for the other two groups. Table 7.5 shows that the wealthy are responsible for most of the farming in the region but are not increasing their farming noticeably more than any other group over this study period.

**Table 7.5: Change in area cultivated by wealth rank in acres** (Source: broad-scale survey)

Year	Wealth Rank	N	Mean	Total	Proportion of Land Farmed	Standard Deviation
2002	Rich	51	18.0	918	47%	25.8
	Middle	67	8.8	590	30%	14.2
	Poor	94	4.9	461	23%	7.2
	<i>Total</i>	<i>212</i>	<i>9.3</i>	<i>1972</i>		<i>9.3</i>
2003	Rich	51	20.5	1046	49%	23.6
	Middle	67	8.4	563	27%	12.0
	Poor	94	5.4	508	24%	8.0
	<i>Total</i>	<i>212</i>	<i>10.0</i>	<i>2120</i>		<i>15.6</i>
2004	Rich	51	26.0	1326	49%	38.0
	Middle	69	10.8	745	28%	15.6
	Poor	94	6.6	620	23%	10.3
	<i>Total</i>	<i>214</i>	<i>12.6</i>	<i>2696</i>		<i>22.9</i>

The distribution of acreage per capita was slightly negatively correlated with mean Tropical Livestock Unit (TLU) holdings per Adult Unit (AU) equivalent at a sub-village level ( $Rho = -0.0497$ ,  $p = 0.01$ ). In terms of the relationship between cattle and farming, it suggested that the wealthiest herders were not necessarily the largest farmers. I observed that the wealthiest herders in terms of livestock focused their efforts on their herds and

farmed smaller plots for subsistence maize. Emboreet sub-village had the highest farming acreage per capita and lowest TLU/AU (Table 7.6).

**Table 7. 6: Acreage per mean Adult Unit equivalent by sub-village in 2003 and 2004** (Source: broad-scale survey)

Sub-village	Per capita acreage rank	Acres/AU in 2004	Acres/AU in 2003	TLU rank
Emboreet	1	126.37	99.78	6
Meleleki	2	91.54	79.13	3
Lenaitunyo	3	86.44	71.21	1
Esilalei	4	63.42	41.37	5
Ingung	5	46.21	33.71	7
Laarkaitial	6	41.83	24.70	4
Kati Kati	7	17.12	15.59	2

Esilalei, Ingung and Emboreet had relatively high acreages per AU despite having the lowest TLU/AU, partly due to the phenomenon of land leasing occurring in these sub-villages and the concentration of Maasai and non-Maasai agriculturalists living in Emboreet sub-village.

### Mining and Farming

*“Hii mambo ya kilimo ndiyo sasa hivi inakuja”* (This farming issue is just beginning to build momentum)

—Maasai tourism employee, Kikoti Safari Camp, 1 July 2005

It is important to know how much farming wealthy and poor people are doing, and the importance of farming for the livelihoods of each. It is also important to examine the role of mining in fuelling farming. There are a variety of possible explanations for the different levels of farming in the different sub-villages. We have examined that one possibility is conversion driven by hunger. Conversion could also be driven by wealth.

But there are wealthy people in different sub-villages and this would not explain why there are different acreages in different sub-villages. Conversion could be driven by the more favourable agricultural conditions in the plains, but Meleleki and Lenaitunyo were more wooded than plains. Conversion could also have been driven by exclusion fears due to conservation and land loss due to immigration and investment promotion. There could also have been an ethnic dimension at play. This would explain the higher acreage in Emboreet sub-village.

I asked household heads to list their economic life histories in the broad-scale survey. I recorded each time a respondent began and ended an activity. The sample engaged in different livelihood activities 796 times—a mean of 3.5 different activities per household (Table 7.7 and Figure 7.4). Many households stopped then restarted the same activities. The most common activity listed was livestock (herding and brokerage), followed by agriculture. Tanzanite mining brokerage was the fourth most common activity cited, with over thirteen percent of the total frequency.

**Table 7.7: Livelihood frequency amongst villagers in Emboreet, including active and non-active activities** (Source: broad-scale survey)

<b>Activity</b>	<b>Frequency</b>	<b>%</b>
Livestock Herding	298	37.4%
Agriculture	226	28.4%
Employment	127	16.0%
Mining	104	13.1%
Small Business Owner	41	5.2%
<b>Totals</b>	<b>796</b>	<b>100.0%</b>

**Figure 7. 4: Frequency of livelihood activity conducted in Emboreet, including active and non-active activities** (Source: broad-scale survey)

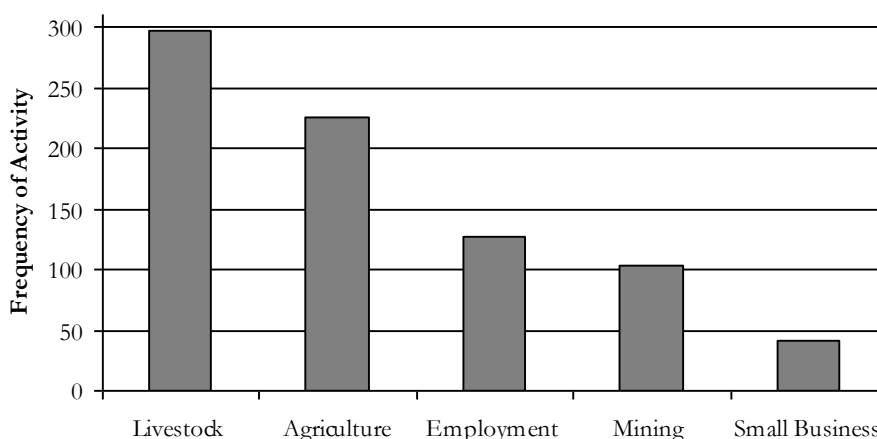


Figure 7.5 illustrates the start year of three activities: farming, livestock brokering, and gemstone mining/brokering. The figure shows a fairly low level of livestock brokers entering this activity (first year reported 1925). There is a steady increase of Maasai beginning to farm from 1945, as well as a rapid increase in the number of people involved in gemstones from the mid-1990s. There were two spikes in the number of people starting to farm: 1978 and 1998. The first coincided with the Tanzania-Uganda war and the repercussions of forced resettlement due to *Ujamaa* in the late 1970s. In 1998, the highest number of people initiated livestock brokering activities, as well as farming and gemstone activities, so this marked a period of intense diversification. This year coincided with heavy rainfall due to the El Niño oscillation, producing an estimated fivefold increase in rainfall (Galvin *et al.* 2001).

But 1997 and 1999 were the worst drought years on record (WFP 2000),<sup>29</sup> so the combination of drought shock and rain glut possibly acted as a catalyst to diversification. Respondents reported that from 1999, farming especially came to be seen as a panacea

<sup>29</sup> [http://www.wfp.org/newsroom/in\\_depth/Kenya.asp?section=2&sub\\_section=2](http://www.wfp.org/newsroom/in_depth/Kenya.asp?section=2&sub_section=2) accessed 5 July 2007.

for poverty alleviation by the Maasai.<sup>30</sup> Both farming and livestock brokering increased when fewer people started gemstone activities, and the number of new gemstone and farming starts seemed to track each other.

**Figure 7.5: Composite graph: year in which household heads in Emboreet began activities (n=226)**

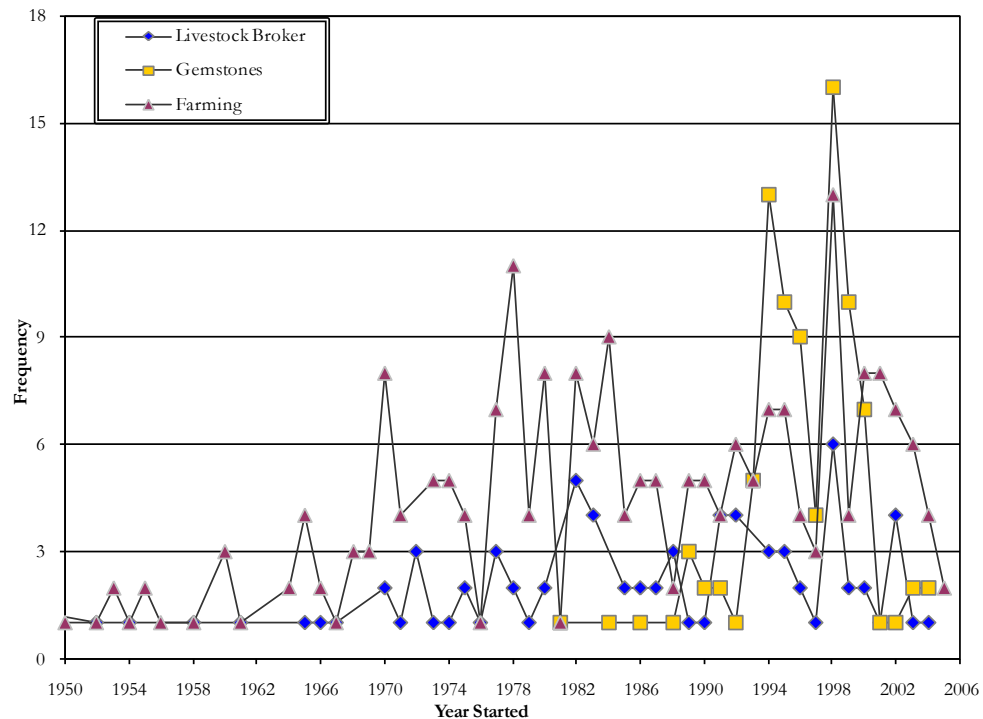
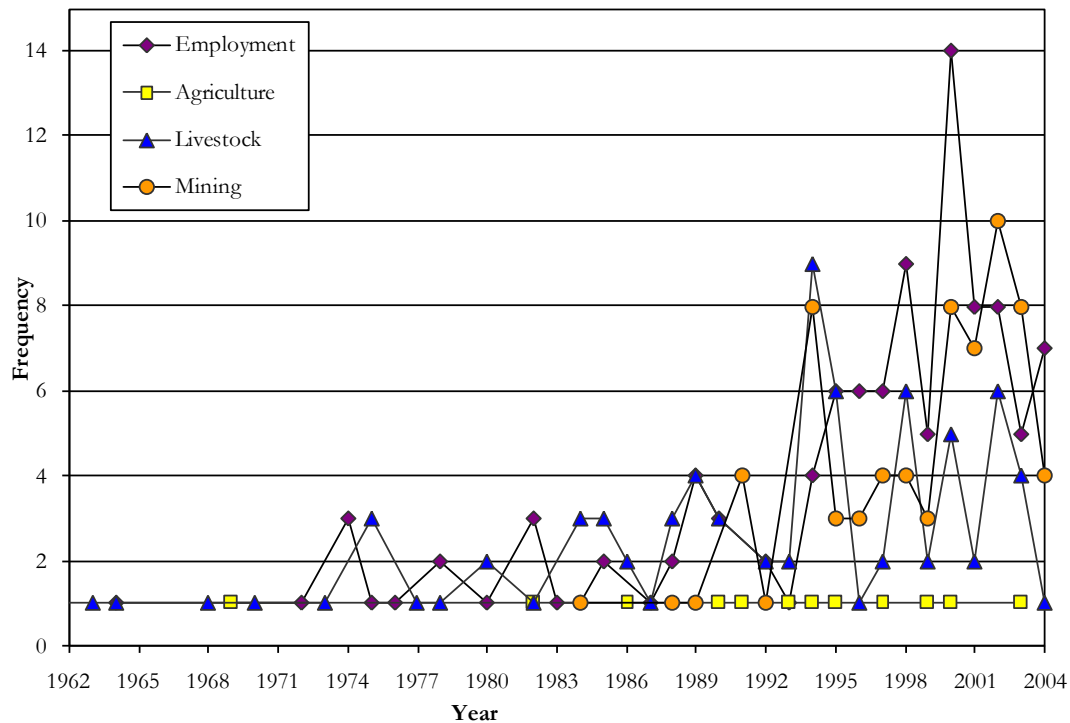


Figure 7.6 illustrates when respondents reported stopping various activities. Stoppages of farming were low. Cessation of livestock activities (mainly livestock brokering) increased steadily from the mid-1980s. There were also an increasing number of people who stopped mining activities from the early 1990s, and particularly post 2000. Gemstone brokering dropped off sharply after 2001 due to supply issues in Mererani and international sanctions. The highest frequency stopped were employment related (employment or small business owner). Most employment stopped was due to low profits, termination of project, and employment elsewhere. People frequently stopped livestock brokering to go into tanzanite brokering. Common reasons given for brokerage

<sup>30</sup> Discussions, RN and OL, Emboreet, 2004, 2005, 2006.

stopping were low profits and labour requirements in Emboreet for livestock and farming.

**Figure 7.6: Composite of frequency by year in which economic activity was stopped by HH heads in Emboreet**



Two of the lowest years of rainfall (1993 and 1995) coincided with a sharp rise in mining brokerage starts, presumably as livestock and agriculture were affected. Of my broad-scale sample, 45 percent of the total survey had engaged in mining related activities, predominately tanzanite. However, only 65 households reported incomes from mining in the past year (29 percent of households). Of these, only 34 household heads were active gem brokers in 2004 (15 percent). The remainder of households that reported mining incomes obtained these from remittances. Remittances were important to pay agricultural and livestock veterinary expenses, to purchase food and other household expenses.



To explore the hypothesis that mining revenues are fuelling land use change, I analyzed the acreage farmed from 2002 to 2004 by households that reported mining revenue (n=65), contrasted with households which reported no mining revenue (n=161). Table 7.8 illustrates that mining HHs farmed more than non-mining HHs, averaging about 27 percent more acreage farmed per year.

**Table 7.8: Mean acreage farmed reported by mining (n=65) and non-mining (n=161) households in Emboreet from 2002–2004** (Source: broad-scale survey)

<b>Year</b>	<b>Acres Non-mining</b>	<b>Acres Mining</b>	<b>% Difference</b>
2002	2.77	3.58	29.2%
2003	2.6	3.48	33.8%
2004	3.88	4.67	20.4%
<b>Totals</b>	<b>3.08</b>	<b>3.91</b>	<b>26.8%</b>

Respondents stated that tanzanite offered a source of capital to farm, thereby preserving livestock herds to an extent.<sup>31</sup> Due to livestock disease and the slow rate of return of livestock production compared with potentially high seasonal profits, gemstone brokering and farming appealed as quicker production systems than livestock production.<sup>32</sup> One *Landisi* male compared farming to tanzanite: with luck and skill, huge profits could be realized from both within a relatively short time period.<sup>33</sup> Several stories fuelled local fantasies about the possible windfalls from farming; several non-Maasai villagers in Emboreet purchased vehicles exclusively from farming proceeds in

<sup>31</sup> Interview, TS, *Landisi*, Emboreet, 10 February 2005; interview, SM, *Makaa*, Emboreet, 27 February 2005.

<sup>32</sup> Interview, CT, *Seuri*, Emboreet, 12 November 2004; interview, SK, *Landisi*, Emboreet, 3 October 2004. One of the largest new farms in the plains (400 acres) was initiated in 2004 by mining brokers. Interview, JL, *Landisi*, Emboreet, 2 November 2004. An Indian priest in Emboreet stated that most of the large commercial farmers in Emboreet spent time in Mererani where: “Their eyes are opened to how other tribes are coming up..” (Interview, PC, Emboreet, 11 November 2004).

<sup>33</sup> Interview, RN, *Landisi*, Emboreet, 7 February 2005.

Emboreet.<sup>34</sup> Households reported reinvesting farming proceeds into expanding new farms and used mining remittances to invest in farming or to buy maize to preserve cattle herds.<sup>35</sup> Different villagers described how maize farming crazed people in the context of poor livestock performance: “*Mambo ya mabindi imechanganya watu kichwa...ndigana ni ukimwi ya ng’ombe*” (This business of maize has made people crazy...ECF is the HIV/AIDS of cattle).<sup>36</sup>

It appeared that a complex relationship between mining and farming occurred in which it seemed that mining fuelled farming. Mining seemed to do this for two reasons: people used remittances to pay for farm needs; and brokers reported reinvesting mining proceeds into expanding their farms. In addition, people reported using mining remittances to invest in farming or buying maize and not the other way around.

Among households in the broad-scale survey, households with wildlife revenue farmed on average more land than households without wildlife revenue, although the difference is not significant (15.1 acres vs. 10.3 acres) (Table 7.9).

**Table 7.9: Acres farmed by households with wildlife income in 2002–2004** (Source: broad-scale survey)

Year	Acres farmed/HH Wildlife income (n=17)	Acres farmed/HH No wildlife income (n=197)	Percentage difference
2002	12.18	9.05	34.54%
2003	13.88	9.70	69.84%
2004	19.18	12.10	36.92%

<sup>34</sup> Discussion, JK, Emboreet, 19 September 2004; Discussion, JO, Emboreet, 3 October 2004.

<sup>35</sup> Interview, TS, *Landisi*, Emboreet, 10 February 2005; Interview, SM, *Makaa*, Emboreet, 27 February 2005.

<sup>36</sup> Interview, OL, *Korianga*, Emboreet, 10 November 2004.

Between 2003 and 2004, 53 percent of households that received wildlife income increased the area under cultivation, compared with 33 percent of households that did not receive any wildlife income. In addition, ten villagers benefited directly as photographic tourism employees in Emboreet. Every one of these employees invested their wages into expanding their farms,<sup>37</sup> as did village leaders directly responsible for tourism funds management, suggesting that even those who benefited directly from wildlife saw farming as a longer term development strategy. While these differences are not significant, these results suggest that households receiving income from wildlife related sources are certainly not reducing their investments in agriculture and households may indeed be investing this revenue into farming the Simanjiro Plains.

The amount of off farm income and farming were linked in 2004 ( $Rho= 0.82$ ,  $n=211$ ,  $p=0.01$ ). The correlation in 2003 was slightly less ( $Rho=0.106$ ,  $n=209$ ,  $p=0.01$ ). There was also a positive correlation between TLU/AU and total off farm income in 2004 ( $Rho=0.418$ ,  $n=223$ ,  $p=0.01$ ) and in 2003 ( $Rho=0.317$ ,  $n=219$ ,  $p=0.01$ ). This suggests that off farm income was invested in farming and livestock production strategies. A slightly positive relationship was found between livestock holdings and acres cultivated (2004:  $Rho=0.220$ ,  $n=226$ ,  $p=0.01$ ; and 2003:  $Rho=0.268$ ,  $n=209$ ,  $p=0.01$ ).

The analysis above shows a highly uneven distribution in gross household income and suggests those households getting most income from tanzanite mining and from wildlife related sources are investing this income in further extension of agriculture in the Simanjiro Plains. As such, these results present an apparent paradox: why are the very

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<sup>37</sup> Recorded interview, PO, tour operator, Arusha 28 April 2005; Discussion, SS, tourism employee, Laarkaitial, 16 June 2005; Recorded interviews: KK, SK, LL, YL & IO, TPTS employees, Kikoti, 1 July 2005.

households that may benefit from wildlife conservation apparently playing a key role in accelerating the decline of valuable wildlife habitat?

### **The Diamond Fields: Land Leasing and External Farmers**

*“Waarusha wameonja utamu wa ardhi”* (The Waarusha have tasted the sweetness of this land)

—Former MP, Vincent Kone, Emboreet, 2005

This section examines farming by non-Maasai in Emboreet. It considers the role of immigrant farmers and the extent to which this is encouraged and promoted by residents, and why, and with what consequences. Land subdivision became an issue in Emboreet as more villagers leased their land to outsiders. Initially it began with Emboreet villagers who owned land but resided elsewhere. Respondents leased their land in order to show tenure so that it would not be reallocated by the Village Council in their absence.

Leasing land to others involved few families; approximately eight percent of broad-scale households leased their land to external farmers or tenants within Emboreet. Of n=253 plots farmed in 2004 by broad-scale respondents in Emboreet (2,628 acres), eighteen of these plots (7.1 percent) were leased to external commercial farmers, totalling 533 acres (20 percent). This suggested that Emboreet villagers, not outsiders, farmed 80 percent of Emboreet’s large farms. Land leasing thus affected relatively little land and few households but it weighed heavily on people’s minds.

These contracts varied: *meinati* leased large areas of land to commercial farmers in exchange for a fraction of the harvest. Contracts usually lasted only a year, with

landowners intending to use tenants to clear the land for them.<sup>38</sup> *Meinati* saw external farmers as capable of lifting them from poverty: “*Tuseme ni Mungu tu amekuja*” (Let’s just say that God has arrived).<sup>39</sup> The wealthy also leased land. Village leaders who allocated themselves land engaged outsiders to farm it. All inputs other than land were the tenant’s responsibility.<sup>40</sup> The majority of external commercial farmers were Waarusha from Arusha Region—people with similar ecologies and language but not ‘people of cattle’ (Spear 1997). Furthering the allegory of mining at a local level, a Mwarusha commercial farmer leasing land in Emboreet for the first time referred to farms as diamonds (“*Shamba ni almasi*”).<sup>41</sup> A Mwarusha casual labourer described the Warusha perspective on farming as now, more than ever, there was “joy in farming the wilderness,” saying that he would “not stop farming if he had one million cattle”.<sup>42</sup> As a former coffee farmer in Arusha, declining global prices of coffee made him seek ‘open’ farmland in Simanjiro. Waarusha tenanting intensified animosity from local Maasai, who resented the conversion of their land by outsiders. Anti-Waarusha resentment mirrored a macro-conflict in Emboreet: the tension between herders who supported large-scale land cultivation and those who opposed it.

A flash point of the livestock and agriculture conflict was the plowing of ‘*orgoss*’, or livestock corridors (Maa: throat). Land leasing was more common in poorer sub-villages such as Esilalei and Ingung. Esilalei’s subdivision led to inter-*kitongoji* tension with Lenaitunyo which blamed Esilalei for farming *orgoss* and water catchment areas. Lenaitunyo banned land leasing to outsiders through sub-village by-laws making it

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<sup>38</sup> Interview, MK, Esilalei, 9 February 2005.

<sup>39</sup> Interview, DN, Emboreet, 11 February 2005.

<sup>40</sup> Interview, JO, VEO, Emboreet, 29 December 2003.

<sup>41</sup> Discussion, MM, Lolkisale, 13 April 2005.

<sup>42</sup> Interview, LL, Emboreet, 16 September 2004.

difficult for anyone not a sub-villager of Lenaitunyo to farm there.<sup>43</sup> However, Lenaitunyo sub-villagers took advantage of weaker governance to purchase farms in Esilalei.<sup>44</sup> Many of the contracts did not favour villagers. An elder with a 2,000 acre farm in Loiborsoit received just seven bags of grain a year from the tenant.<sup>45</sup>

A prominent Mwarusha tenant was Piniel. A bar owner in Meserani, Monduli District, he rented hundreds of acres from *meinati* throughout Emboreet.<sup>46</sup> Declining soil fertility and increasing elephant damage had made farming in Lolkisale uneconomic for Piniel and his Waarusha associates. Attracted to the open plains (Figure 7.7), proximity to their farming infrastructure, fewer elephants and poor Maasai new to land leasing, combined with corrupt local governance, these land leasers realized short-term profits in Emboreet.

**Figure 7.7: Piniel's tractor clearing a new farm in the Simanjiro Plains in Esilalei *kitongoji***



<sup>43</sup> Interview, MA, Lenaitunyo, 6 April 2005.

<sup>44</sup> A *Korianga* man purchased 25 acres for US\$ 20 per acre in 2003. Interview, KN, Lenaitunyo, 6 April 2005.

<sup>45</sup> Interview, TP, Emboreet, 17 September 2004.

<sup>46</sup> Discussion, MP, Esilalei, 31 January 2005.

In 2004, Piniel reportedly harvested 120,000 kg of grain from Emboreet, worth approximately US\$ 13,221 (Figure 7.8). Like most external farmers, the grain was exported to the commercial markets of nearby towns. In exchange, landowners were paid a fraction of the harvest. Villagers perceived these external farmers as exploitative: they defrauded *meinati* landlords by under-reporting harvests, farmed more land than they were allocated,<sup>47</sup> and underpaid their employees. But they represented a necessary evil to villagers, especially the poor. The Waarusha absorbed the initial expenses of land preparation, landlords received some grain for little investment, and their land was clearly used, or in local parlance 'branded'. People opted for short-term contracts with Waarusha in the hope that the arrangement would elevate them to be able to farm the same plot within one or two years.

**Figure 7.8: One of Piniel's maize harvests and labour camps in Emboreet**



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<sup>47</sup> Interview, RK, Emboreet, 3 February 2005.

## Land Demand and Ethnicity

“*Waswahili wamevamia...*” (The non-Maasai have invaded...)

—A man of the *Korianga* age-set viewing the interlaced network of vehicle tracks, tractors, large-scale farms and camps in the plains, Emboreet, 2005

Heavy internal migration, combined with growing land insecurity, are facets of contemporary Tanzania (Odgaard 2002). Since independence, immigration and land use change were seen as major threats by the district council and villages in Simanjiro.<sup>48</sup> Small-holder rain-fed agriculture expanded with immigration from over-crowded areas and as pastoralists adopted agro-pastoralism (Igoe and Brockington 1999). Declining supply of good quality land in the Simanjiro Plains and close to *bomas* caused Maasai villagers to lease land to each other<sup>49</sup> and register land in the names of their children and wives. Land shortages were particularly acute in Emboreet sub-village. *Korianga* men could only obtain land far from the plains (in the woodland of the Lolkisale GCA, far from homes and social services). When they complained of discrimination, they were informed that the *Korianga* age-set was being used as a buffer to immigrants who might be spurred to move now that Simanjiro was in Manyara Region. Those who did access land leased it or formed cooperatives with other *Korianga* to farm commercially. It became more difficult for immigrants—Maasai and non-Maasai—to obtain land in Emboreet (cf. Cooke 2007 in Loiborsoit 'A'). It was easier for non-Maasai to enter into

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<sup>48</sup> Letter, P. Mang'atinda, Principal Administrator, to all divisional and village heads in the Masai District, 17 September 1969, Ref. NOL. 20/1/20, stated that due to land shortages in neighbouring districts "...the attraction of farming to those people... has caused various areas to be invaded and farmed without permission...The time of farming has now begun and I know that farm conflict will be huge."; letter, S. Mibaku, WEO Emboreet to Sukuro CCM branch chairman, 25 January 1983, Ref. OP/EM/KE/B/32; recorded interview, EL, VEO, Kimotorok, 5 July 2005.

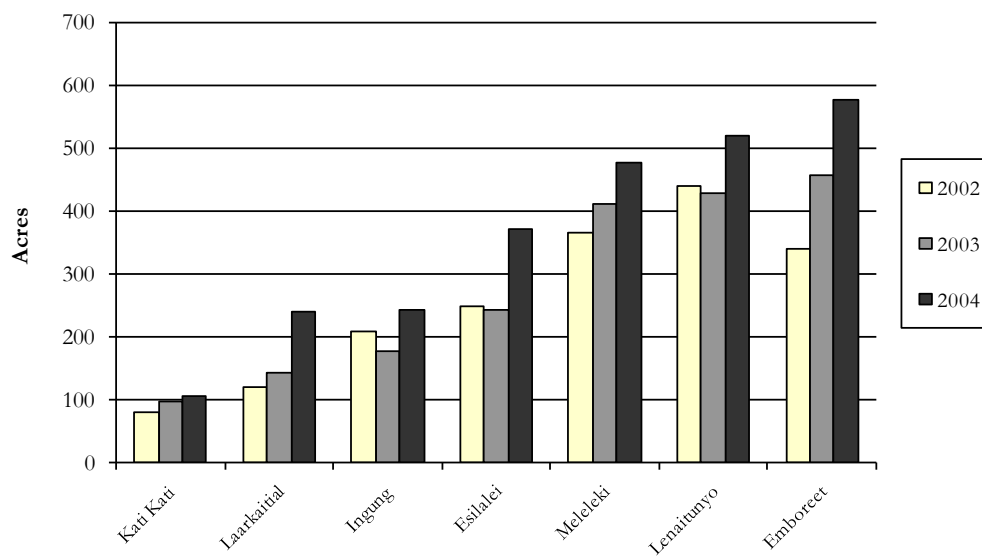
<sup>49</sup> Interview, ML, villager, Emboreet, 27 June 2006.



lease agreements with Maasai residents. Villagers suggested that other ethnic groups accelerated land commoditization by paying leaders for illegal land transactions.<sup>50</sup>

The availability of farming land in different sub-villages stimulated a significant amount of movement of villagers between different sub-villages.<sup>51</sup> Non-Maasai encountered difficulty settling in other *kitongoji*, but found it easier to settle in the ethnically diverse village centre. Emboreet was the most agro-pastoral of the sub-villages (Figure 7.9).

**Figure 7.9: Growth of total farming acreage per sub-village 2002–2004** (Source: broad-scale survey)



Emboreet sub-village had the majority of large-scale commercial farmers (and highest number of non-Maasai and agro-pastoralists). Agriculturalists, immigrants, government bureaucrats and the Mission concentrated in Emboreet sub-village and prioritized agriculture as a livelihood strategy. They became a powerful caucus, with access to

<sup>50</sup> A commercial farmer from Arusha claimed that he paid US\$ 20,370 in bribes to sub-village leaders and district lands officers to make the ‘purchase’ of 80 acres in Emboreet official. Discussion, MM, Arusha, 3 April 2006.

<sup>51</sup> Interview, LK, villager, Emboreet, 12 February 2005.

networks and cash, influential in the village government. In other sub-villages, the largest areas farmed were leased by Emboreet sub-village residents.

### Conservation Fears and Ngorongoro

“If you want to provoke a Maasai, talk about ‘conservation’” (*Ukitaka kuchukiza Maasai, ongea mambo ya ‘conservation’*)

—A man of the *Landisi* age-set, Meleleki, 2004

The Ngorongoro issue became extremely sensitive in Simanjiro following Borner’s (1982) ‘Simanjiro Conservation Area’ proposal as residents of Simanjiro were aware of the problems pastoralists experienced there. In 1984, African pastors replaced expatriates at the Simanjiro Catholic Mission in Emboreet. The majority of Maasai pastors to Simanjiro came from Ngorongoro. These pastors obtained personal land to farm in Emboreet and initiated the first 100 acre farms. Ngorongoro priests allegedly fanned the conservation threat in order to support their claims for large landholdings within Simanjiro.<sup>52</sup> They did this through local-level advocacy about Ngorongoro’s example of land use restrictions on the Maasai. Eighty percent of broad-scale respondents in Emboreet were aware of the restrictions on farming and natural resource access, repression and dependence on NGOs for aid in Ngorongoro.<sup>53</sup> Additionally, Simanjiro residents viewed their Ngorongoro counterparts as having been robbed of their dignity, dependent on tourism, and relegated to cultural *bomas*.<sup>54</sup> In juxtaposition to this, Simanjiro Maasai saw in farming an idiom of their independence. Farming empowered

<sup>52</sup> Interview, PT, DC, Emboreet, 17 September 2004.

<sup>53</sup> Discussion, DL, Ngorongoro immigrant, 16 April 2004.

<sup>54</sup> Interview, ML, Emboreet, 18 November 2004.

Simanjiro Maasai. It showed that they still had control of their land, and to other Maasai, farming became part of the identity of being a Simanjiro Maasai.<sup>55</sup>

Villagers believed that Ngorongoro increased poverty in Simanjiro due to requests for aid they received from Ngorongoro Maasai.<sup>56</sup> Ngorongoro settlers in Simanjiro grew additional food to send to their families in Ngorongoro.<sup>57</sup> Another impact of Ngorongoro in Simanjiro was immigration. Although, the rate of immigration was low (approximately four percent of households were from Ngorongoro), a number of immigrants were influential—priests, NGO workers, village councillors and large-scale farmers—which made them seem more visible. They used their influence to acquire large tracts of farming land within Emboreet.

Ngorongoro emigrants vociferously sensitized Simanjiro villagers to the threat of conservation. They argued that immigration or large-scale farming were not actually threats but buffers against the same thing happening in Simanjiro. Their voices were amplified in 2001 when a letter from the Conservator of Ngorongoro Conservation Area Authority (NCAA) was disseminated in Emboreet. The subject of the letter was ‘Removal of Agriculture and Illegal Immigrants from Within NCA’.<sup>58</sup> The letter touched upon the sensitivities of the SCA and was used by farming proponents to illustrate to villagers the negative perceptions of the State towards pastoral farming in wildlife conservation areas and the imminent threat that the State’s actions in Ngorongoro represented in Simanjiro. Emboreet villagers described conservation areas as a ‘war zone’<sup>59</sup> and declared: “It is not that we are afraid conservation will take land, it does take

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<sup>55</sup> Interview, CT, Emboreet, 12 November 2004.

<sup>56</sup> Discussion, WS, villager, Emboreet, 15 September 2004.

<sup>57</sup> Discussion, *Laiyon*, Emboreet, 18 September 2004.

<sup>58</sup> Letter, E.B. Chausi, Conservator-NCAA, to PS-MNRT, Ref. NCA/AR/CN/2/Vol. V/25, 4 May 2001.

<sup>59</sup> Discussion, sub-village chairman, Esilalei, 11 September 2004.

land! A live example is Ngorongoro.”<sup>60</sup> Villagers were likely referring to continued evictions from NCA of local people for conservation reasons reported in the local press (Ihucha 2007a, Magubira 2005).

Village disputes about farming were couched in terms of defence of livelihoods and identity. The politics of land use and conversion to agriculture was divided between those who wanted to preserve land for livestock and protect it from farming, and those who, at least in their rhetoric, saw farming as a means of keeping conservation at bay and thus protecting villagers’ independence and ways of life. Ultimately, opposition to conservation united the two sides. This process of unification is visible in attempts by the village to limit farming. Emboreet initially tried to limit leasing of village land to external farmers. The SDC instructed Emboreet in 1997 to develop a Land Use Plan (LUP).<sup>61</sup> The Village Council decreed shortly afterwards that all farming in the plains should stop.<sup>62</sup> Some villagers saw the LUP as a way to secure the important rangeland of the Simanjiro Plains for livestock and to block external farmers. But land tenure fears soon overrode the 1997 Village Council minutes with the consequence that farming continued in rangelands which had been set aside for livestock.

In 2001, tension over land between resident Maasai and immigrants (both Maasai and non-Maasai) in Emboreet erupted in violence when irate herders blocked tractors and assaulted a Ngorongoro settler. The District Commissioner (DC) and Member of Parliament (MP) mediated the conflict in which Maasai villagers accused non-Maasai and Ngorongoro immigrants of ruining the land for cattle. The NGO Inyuat-e-Maa capitalized on the opportunity to lobby for wildlife corridors in which farming was

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<sup>60</sup> “*Sijyo kwamba tunaogopa conservation itachukua ardhi, inachukua! Mfano hai ni Ngorongoro.*” Interview, JK, villager, Emboreet, 6 May 2004.

<sup>61</sup> Letter, DC-Simanjiro to VEO, Ref. DC/SM/K.20/18/51, 18 March 1997.

<sup>62</sup> Village Council meeting minutes, Emboreet, Ag. No. 97 – 12, 22 April 1997.

restricted but livestock grazing was encouraged. The DC called for a Village Assembly vote to decide whether large-scale farming should continue. The vote divided along ethnic lines with about twenty non-Maasai and Ngorongoro settlers in favour and hundreds of Maasai in opposition.<sup>63</sup>

Similar to experience in Zimbabwe, where rural people may use the conservation agenda for non-conservation ends (Murombedzi 1999), agriculturalist immigrants saw their livelihoods threatened by this vote. They claimed that farming restrictions on immigrants were an attempt to alienate village land by conservation agencies which would affect Emboreet residents. This claim met receptive ears, and herders allowed other ethnic groups to continue farming. Opposition to conservation served the purpose of unifying immigrants and Maasai in a common discourse regarding land tenure; conservation made a convenient distraction to land accumulation by immigrants.

#### **Box 7.2: Conflict between Pastoralists and Farmers**

There was widespread conflict between livestock and farming in Simanjiro. A violent land conflict between Maasai and WaIrangi erupted in 2003 in Kiteto District. *Bomas* were burned; shootings and assaults occurred when the conflict escalated.<sup>64</sup> Forced migration of herders into Simanjiro resulted.<sup>65</sup> In Naberera, farms reduced access to traditional water sources, forcing some cattle to trek to the Ruvu River area where ECF was more prevalent.<sup>66</sup>

<sup>63</sup> Recorded interview, AM, Emboreet, 20 June 2005.

<sup>64</sup> Interview, LL, Emboreet, 2 March 2005; interview, WE, cattle rancher, Arusha, 19 April 2004.

<sup>65</sup> Interview, ML, TNP employee, 30 June 2005.

<sup>66</sup> Interview, RA, NGO employee, Arusha, 22 April 2005.

## Defensive Farming

*“Tusbike pori, tulime ili nao wakija wapate sebemu ndogo tumebakiza, kama tumebakiza.”* (Let’s privatize the bush, farm it so that if they come they get a small area that is left, if any is left.)

—Former Chairman, Kimotorok, 2005

Defensive farming was a phenomenon that villagers felt obstructed land alienation and illustrated land tenure. The Maasai likened this to branding the land like they do cattle to show ownership.<sup>67</sup> As we have seen, villagers adopted agriculture due to their perception that it was a more reliable income source than livestock.<sup>68</sup> In addition, the fear of land alienation due to conservation,<sup>69</sup> State appropriation for investment and immigration encouraged rapid land privatization. Emboreet villagers were well aware that the plains were a key target for conservation agencies.

The rapid land privatization and conversion to agriculture that occurred post-1999 in the plains was, in part, driven by the perceived need to block park expansion and to hedge for compensation should evictions occur. Demand for farms was high in the plains for other speculative reasons: villagers knew it was easier to lease or sell as well as being cheaper to farm as an individual. Emboreet villagers’ strategy was to allocate, lease and farm the plains as rapidly as possible. Villagers knew that ploughed rangeland was less valuable to conservationists than undisturbed rangelands where wildebeest could freely calve and graze.<sup>70</sup> Of individuals who were asked whether they would invest hypothetical household level tourism revenues into farming, 91 percent of respondents replied that

<sup>67</sup> I thank J. Terence McCabe for bringing the notion of ‘branding’ the land to my attention.

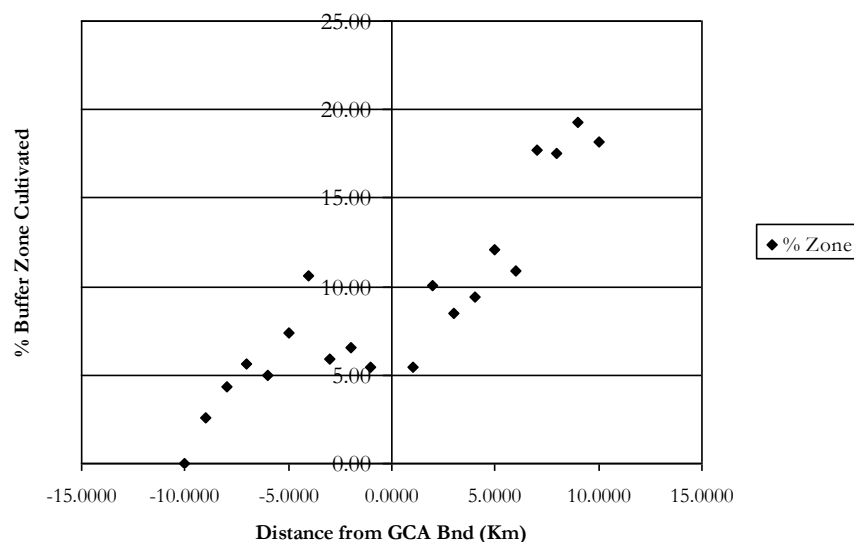
<sup>68</sup> Interview, LO, *Korianga*, Esilalei, 10 September 2004.

<sup>69</sup> Interview, JO, VEO, Emboreet, 22 March 2004.

<sup>70</sup> Interviews, ON, Emboreet, 18 May 2004; SK, Esilalei, 6 July 2005.

they would. When asked if farms near the park boundary affected park expansion, 74 percent of respondents responded that the farms would block the park. A former village Chairman described farming as ‘the cure’ to stop park expansion.<sup>71</sup> Loiborsoit had apparently farmed close to the TNP border in the Lolkisale GCA precisely for this reason.<sup>72</sup> An analysis of distance of cultivation from the GCA boundary in 2004 illustrated that the GCA boundary did not impede farming elsewhere (Figure 7.10).

**Figure 7.10: Distance from Lolkisale GCA boundary versus cultivation** (Source: David Williams)



Farming was practiced in villages to the north of Kikoti Safari Camp in Monduli District (Figure 7.11). However, despite farming and settlement being legal in GCAs,<sup>73</sup> villagers in Emboreet avoided farming in the Lolkisale GCA (Figure 7.11).<sup>74</sup> Villagers knew that the village title deed stopped at the Lolkisale GCA boundary. Though they contested this land, they knew their claims to it were not as strong as in the titled village area. The GCA was also distant from social services and an area of high wildlife traffic. As such, the plains near the village centre were highly prized.

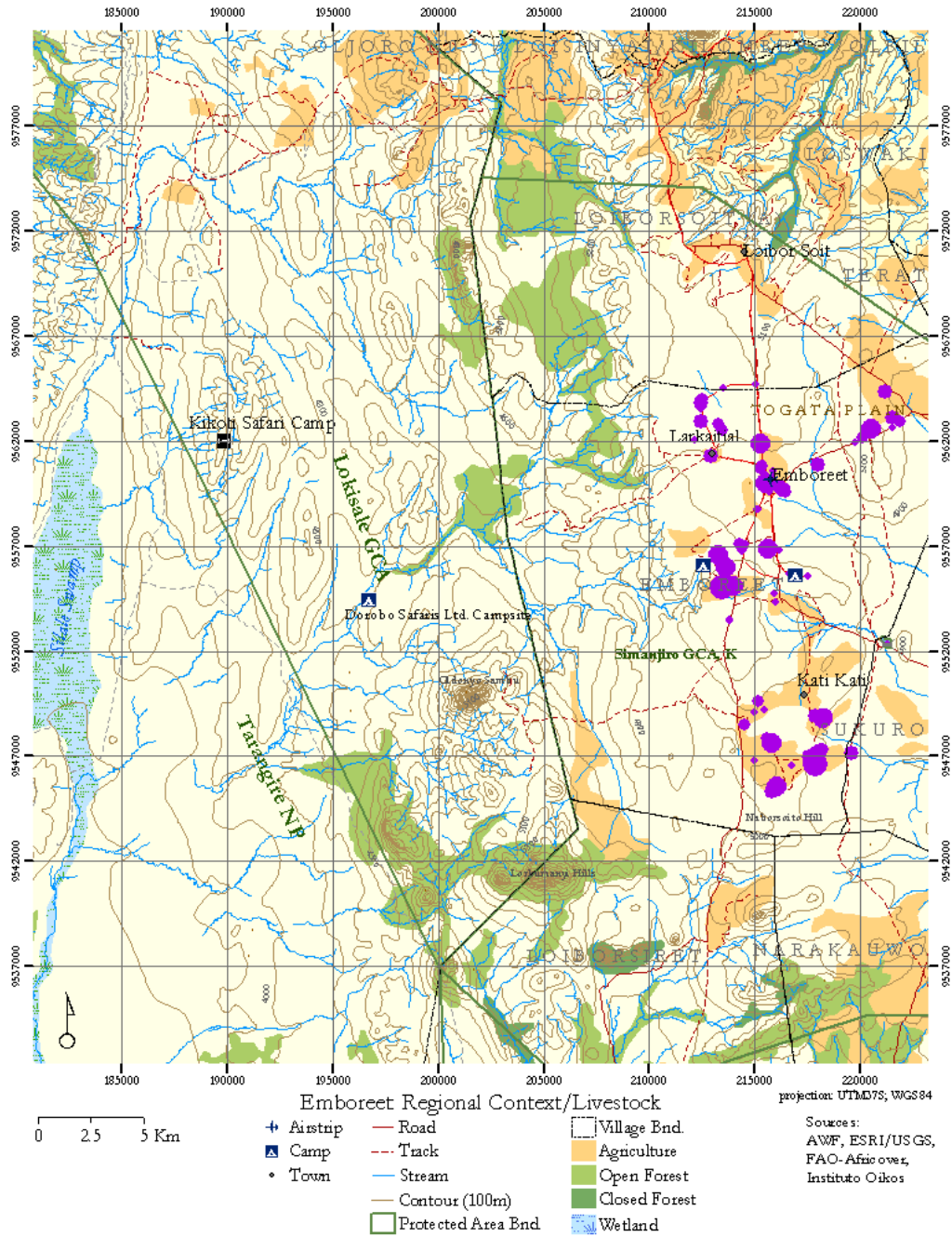
<sup>71</sup> “...ni dawa yake...” Interview, ML, Lenaitunyo, 7 April 2005.

<sup>72</sup> Interview, VEO, Emboreet, 22 March 2004.

<sup>73</sup> According to the WCA (1974).

<sup>74</sup> Interview, PO, tour operator, Arusha, 28 April 2005.

Figure 7.11: Spatial location of farming in the Lolkisale GCA adjacent to Simanjiro villages





## Tobacco for the Elders: The Commoditization of the Plains

*“Tabala engulukoni! Tabala engulukoni!”* (Leave the land alone! Leave the land alone!)

—*Nyangusi* elder at an Esilalei land conflict meeting, 2006

This section describes access to land for farming on village politics and governance. This section concerns the consequences of needing to own farm land on land politics and land ownership.

Corruption is common in Tanzanian daily life (Heilman et al. 2000, Kironde 2006, URT 1996a), throughout all levels of government (Brockington 2006, Burgis et al. 2007, Kaufmann et al. 2006, Kelsall 2002). It became such a norm that many people believed they could not get fair treatment without bribing.<sup>75</sup> Social acceptance of corruption was evidenced by the variety of unofficial terms to describe corruption in Kiswahili such as *kupuliza* (to spray), *kueleweka* (to be understood) and *tumbaku ya wazee* (elders’ tobacco). The administration of land by the central bureaucracy created opportunities associated with corruption and nepotism which reverberated throughout Tanzania (Shivji 1999, URT 1993a,d). State bureaucrats controlled land allocation and administration which allowed them to extract ‘rents’ such as kick-backs and commissions. The Land Commission found frequent incidences of abuse of power by Village Councils (URT 1993a,d).

Homewood *et al.* (2001) explain massive wildlife declines in pastoral areas of southern Kenya due to a policy of land privatization and individualization. Illegal land sub-

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<sup>75</sup> Recorded interview, KK, Chairman, Kimotorok, 6 July 2005.

division and land conflicts intensified in Simanjiro in the early 1970s.<sup>76</sup> Villagisation resulted in immigration and land demand by the early 1980s.<sup>77</sup> In the 1980s and 1990s, large scale land alienation (such as the infamous Steyn lease) was a national problem, but especially acute in Arusha Region (Shivji 1999). A European commercial farmer stated that he was “rather disgusted how easy it was to get land” in Simanjiro in the 1990s.<sup>78</sup> From the late 1980s, immigration and land alienation for commercial farming and conservation drove people to privatize land.<sup>79</sup> The Land Act and Village Land Act of 1999 heralded a further shift in policy from state-owned land to private land ownership (Celender et al. 2005: 25). Combined with the decline in per capita livestock, it led some Maasai to refer to land as more valuable to them than cattle.<sup>80</sup>

The current rampant land grab seen in Simanjiro began in 1999. Pastoralists feared that immigration and State appropriation for investment threatened their land.<sup>81</sup> According to the Village Land Act, the Village Council has the power to allocate land within its jurisdiction, which must then be approved by the Village Assembly. The Village Council was ultimately accountable to the Commissioner of Lands. The VEO, Chairman and sub-village chairmen categorically did not have the legal power to allocate or sell village land. As more villagers responded to market opportunities for agriculture, people in leadership positions enriched themselves through controlling the allocation of land. It

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<sup>76</sup> Letter, P. Mang’atinda to WEO-Simanjiro, 3 November 1973, Ref. MON/A.3/17/IV/177.3; letter, Monduli/Masai lands officer to WEO-Simanjiro, 23 January 1973, Ref. MON/473/2/RA.

<sup>77</sup> Letter from SM, CCM branch chairman, Emboreet, 25 January 1983, Ref. OP/EM/KE/B/32, complained about demand for land from unprecedented rates of immigration.

<sup>78</sup> Recorded interview, JF, Loiborserrit, 4 June 2005.

<sup>79</sup> Recorded interview, PK, former Chairman, Emboreet, 10 June 2005; recorded interview, LL, former VEO, Loiborsoit ‘A’, 14 June 2005.

<sup>80</sup> Interview, OL, Emboreet, 22 November 2003.

<sup>81</sup> Recorded interview, KK, Chairman, Kimotorok, 6 July 2005.

was illegal for villagers to sell village land. Some villagers sold their land but masked this by calling the transaction a land ‘lease’ or ‘rent’.<sup>82</sup>

Village leaders allocated themselves land without involving the Village Assembly.<sup>83</sup> By the mid-1990s, Emboreet village councillors allocated themselves 12,000 hectares (Muir 1994). Several village councillors and a mission priest allocated themselves thousand acre plots near the Kikoti tourism concession in the Lolkisale GCA with the intent to personally benefit should additional land be leased for tourism. An illegitimate land ‘sale’ mechanism involving the VEO and sub-village chairmen became the norm for other villagers. Villagers reportedly paid these officers in order to receive a plot.<sup>84</sup> Land allocations gained local legitimacy through often backdated letters from the VEO and the support of the *kitongoji* Chairman.

Stories abounded about village land sales. Villagers resented the expense but knew that if they wanted land, they needed to pay. In Emboreet sub-village, a villager paid US\$ 33 per acre in 1999 and US\$ 20 per acre in 2003; another allegedly paid with ten crates of beer and two goats. These were not land ‘sales’ *per se* as the village account received no revenue, but bribes were paid to officials to issue a village letter of transfer.<sup>85</sup> There were instances of villagers selling their own plots after paying the VEO to transfer the title. Land in the plains was in high demand: in Ingung, the ‘price’ was reportedly US\$ 139 per acre. This cash was subdivided amongst the sub-village chairman and his associates to

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<sup>82</sup> Interview, RS, Ward Councillor, Terat, 19 May 2004.

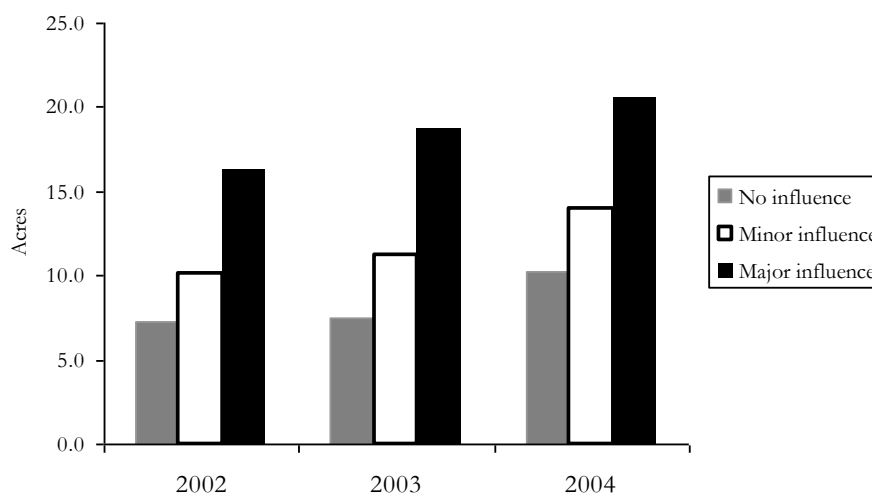
<sup>83</sup> Discussion, OL, Emboreet, 16 September 2004; Recorded interview, former VEO, Loiborsoit ‘A’, 14 June 2005; Discussion, ON, Esilalei, 20 January 2006.

<sup>84</sup> The VEO summoned the sub-village chairmen to a bar with the applicant to discuss his or her request for land. The applicant bought beers for the elders, sugar for their households, and was solicited for *tumbaku ya wazee* – a bribe of up to US\$ 93 for six elders. Interview, KK, villager, Emboreet, 11 February 2005; Recorded interview, former VEO, Loiborsoit ‘A’, 14 June 2005.

<sup>85</sup> Discussion, GK, villager, Emboreet, 16 February 2005; discussion, SK, villager, Esilalei, 18 February 2005.

legitimate the transfer. After the buyer bought the elders bottled beer, land was allocated using the headlights of a car. Where the light ended was the farm's boundary. Leaders from adjacent villages criticized Emboreet's rampant sub-division of its plains.<sup>86</sup> They blamed wildlife tourism for corrupting leaders and catalyzing land use change.<sup>87</sup> As in the case of the wildlife rich Mara ecosystem in Kenya, where elites invested tourism revenues into farming (Thompson 2002, Thompson and Homewood 2002), elites invested in mechanized agriculture in Emboreet. Mean acreage farmed by villagers with a major leadership influence (such as local officials, village councillors, *kitongoji* chairmen and officers) were much higher than those of people with minor (Catechist or *Balozi*) or no influence (Figure 7.12).

**Figure 7.12: Comparison of mean acreage farmed by different leadership variables, 2002–2004**  
(Source: broad-scale survey)



A one-way analysis of variance in the three groups showed a significant difference between them. Post hoc comparisons using the Tamhane test indicated that the mean farms for households with a major leadership role and those with no leadership role were

<sup>86</sup> Interview, RM, Chairman, Loiborserrit, 23 June 2006; interview, District Councillor, Terat, 23 June 2006.

<sup>87</sup> *Ibid.*

significantly different (Table 7.10). Households with minor influence did not differ significantly from either of the other groups.

**Table 7.10: Mean acres farmed by year by different leadership variables, 2002–2004** (Source: broad-scale survey)

	Leadership	N	Mean Acres	Std. Dev.	F	df	p=
2002	Major Influence	35	16.3	22.0	4.45	209, 2	0.01
	Minor Influence	36	10.1	15.2			
	No Influence	141	7.3	14.7			
2003	Major Influence	35	18.7	23.2	7.94	209, 2	0.00
	Minor Influence	36	11.3	15.4			
	No Influence	141	7.5	12.2			
2004	Major Influence	35	20.6	24.9	3.00	211, 2	0.05
	Minor Influence	36	14.0	21.0			
	No Influence	143	10.3	22.5			

Leaders used the promise of land allocations to access free labour from poor people, who claimed they never received their plot.<sup>88</sup> Poor people complained that “If you have long arms, you get a *shamba*. If you have short arms, you do not”,<sup>89</sup> suggesting that those who could pay leaders cash obtained land. There was a significant difference of acreage allocated to wealthy households (174 acres) compared with poor (73 acres) and middling households (82 acres). Post hoc comparisons using the Bonferroni test indicated that the mean acreage for richer households and poorer households were significantly different. Middling households did not differ significantly from either of the other groups (F= 3.64; df= 193, 2; p= 0.03). My research assistants claimed to have paid the chairmen of Ingung, Emboreet and Esilalei sub-villages for plots which they had not received.

<sup>88</sup> Discussion, KT, Emboreet, 17 February 2005.

<sup>89</sup> Interview, LT, Emboreet, 17 February 2005.

As a case of how these illegal land payments may have affected leader's livelihoods, I tracked one of these *kitongoji* chairmen during the repeat-round survey. His expenses consistently exceeded his declared income (Table 7.11).

**Table 7.11: Comparison of income and expenses over one year for a sub-village chairman** (Source: repeat-round survey)

		Amount	Percent	Totals
<b>Income</b>	Livestock sales	\$581	79%	
	Remittance	\$93	13%	
	Crop sales	\$63	9%	<b>\$737</b>
<b>Expenses</b>	Livestock purchases	\$637	39%	
	Market expenses	\$345	21%	
	Farming costs	\$342	21%	
	Veterinary drugs	\$310	19%	<b>\$1,634</b>
<b>Difference between income and expenditure</b>				<b>\$897</b>

This chairman was categorized as 'poor' by villagers in terms of assets. Part of the VEO's family, he was alleged to have colluded to sub-divide large swathes of Esilalei to this family. He invested most of his disposable income into farming (21 percent), livestock (58 percent), and market items (21 percent). I tracked the VEO's father to explore whether this exposed irregular patterns of expenditure versus income. Unemployed and totally dependent on his sons, he received approximately US\$ 900 in remittances from the VEO in one year, as well as additions of up to 16 goats at a single time purchased by the VEO.<sup>90</sup> These infusions of cash could have come from other sources, but the volume and frequency suggested that he was close to someone with access to large amounts of disposable income. This is not conclusive proof of corruption, though few other households had such large discrepancies.

<sup>90</sup> Shoats were less noticeable to other villagers than cattle.

How did leadership correlate with the amount of land allocated? A one-way analysis of variance between the three leadership groups showed a significant difference between them (Table 7.12). Individuals with major influence owned a mean of 246 acres, substantially more than individuals with minor influence (65 acres) and no leadership influence ( $F= 9.25$ ,  $df= 193,2$ ,  $p= 0.00$ ). Post hoc comparisons using the Bonferroni test indicated that the mean acreage for households with a major leadership role and those with a minor or no leadership role were significantly different.

**Table 7.12: One way ANOVA of acres allocated by leadership influence**

	<b>N</b>	<b>Mean</b>	<b>Std. Dev.</b>	<b>Minimum</b>	<b>Maximum</b>
<b>Major Influence</b>	35	246	428	8	2,049
<b>Minor Influence</b>	34	65	43	4	250
<b>No Influence</b>	127	74	150	1	1,260

Households with no leadership influence had more land allocated to them than those of minor influence. An analysis of leadership cross tabulated with wealth illustrated that the wealthiest were closest to positions of power, but that eight percent of the poor had major leadership influence (Table 7.13).

**Table 7.13: Cross tabulation of wealth class compared with leadership influence** (Source: broad-scale survey)

	<b>Rich</b>	<b>%</b>	<b>Middle</b>	<b>%</b>	<b>Poor</b>	<b>%</b>	<b>Total</b>
<b>Major Influence</b>	18	34%	10	14%	8	8%	36
<b>Minor Influence</b>	6	11%	20	28%	10	10%	36
<b>No Influence</b>	29	55%	42	58%	83	82%	154
<b>Totals</b>	<b>53</b>	<b>100%</b>	<b>72</b>	<b>100%</b>	<b>101</b>	<b>100%</b>	<b>226</b>

Villagers perceived the aforementioned sub-village chairman's land sales in Esilalei as poverty-driven. He allegedly sub-divided land to himself which he then sold. He also

allegedly sold other people's plots which resulted in multiple intense conflicts in Esilalei. Conflicts over land allocation were a common occurrence in Emboreet (including intra- and inter-household) and Loiborsoit and sometimes resolved violently. There was no legitimate process of settling land disputes in the Land Acts (Shivji 1999).

### Elephant and Soil Fertility

“*Ng’ombe wanakuḡa. Ardhi haiḡi.*” (Cattle die. Land does not die.)

—Man of the *Makaa* age-set, Meleleki, 2004

Rain-fed farming in arid zones is notoriously unpredictable. Erratic rainfall, declining soil fertility, wildlife damage, pests and weeds affected agriculture in Emboreet.<sup>91</sup> Nearby Singida Region, a source of casual labourers in Emboreet, experienced decreasing soil fertility which was blamed for it having one of the highest poverty severity indices and emigration rates in Tanzania (Mkenda *et al.* 2004: 9).<sup>92</sup> Declining soil fertility affected productivity in villages in Simanjiro. In the 1960s the predominately Waarusha village of Loswaki, adjacent to Emboreet, reportedly supplied Arusha with a significant amount of grain.<sup>93</sup> Declines in soil fertility in Loswaki and nearby Lolkisale village in Monduli District resulted in commercial farmers seeking new farms in the Simanjiro Plains.<sup>94</sup> In eastern Simanjiro, farms declined between Moshi and Mererani;<sup>95</sup> villagers reported fertility declines from their farms in Emboreet and Terat.<sup>96</sup>

<sup>91</sup> *Sangare* (Maa for a fibrous grass), was not eaten by cattle. It colonized new fields which had to be abandoned.

<sup>92</sup> Interview, TP, Emboreet, 17 November 2004.

<sup>93</sup> Interview, former MP, Vincent Kone, Emboreet, 26 June 2005.

<sup>94</sup> Interview, PT, DC, Emboreet, 17 September 2004; interview, MM, LFO, Emboreet, 9 December 2004; interview, PK, Emboreet, 9 December 2004.

<sup>95</sup> Discussion, MN, NGO employee, Emboreet, 23 November 2004.

<sup>96</sup> Interview, PM, Emboreet, 16 November 2004; interview, MA, Emboreet, 24 November 2004.



Based on interviews with commercial seed bean farmers, Simanjiro's soils were particularly prone to trace element exhaustion. Commercial farmers invested heavily in imported fertilizers (TNR 2005b). Additionally, ploughing using discs—as practiced in Simanjiro—was said to hasten soil exhaustion. Commercial farmers practiced minimal tillage, using timed claws which retained soil structure and retained water.<sup>97</sup> But even modern techniques and access to capital did not ensure the success of expatriate farmers; some had failed due to declining soil fertility and global competition.<sup>98</sup>

Villagers believed that one acre produced on average 1,200 kg of maize per year (SDC 2005), but results in Emboreet indicate that the amount was closer to a third of this amount (Table 7.14).

**Table 7.14: Mean yields per acre for maize and beans in Emboreet 2003-2004** (Source: broad-scale survey)

	2003		2004	
	Maize	Beans	Maize	Beans
<b>Mean kg per acre</b>	436.26	178.78	386.25	160.86
<b>St. Dev</b>	391.35	276.34	430.71	427.19

Mean yield per household for maize increased by 29 percent in 2004 from 2003, while bean yields declined per household by 22 percent in the same period (Table 7.15). There was a 26 percent increase in farming acreage per household over the same time. So while mean yields per acre declined, the increase in new acreage compensated with an increase in food availability at a household level. While it is speculative to suggest that declining

<sup>97</sup> Interview, GH, commercial farmer, Arusha, 20 April 2005; interview, JF, commercial farmer, Loiborsirret, 11 June 2005.

<sup>98</sup> Main competitors were Chile and the USA which benefited from irrigated agriculture compared with Simanjiro's rain-fed seed bean industry.

soil fertility could affect food production in Emboreet, this could be a risk to farming within the next decade.

**Table 7.15: Mean yields per household for maize and beans in 2003 and 2004** (Source: broad-scale survey)

	2003		2004	
	Maize	Beans	Maize	Beans
<b>Mean yield per HH in kg</b>	3,251.15	330.93	4,191.61	259.05
<b>St. Dev.</b>	6,825.90	1,219.25	7,473.43	1,074.14

In many parts of Africa, people report conflict with wildlife towards crops, livestock and human life (Gillingham and Lee 2002, Newmark et al. 1994, Parry and Campbell 1992). Human-wildlife conflict had been reported as a problem in Simanjiro since the 1960s.<sup>99</sup> It became more extreme in the 1990s as wildlife “...completely clean out farms and threaten famine in the village”.<sup>100</sup> Perceptions towards wildlife suffered due to increasing rates of human-wildlife conflict related to the expansion of farming and population growth in Simanjiro.

In contrast to declines in other large mammals, elephant and buffalo increased in the Maasai Steppe (Foley and Foley 2006, Stoner et al. 2007, TAWIRI 2004a). Buffaloes injured villagers, disrupted women’s economic activities,<sup>101</sup> and people’s movement in the woodland. For the first time in living memory, elephants were sighted in Laarkaitial *kitongoji* in 2004, and began raiding fields in each subsequent year. Elephant populations in the Maasai Steppe grew by seven percent per annum since 1994, close to their known maximum reproductive rate (INRF 2005b: 14). Elephants numbered approximately

<sup>99</sup> Letter, Mariko Kilae to DC, 11 June 1960 complaining about warthog; letter, M.J. Kuyatto, Simanjiro VEO, to Lolkisale Game Post, Ref. S.WD/K/6/2, 19 June 1972.

<sup>100</sup> Letter, J. Porokwa, VEO to Simanjiro DED, Ref. KIJ/EMB/325/1/13/95, 2 March 1995.

<sup>101</sup> Discussion, TL, *Landisi* woman, Esilalei, 16 June 2005.

2,300 individuals, the largest population in northern Tanzania (Foley and Foley 2006). As elephants increased in number and recolonized their former ranges, conflict increased with people in the Maasai Steppe (Figure 7.13). Elephants made farming in areas of Loiborsoit and Lolkisale villages uneconomic,<sup>102</sup> and they were destructive in Laarkaitial.

**Figure 7.13: Granary damage by elephant in Mswakini Juu village, Monduli District** (© Clive Jones)



A variety of wildlife, large and small, caused extensive crop damage. Game birds and zebra assailed the fields by day; at night porcupines, bush pigs, and even hyena damaged crops. The consumption of raw maize by spotted hyenas—a carnivore—confounded villagers. This behavior was first noted in 2002. Villagers expressed surprise and postulated that a decline in prey species caused the behavioral change.<sup>103</sup> Hyena researchers had not heard of this behaviour either.<sup>104</sup> Respondents reported an average of 5.45 acres lost in 2003 due to wildlife damage (Table 7.16). This declined in 2004 to 2.59 acres. Livestock losses due to wildlife increased to US\$ 298 in 2004 from US\$ 221

<sup>102</sup> An Emboreet Village Councillor abandoned a 2,000 acre farm in Loiborsoit when elephants stopped fleeing from a tractor. Discussion, TP, Emboreet, 17 November 2004; Discussion, MM, Lolkisale, 9 April 2004.

<sup>103</sup> Discussion, PK, Laarkaitial, 16 March 2005.

<sup>104</sup> E-mail correspondence, Dr. Marion East, Max Planck Institute for Behavioural Physiology, Germany, March 2005.

in 2003.<sup>105</sup> Villagers suggested that declining wildlife populations resulted in increased livestock depredation as predators sought alternative prey. Mirroring other studies where people tend to over-report wildlife damage (Bergin 1995, Gillingham 1998, Gillingham and Lee 2002, Naughton-Treves 1997), villagers tended to inflate their responses. Data may have been embellished as a form of passive resistance to the costs of wildlife and villagers' contested access to the resource which Gillingham and Lee (2002) refer to as a strategy of "disproportionate complaint in trying to redress the balance of power".

**Table 7.16: Mean reported household damage to farms (acres) and livestock (US\$) from wildlife in 2003 and 2004** (Source: broad-scale survey)

	2003	N	Mean	Std. Dev.
<b>Crop Loss (Acres)</b>		141	5.45	13.17
<b>Livestock Loss US\$</b>		80	\$221	310.00
	2004			
<b>Crop Loss (Acres)</b>		146	2.59	4.24
<b>Livestock Loss US\$</b>		57	\$298	492.52

Increased farming disturbed wildlife. Less land was available for grazing due to farming and fencing, two villagers shot wildlife as farm protection, and people chased animals on foot and by vehicle and scared them with loud noises. In contrast to the extensive herds of wildlife reported on the Simanjiro Plains (Kahurananga 1981, 1997, Peterson 1976, Peterson 1978), I only witnessed small harassed clusters of wildlife in Emboreet, Terat and Sukuro over three years. Villagers reported fewer livestock losses from Malignant Catarrhal Fever and farm damage, which villagers postulated was related to fewer wildlife numbers.<sup>106</sup> Human intervention seems to have decreased some wildlife species (like wildebeest and predators) and increased others. The 1989 Ivory Ban and suppression of

<sup>105</sup> Lama estimated that the average household in Loiborsoit 'A' suffered livestock losses of US\$ 615 due to depredation (Lama 1998: 118).

<sup>106</sup> Interview, MN, Emboreet, 23 March 2004; interview, JK, Emboreet, 6 May 2004.

poaching were key catalysts in conserving elephant in the Maasai Steppe. Ironically, the success of this global conservation mechanism could result in intensified human-wildlife conflict in coming years in this landscape.

## **Discussion**

When all the causes of land use change are grouped together, the importance of conservation in driving land use change seems slight. Opposition to conservation was just one factor out of many. The need to save cattle and invest mining income were important factors, as was the need to earn money from immigrant farmers and secure land tenure. Corrupt village leaders were also one of the causative factors of the expansion of agriculture. However, it is difficult to demonstrate that people were farming more than they might otherwise be expected to. This would indicate that opposition to conservation was important in their decision making. But given the variety of reasons for taking up farming, it is striking that opposition to conservation was so prominently and continually cited as a driver of land use change. The idiom and rhetoric of opposition to conservation dominated, despite the fact that this opposition in itself does not explain the actual rationales of deciding to farm. This could have been consciously adopted to give me a message to take back to conservationists in Arusha, but the prevalence of this rhetoric, and its power in intra-village disputes about farming, suggest that this is more than posturing. Given these fears, the rise of human-wildlife conflict that the growth in farming and elephant and buffalo populations inevitably entail is likely to inaugurate new domains of conflict between residents of Simanjiro and conservation interests.

## Chapter Eight

### Conservation Empire: A Case Study of African Wildlife Foundation

“We are seeing unprecedented attention being given to foreign assistance and poverty right now...TV and movie stars are joining forces with academics, NGOs and the government to raise awareness about poverty issues...Corporate philanthropy dedicated to poverty alleviation is at an all-time high...And you know that foreign assistance reduces the likelihood of future military action... Official Development Assistance for the United States Government has nearly tripled over the past five years from approximately \$10 billion in 2000 to \$28.5 billion in 2005...”

—Randall L. Tobias, Former Director of US Foreign Assistance and USAID Administrator<sup>1</sup>

#### Introduction

Conservation Non-governmental Organisations (NGO) strongly influenced conservation funding, wildlife policy and rural livelihoods in Tanzania. Despite increasing academic and popular critiques of these organisations (Chapin 2004, Dowie 2005, Igoe and Kelsall 2005), and an extensive literature on governance of development NGOs, there is little

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<sup>1</sup> <http://www.usaid.gov/press/speeches/2007/sp070205.html> accessed 14 March 2007.

empirical information about the financial and programmatic accountability of conservation NGOs (Edwards and Hulme 1996a, Salamon and Geller 2005).

This chapter examines the local and global forces shaping conservation NGO values and accountability. It examines how relationships with donors and the State affect accountability and transparency. It considers how specific donors' policies affect conservation NGOs. It reflects upon the extent to which NGOs are accountable to states or local groups (often their targeted beneficiaries). I am particularly interested in the notion of 'beneficiary accountability', which suggests that to be effective as empowerment agents, NGOs should have some 'downward' accountability to their beneficiaries (Kilby 2006).

My sample size is one: I write about African Wildlife Foundation (AWF). But there is much to be learned from it. AWF is one of the larger and more influential conservation NGOs working in Africa. AWF is also the most influential conservation NGO working in the Tarangire ecosystem. I document AWF's successful transformation into a Big International NGO (BINGO), and the consequences this growth has had for the choices and actions of the organization. AWF's growth both absolutely and relatively makes it an excellent case to study the impact of scaling up - not just increased size - and the structural constraints and contradictions that this could entail.

Scholfield and Brockington's (2008) analysis of the African conservation sector found AWF to have the fourth largest budget of conservation NGOs active in sub-Saharan Africa, behind the Worldwide Fund for Nature (WWF), Wildlife Conservation Society (WCS) and Conservation International (CI); it is the largest NGO working exclusively in

Africa (Table 8.1). I will argue below that in Africa AWF needs to be considered on a par with the largest conservation NGOs.

**Table 8.1: Relative importance of the ten most conservation organisations in Africa by amount of expenditure between 2004-2006** (Source: Scholfield and Brockington 2008: 43)

<b>Organisation name</b>	<b>Average Expenditure (US\$)</b>	<b>Average Expenditure Including Overheads (US\$)</b>
WWF (International)	32,277,621	38,669,962
Conservation International	17,770,225	20,719,021
Wildlife Conservation Society	15,585,563	17,321,231
<b>African Wildlife Foundation</b>	<b>12,073,116</b>	<b>14,614,140</b>
Peace Parks Foundation	7,444,814	10,055,302
Jane Goodall Institute	4,412,168	6,120,999
Fauna and Flora International	4,895,446	5,947,705
African Parks Foundation	3,246,610	5,136,265
Dian Fossey Gorilla Fund International	3,497,692	4,237,644
WWF South Africa	2,935,373	4,038,064

Table 8.2 illustrates AWF's growth in total program operating revenues (versus expenses in Table 8.1) during the 1999 to 2006 financial years.<sup>2</sup> Continued growth in AWF's budget could make it an even more important player in African conservation.

**Table 8.2: AWF's Total Operating Revenues—Financial Years 1999–2006** (Source: AWF Annual Reports)

<b>Financial Year</b>	<b>Total Operating Revenues</b>
1999	\$8,274,170
2000	\$8,283,989
2001	\$8,360,308
2002	\$9,309,000
2003	\$15,477,901
2004	\$20,517,521
2005	\$19,341,007
2006	\$20,022,394
<b>Total 1999-2006</b>	<b>\$109,586,290</b>

AWF has also been a particularly influential player in the landscape and institutions with which this thesis is concerned. AWF helped TANAPA to initiate its Community

<sup>2</sup> <http://awf.org/section/about/resources/annualreport> accessed 14 November 2006.



Conservation Service in 1985 (Dembe and Bergin 1996). In 1999, AWF facilitated the deal between Ololosokwan Village in Loliondo District and South African-based Conservation Corporation Africa for tourism use rights over a 25,000 acre parcel of village land (AWF Undated) which, as I have shown, is considered one of the most successful examples of CBT in Tanzania in terms of economic and conservation impacts.

AWF has successfully transformed itself from an important regional player into an organisation with continental ambition, with relationships with donors and government scaling up in proportion to its goals and funding needs. My argument is that this transformation has had a number of profound consequences for the work and practices of the organisation. I believe that the relationships with donors and the government have effectively reduced AWF's grass-roots accountability. As a result, AWF's actions have increasingly contributed to pastoral poverty and disempowerment.

Tragically, for an organization whose mission is to conserve wildlife in partnership with African people, AWF's role in pastoral disenfranchisement has negative impacts on the sustainability of wildlife conservation practices in the Tarangire ecosystem and Emboreet, and thus ultimately undermines the organisation's very mission. This chapter charts the history, development and internal politics of AWF, its relationship to donors and accountability to government. It examines how these relationships have altered the organisation's financial and operational culture and affected the organisation's accountability to its beneficiaries. The next chapter examines the consequences of these transformations for AWF's work in the field.

## The Rise of International Conservation NGOs

“I have been to the coastal plain of the Arctic National Wildlife Refuge. Far from being the frozen ‘desert’ that some suggest, this is a rich, Serengeti-like haven of life: nursery for caribou, polar bears, walruses, and millions of shorebirds and waterfowl.”

—Former US President Jimmy Carter (Johns 2006)

President Carter’s invocation of the Serengeti to advocate for the protection of American wilderness is ironic in that African PAs have their roots in an American vision of nature. It illustrates the ability of African, especially Tanzanian, wildernesses to influence policies beyond their borders. One of the earliest conservation NGOs, the Society for the Preservation of the Wild Fauna of the Empire—an organisation composed primarily of wealthy and titled hunters—lobbied strongly for the creation of NPs in Africa on the lines of the then recently created Yellowstone National Park in the US (Adams 2004, Neumann 1998, Prendergast and Adams 2003).

A number of events coincided in the early 1960s to enhance the growth of conservation NGOs. The first coincided with the independence of a number of African countries. During this time, WWF and AWF were established; the former in 1960 and the latter in 1961. The impetus for establishing these institutions was a fear that departing colonial administrations had not built sufficient African capacity to manage wildlife (Adams 2004, Bonner 1993). Institutions like WWF were established on an alarmist discourse of “... runaway habitat destruction and uncontrolled hunting of endangered species that,

unchecked, would drive many of them into extinction within a matter of years”.<sup>3</sup> International conservation organisations like WWF and AWF were conceived as more politically acceptable vehicles with which to continue to influence African conservation with Euro-American ideals of conservation following independence (Bonner 1993). Over the last four decades, the conservation NGO sector has grown into a powerful lobby representing a wealthy western conservation philosophy. Table 8.3 illustrates the key decades of conservation NGO establishment.

**Table 8.3: The establishment dates of conservation NGOs working in Africa** (Source: Scholfield and Brockington 2008: 31)

Decade Established	Number of orgs
1901-10	3
1911-20	0
1921-30	1
1931-40	0
1941-50	0
1951-60	5
1961-70	8
1971-80	14
1981-90	38
1991-2000	51
2001-present	19
Unclear	127
<b>Total</b>	<b>266</b>

Funding for conservation has had three significant boosts over this time. First, conservation NGOs which were initially concerned with domestic policies have developed an international focus, so they have become vehicles of foreign aid, which is often tied to donors’ foreign policy (Gibson et al. 2005). The view of the current US administration is that it should support African conservation for economic, intrinsic and

<sup>3</sup> <http://www.worldwildlife.org/about/history.cfm> accessed 29 October 2006.

security reasons (Lapham 2004, USG 2004).<sup>4</sup> This is linked to a recognition of conservation as a potentially powerful tool in promoting US foreign policy interests in Africa (USAID 2004, USAID 2006a: 13). The perspective of US foreign policy is that goals such as reducing conflict and poverty, promoting democracy, economic growth, and public health, are achieved through natural resource management (Lapham 2004). International NGOs and civil society are seen as crucial partners in achieving US foreign policy goals by leveraging the resources of various organisations to extend the reach and influence of US foreign aid (Summers 2004).

The second funding boost came from the establishment of the Convention on Biological Diversity, Agenda 21, the UN Framework Convention on Climate Change and the Global Environment Facility (GEF) after the first Earth Summit in Rio de Janeiro in 1992. The GEF has provided more than US\$ 6.2 billion in conservation financing worldwide. Up to 20 percent of this funding flows through NGOs. Third, since the 1990s, the conservation sector has experienced significant growth in funding from private individuals, family foundations and corporations (Edwards and Sen 2000).

Within the last decade, an increasing proportion of this new funding has been dominated by the largest US NGOs which dominate the global conservation agenda: AWF, CI, The Nature Conservancy (TNC), WCS, and the US chapter of WWF (Chapin 2004, Dowie 2005, 2006a, Ottaway and Stephens 2003a). These five NGOs are nicknamed 'BINGOs' to distinguish them as the key players in international conservation. Following the TNC exposé in the Washington Post (Box 8.1), two other popular articles were extremely influential in raising the profile of the debate on the accountability of conservation

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<sup>4</sup> See the African Growth and Opportunity Act (AGOA) Acceleration Act of 2004 at [http://www.agoa.gov/agoa\\_legislation/AGOAIIL\\_text.pdf](http://www.agoa.gov/agoa_legislation/AGOAIIL_text.pdf) in particular section 10 on ecotourism.

NGOs. Mac Chapin's 'A Challenge to Conservationists' (2004) and Mark Dowie's 'Conservation Refugees: When Protecting Nature Means Kicking People Out' (2005) suggested that conservation NGOs neglect indigenous peoples and highlighted the rapid accumulation of wealth by conservation NGOs.

**Box 8.1: The Washington Post Exposé on TNC**

In May 2003, a special report in *The Washington Post* on TNC highlighted its rapid accumulation of wealth and queried its financial and programmatic accountability (Ottaway and Stephens 2003a, Stephens and Ottaway 2003c). At least thirteen follow-on articles argued that TNC's board permitted illegal land transactions for personal benefit; TNC's pursuit of corporate partnerships jeopardized its core mission; and it squandered funds on ill-conceived efforts. Ultimately, it was argued TNC failed in ethical and fiduciary terms to stay focused on its mission (Ottaway and Stephens 2003b, Stephens and Ottaway 2003a, Stephens and Ottaway 2003b, Stephens and Ottaway 2003c).

The articles widely shaped popular understandings of the problems facing non-profit accountability (Stephenson and Chaves 2006). As a result of the exposé, TNC restructured its board and the US Senate announced a probe into TNC (Stephenson & Chaves 2006: 355-357). TNC was criticised during subsequent investigations for being uncooperative and unapologetic (Stephenson & Chaves 2006: 359-360). In addition to affecting non-profit governance practices and reshaping some dimensions of public policy, the TNC articles led to tightened accountability standards and scrutiny of governance and transparency of organizations across the non-profit sector (Stephenson & Chaves 2006: 362).

BINGOs, like other NGOs, have grown in dependence on funding from bilateral and multilateral banks and government agencies, to increasing funding from trans-national corporations (Edwards and Sen 2000). This development has transformed BINGOs into

*de facto* extensions of multilateral donor agendas.<sup>5</sup> These alliances with multilateral agencies and trans-national corporations led to claims that the BINGOs compromised their grass-roots accountability due to upward financial dependence (Chapin 2004, Dowie 2006a). These critics also suggest that the scale of resource mobilisation by BINGOs has the potential to influence global conservation strategy, especially when compared with the economic strength of local peoples affected by conservation strategies (Chapin 2004, Dowie 2006a).

**Table 8.4: BINGO's year of establishment, operating expenses, and net assets in 2005, including the percentage of each institution's share of total expenses and assets**

Institution	Year Est.	Expenses (US\$) 2005	% of Total	Assets 2005 (US\$)	% of Total Assets
The Nature Conservancy <sup>6</sup>	1951	600 million	59.3%	3.9 billion	78.3%
Wildlife Conservation Society <sup>7</sup>	1895	153 million	15.1%	715 million	14.4%
World Wildlife Fund (USA) <sup>8</sup>	1960	125 million	12.4%	180 million	3.6%
Conservation International <sup>9</sup>	1984	115 million	11.4%	173 million	3.5%
African Wildlife Foundation <sup>10</sup>	1961	18 million	1.8%	12 million	0.2%
<b>Totals</b>		<b>1.011 Billion</b>	<b>100.0%</b>	<b>4.98 Billion</b>	<b>100.0%</b>

Globally, AWF clearly belongs to a second tier of NGOs, but within Africa it is a key player. It is one of the main partners of TNC (the world's wealthiest conservation NGO) as the latter seeks to begin operations in Africa. TNC signed a strategic alliance partnership in 2006 with AWF (Bergin 2006). Through this agreement, AWF gains access to the world's wealthiest fundraising donor base. AWF has already benefited from an increased flow of funds from TNC,<sup>11</sup> and views the TNC partnership as a mechanism for organisational expansion (AWF 2007a: 4). The TNC-AWF agreement reflects the tendency towards centralization and gigantism evident in the global economy which also

<sup>5</sup> Multilateral aid is given from the government of a country to an international agency.

<sup>6</sup> <http://www.nature.org/aboutus/annualreport/files/arfinancials2005.pdf> accessed 24 October 2006.

<sup>7</sup> <http://www.wcs.org/media/file/annual05.pdf> accessed 31 October 2006.

<sup>8</sup> [http://www.worldwildlife.org/about/2005\\_report/pdfs/2005AR\\_Financials.pdf](http://www.worldwildlife.org/about/2005_report/pdfs/2005AR_Financials.pdf) accessed 31 October 2006.

<sup>9</sup> [http://www.conservation.org/ImageCache/CIWEB/content/about/ci\\_5f05\\_5ffinancials\\_2epdf/v1/ci\\_5f05\\_5ffinancials.pdf](http://www.conservation.org/ImageCache/CIWEB/content/about/ci_5f05_5ffinancials_2epdf/v1/ci_5f05_5ffinancials.pdf) accessed 24 October 2006.

<sup>10</sup> [http://awf.org/documents/AWF\\_2005financials.pdf](http://awf.org/documents/AWF_2005financials.pdf) accessed 24 October 2006.

<sup>11</sup> In 2007, TNC awarded AWF US\$ 1.5 million, one of the largest grants to AWF (AWF 2007a: 41).

affects the international conservation NGO sector (Bray and Anderson 2005). The picture of an organisation with a clear geographical focus and hungry for resources to expand was illustrated at an AWF board meeting in October 2006:

“All of us associated with AWF are determined to see the organisation have greater impact and create more good for Africa and for the world. As we consolidate our work in the existing Heartlands, raise our profile, and mobilize greater resources, we will eventually be able to work with partners in more of Africa’s greatest conservation landscapes” (Bergin 2006).

### **The Development of AWF Values and Operations**

The African Wildlife Leadership Foundation (AWLF) was incorporated in 1961 in Washington, DC, a year after WWF was established. The founding vision of AWLF was to train African PA managers to replace European colonial-era wardens. In the 1960s, AWF sponsored the education of several African conservationists who went on to positions of leadership: for example, Perez Olindo (Director, Wildlife Conservation and Management Department in Kenya) and David Babu (Director of TANAPA). AWLF changed its name to the ‘African Wildlife Foundation’ in 1983 to reflect a widening of its mission into the physical implementation of conservation projects.

AWLF began operations in Tanzania in 1961. One of the first projects AWLF funded was the establishment of the College of African Wildlife Management at Mweka.<sup>12</sup> AWLF was conceived by Judge Russell E. Train, Kermit Roosevelt and other members of the Washington, DC chapter of Safari Club International (Garland 2006). Train was

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<sup>12</sup> Mweka endures as a primary training facility for protected areas managers in Anglophone Africa. In 2006, Mweka was declared a national university in Tanzania.

the head of the US Environmental Protection Agency (1973-1977)<sup>13</sup> and later President (1978-1985) and then Chairman of WWF-US (Bonner 1993). He is recognized as one of the chief architects of the contemporary conservation movement (Bonner 1993, Flippen 2006). Kermit Roosevelt, grandson of former US president Theodore Roosevelt, is also well known for orchestrating a Central Intelligence Agency (CIA) operation that toppled the Government of Iran in 1953 (Bonner 1993, Perkins 2005).

Several values were shared by AWLF's patriarchs: a love for African big-game hunting, a conviction that Africans would destroy the wildlife, and close connections to the US political establishment. Train and Roosevelt's political orientation—combined with Roosevelt's experience promoting US foreign policy overseas through non-confrontational methods—perhaps encouraged them to consider an NGO mechanism to impress American visions for conservation in Africa.

AWF grew considerably in financial strength and public profile during the ivory ban campaign in 1989. Numerous conservation organisations claim credit for engineering the ban.<sup>14</sup> However, analysts contend that the communications campaign which led to the prohibition of commercial ivory trading was initiated by AWF (Bonner 1993). AWF grew to over 100,000 members in 1990—the highest figure in AWF's history. This figure had declined to 18,000 in 2003 (Figure 8.1). By 2007, the figure had grown to 78,000 following a vigorous investment in recruiting new members as a source of unrestricted funding (AWF 2007: 20).

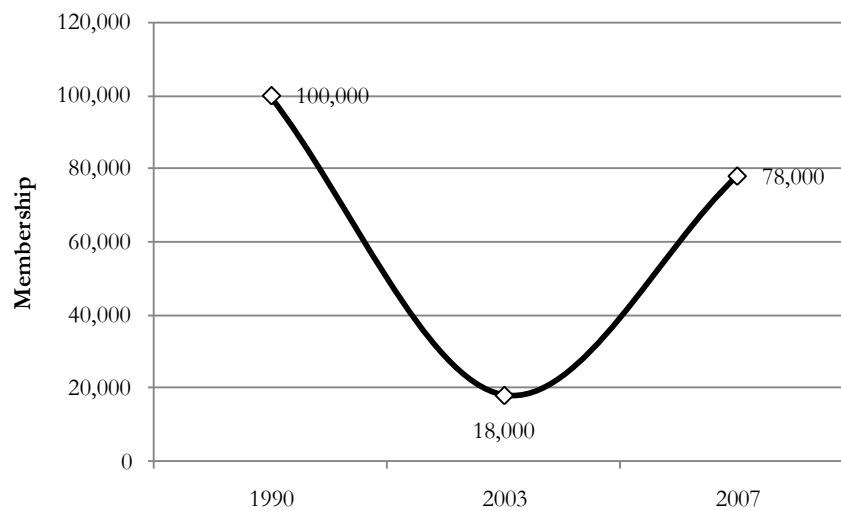
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<sup>13</sup> <http://www.epa.gov/history/admin/agency/train.htm> accessed 16 July 2007.

<sup>14</sup> The ivory ban was one of the most important, emotive and publicized conservation issues in recent history. In Lausanne, Switzerland, parties to the Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES) declared the elephant an endangered species and banned all international ivory trading (Bonner 1993).



Figure 8.1: Trends in AWF membership since the 1989 ivory ban



The ivory ban campaign clearly illustrated to AWF the power of communications to catalyze organisational growth. AWF invested millions of dollars a year in creating an expensive and sophisticated marketing machine such as its website and direct mailings across the US.<sup>15</sup> This program involved sending out mailings several times a year with a simple, and often graphic, appeal for money—poached animals often led to the highest response (cf. Bonner 1993: 53).<sup>16</sup> An example of a direct appeal was launched by e-mail on 30 January 2007. It was labelled ‘Urgent Appeal’ following the shooting of two gorillas in the Democratic Republic of Congo (DRC) and requested funding to adopt a gorilla or to help equip rangers protecting mountain gorillas. Funds raised from appeals and membership programs were often classified as ‘unrestricted’: revenue and contributions received without donor-imposed restrictions (Raffa 2007: 7).

<sup>15</sup> AWF conducted an analysis of its membership in designing these appeals. The result was that the average US\$ 20 a year donor was likely to be a white middle-aged female who owned a pet. Thus, appeals were targeted to this demographic (P. Bergin, *pers. comm.*, 2005).

<sup>16</sup> I was asked by AWF staff in Washington to provide stories and images of poached animals as these were most successful in direct mail donation requests.

Unrestricted funds were useful to organisations that have freer rein to spend them.<sup>17</sup> But restricted funds have become particularly important to AWF since the 1990s. In particular, USAID support transformed the AWF Tanzania program, which in turn transformed the outlook and operations of AWF. This began in 1989, when AWF received funding from USAID/Tanzania to implement the ‘Planning and Assessment for Wildlife Management’ (PAWM) project, the largest multilateral project that AWF had ever undertaken (AWF 1996). The US\$ 3.5 million PAWM Project was implemented with the Wildlife Division (WD) and lasted until 1996. A primary objective of the PAWM project was to institutionalise CBC and:

“To build the capacity of the Wildlife Division in community-based conservation, particularly interpreting aspects of new policies which involve community-based conservation.” (AWF 1996)<sup>18</sup>

The PAWM project was key to reforms of the 1990s promoting CBC which culminated in the Wildlife Policy of 1998. It also heralded the beginning of long-term tensions between the WD and AWF over devolution of wildlife management to local communities and the implementation of that policy. The final PAWM project report provided a candid assessment of WD institutional constraints and failure to effectively institutionalise CBC (AWF 1996). The report cited a slew of problems associated with WD implementation of the project such as:

- A failure to appoint a CBC point person within the WD;

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<sup>17</sup> Restricted funding comprised bi-lateral donor and professional foundation funding that was restricted to specific activities. Unrestricted funding, in contrast, is raised from private donors who do not specify how the money should be spent.

<sup>18</sup> See Walsh (2004, 2006) for an account of dysfunctional donor-driven environmentalism and WD interventions in southern Tanzania.

- CBC not being institutionalized within the WD as intended;
- A non-participatory approach in developing a new Wildlife Policy.

The PAWM project thus heralded the start of a tense relationship between AWF and the WD.<sup>19</sup> The report also highlighted how donor financing created a privileged space within the boundaries of donor–grantee relations:

“Throughout the project, AWF has enjoyed a good relationship with USAID Mission staff and has recently benefited from the increased focus, and capacity within the mission, on natural resource management.” (AWF 1996: 30).

The close relationship developed by AWF with USAID strategically positioned AWF to benefit from follow-on funding. AWF also benefited from the good working relationship with USAID officer Ron Ruybal, a former Peace Corps volunteer in Zaire, and Patrick Bergin, AWF Tanzania’s Executive Officer. Bergin was able to influence the design of USAID/Tanzania’s emerging Environment and Natural Resources (ENR) program, and position AWF to be a major grantee.<sup>20</sup>

In 1998, AWF began implementation of an eight year US\$ 10.5 million project entitled the ‘Partnership Options for Resource Use Innovations’ (PORI) funded by USAID/Tanzania for PA support and CBC in the Maasai Steppe (AWF 2005). PORI became the largest multilateral project AWF had ever implemented; it represented almost

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<sup>19</sup> An internal AWF memo from E. Barrow to senior AWF managers, 5 May 1997, referred to the “fall-out” with the WD due to PAWM.

<sup>20</sup> Discussions, PB, AWF employee, 2004 and 2005; Discussions, AWF manager, Arusha, 2004 and 2005.

a quarter of AWF's total annual budget in 1999.<sup>21</sup> AWF's relationship with USAID/Tanzania was privileged; no other organisation in Tanzania initially benefited from the levels of support AWF obtained. USAID/Tanzania thus helped to metamorphose AWF into one of the wealthiest and more powerful conservation organisations working in Tanzania. This is in part due to the skills and influence of Patrick Bergin, who was also rising rapidly through the ranks of the AWF at the time. Bergin was promoted in quick succession to Vice President (VP) for African Operations in Nairobi in 1999,<sup>22</sup> then President and CEO based in Washington, DC in 2001.

### **The Scramble for Africa's Landscapes**

By 1998, 35 years after its inception, AWF was limited to East Africa. Internally, senior management strongly believed AWF needed to grow. They believed that AWF had tremendous potential for growth; one only had to look at the growth of WWF or CI to see the demand for conservation in the donor marketplace. But AWF was *ad hoc*, lacking in strategic focus, elitist, and Kenya focussed.<sup>23</sup> Managers questioned how the organisation could be called the 'African' Wildlife Foundation yet only work in three East African countries.

Senior management recognised the huge opportunity that government-based funding, especially from the US, represented for AWF. However, AWF needed a new program—one compelling enough to attract increased funding. As VP for African Operations, Bergin envisioned and championed the 'Heartlands' program—a number of landscape

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<sup>21</sup> The Maasai Steppe Heartland continued to be one of the highest-funded AWF Heartlands until 2004.

<sup>22</sup> At the time, this position was AWF's most senior representative in Africa.

<sup>23</sup> Staff in Nairobi in 2001 referred to AWF as the 'Kenyan' Wildlife Foundation, reflecting its traditional focus in Kenya.

level programs like PORI to reach across Africa. Launched in 1998,<sup>24</sup> the Heartlands matched a trend within the conservation sector of adopting ecosystem-scale conservation approaches.<sup>25</sup> AWF pursued, and was rewarded with, significant funding from USAID and other US government agencies to establish Heartlands in other African countries (Figures 8.2 & 8.3). This was part of a trend of international conservation organisations establishing landscape-scale approaches, but in separate places (Redford et al. 2003).

AWF Heartlands are defined as:

“...certain key landscapes are absolutely essential to conservation—thanks to their unmatched concentrations of wildlife and their potential to sustain viable populations for centuries to come...Far larger than any park or reserve, an African Heartland combines national parks and local villages, government lands and private lands into a large, cohesive conservation landscape that often spans international borders.”<sup>26</sup>

AWF took a proactive approach to its branding. It sought the advice of an image consultant in the US, who was able to use their extensive knowledge of American values to brand AWF. For example, the term ‘Heartland’ was selected as it alludes to the geopolitical and culturally significant Heartlands of the American Midwest. Heartlands, based on Norman Myers’s influential work on ‘Biodiversity Hotspots’ (Myers 1988, 1990, Myers et al. 2000), aimed to increase the scale of conservation given the limited coverage of PAs (da Fonseca et al. 2005). AWF broadened the Heartlands idea to include criteria such as the economic value of tourism (Muruthi 2005). Another criterion was

<sup>24</sup> <http://www.awf.org/section/Heartland> accessed 24 October 2006.

<sup>25</sup> Such as CI’s ‘Hotspots’, WCS’s ‘Living Landscapes’, WWF’s ‘Ecoregions’ and TNC’s ‘Last Great Places’.

<sup>26</sup> <http://www.awf.org/section/Heartland> accessed 11 December 2006.

‘inspirational’ value; this means, at least in part, the ability of a landscape to attract funding.<sup>27</sup>

Charismatic species (such as elephants, predators or primates) research projects had proven fundraising potential. AWF learned this from association with celebrity expatriate wildlife researchers. The phenomenon of foreign wildlife researchers becoming spokespeople for African people and wildlife is a continuous and problematic thread in conservation (Bonner 1993, Garland 2006). Eager to differentiate itself in the marketplace to attract funding, AWF reframed itself as an ‘African’ organisation.<sup>28</sup> Its strategy of working with largely expatriate conservationists and charismatic animal researchers (some of whom later became critical of the organisation) was replaced in the late 1990s by focusing on resource stressed African government agencies and local NGOs. These institutions welcomed AWF as a wealthy donor.<sup>29</sup> AWF gained legitimacy from the State and access in chosen landscapes.

Note, however, that a general aspect of the Heartlands program is that AWF branded some landscapes as Heartlands before the organisation had much of a presence there such as in the ‘Samburu’ Heartland in Kenya and ‘Limpopo’ in Southern Africa. At the outset of the Heartlands program, AWF needed compelling descriptions to attract support for the Heartlands program, but in a number of Heartlands AWF operated with a skeleton budget and staff. The Heartlands programme was both an aspirational vision as well as a concrete programme of activities.

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<sup>27</sup> E-mail, CEO to AWF staff members, 6 November 2006.

<sup>28</sup> AWF’s mission statement is “The African Wildlife Foundation, together with the people of Africa, works to ensure the wildlife and wild lands of Africa will endure forever.”

<sup>29</sup> Staff capacity constraints in the Heartlands meant that in many cases AWF expended donor grants through sub-grants to other organisations.

## Changing Relationships with the State

Civil society is defined as the forms of social organization which groups of people engage in which are separate from formal state governance institutions. This separation between state institutions and civic organizations is central to the envisioned role of civil society in holding government to account and thereby improving governance performance. From the point of view of strengthening civil society: “NGOs need to be independent from the state – to retain the capacity to challenge the state, ensure accountability, express discontent and opposition and represent grassroots interests” (Mercer 1999: 250). The tension NGOs face is that they need also to work with the government to have influence, which requires proximity to power. AWF wanted donor money and to be independent from the State. But in order to achieve growth, AWF needed to position itself as a close government partner in order to gain legitimacy, influence and funding.

USAID funds are actually given to NGOs with a strong ‘partnership’ with the Tanzanian state. Central to the political economy of overseas development aid, especially large donor projects, is some form of host government control or ‘ownership’ of the project (Gibson et al. 2005). AWF had no choice but to pursue close government relations which, at the time, seemed reasonable given the history of AWF’s relationship with the WD and its ambitions for growth.

AWF has successfully engineered an extremely close relationship with the Tanzanian government since 1999. Towards the end of the PAWM project, the relationship between AWF and the WD was tense. The WD and TANAPA felt disempowered that USAID routed funds through AWF instead of awarding the funds directly to these agencies. These agencies resented the additional oversight that an NGO intermediary

imposed. A letter drafted by the WD, which attempted to limit AWF activities, illustrated this tension:

“The Director of Wildlife is the appropriate authority on all matters pertaining to wildlife in the areas you are referring. We have learnt that AWF is also intending to start another programme in Loliondo Ngorongoro District without our prior knowledge and permission. The Wildlife Directorate is concerned with your unauthorised activities in these very sensitive areas... By this note you are hence forth instructed to refrain from these unwelcoming activities.”<sup>30</sup>

The WD felt that it needed to exert more control over AWF since the late 1990s. But new funding and changes in staff have resulted in a dramatic improvement in AWF-State relations. In particular, the influx of USAID funding into AWF’s PORI program engendered new relationship dynamics with the government and especially TANAPA, the primary beneficiary of PORI funding. The multi-phased PORI project initially focussed on developing PA infrastructure. Several million dollars were invested into building TANAPA’s capacity in Tarangire and Lake Manyara NPs, developing roads and staff housing in the park, and a fleet of vehicles and heavy machinery for TANAPA. PORI components, which supported park management and visitor experience, undoubtedly enhanced the parks: roads were improved, staff gained modern housing, and vehicles were procured and maintained. The scale of resources available through PORI engendered a close government relationship and entrenched AWF with a monopoly of conservation activities in the Maasai Steppe. In addition to park management, PORI aimed to support CBC in pastoral areas, ecosystem monitoring and

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<sup>30</sup> Letter, I.F. Ndunguru to AWF Executive Officer, Ref. GD/I.20/21/86, 04 June 1998.



the design of conservation interventions based on scientific data, and effective collaboration between AWF and stakeholders in the ecosystem (Malpas and Gamassa 2002).

In 1998, Patrick Bergin's promotion to VP of African Operations in Nairobi further strengthened AWF's relationship with the government. Following PAWM, he had been labelled by some bureaucrats as anti-government and activist.<sup>31</sup> AWF needed a more politically acceptable profile to manage its Tanzania program and Dr. James Kahurananga was recruited. As a former Regional Game Officer in the WD, Kahurananga's political connections were critical to defuse some of the anti-AWF pressure within the WD.

AWF's relationship with the government was also strengthened by the government who sought closer relationships with NGOs in order to control them better. The government exercised control over conservation NGOs through the USAID ENR 'Strategic Objective Team' (SOT). USAID generally allocated funding in-country according to its 'strategic objectives' within each of its thematic areas. Strategic Objective 2 described USAID/Tanzania's ENR program—the lead donor source for both wildlife and coastal resource sectors in Tanzania (USAID 2003a). In order to ensure government involvement in implementing the USAID/Tanzania's ENR Program, USAID and the government agreed to form a funding management organ termed the SOT to oversee allocations of USAID funding in the environmental sector in Tanzania.

The SOT was chaired by the Vice President's Office and was heavily represented by local government and wildlife agencies. The SOT also included NGO beneficiaries of USAID

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<sup>31</sup> This observation was repeatedly made during informal discussions with AWF and TANAPA staff (2003-2006).

funding and USAID representatives. Publicly, the SOT functioned as a collaborative, multi-stakeholder governance and oversight mechanism in the wildlife policy reform process. In order for USAID ENR funds to flow to NGOs in Tanzania, government endorsement through the SOT was required for specific programs. Thus, AWF was wary of criticizing the WD for slow implementation of WMAs and other policy reforms due to the threat of WD interference in AWF's programs (see Chapter 9).

### **Changing Relationships with Donors**

Sustaining existing sources of support and finding new ones were vital for the organisation's ambition. In 2007, AWF aimed for an annual 20 percent growth rate resulting in an annual budget of between US\$ 79 million and US\$ 115 million in 10 years (AWF 2007b: 1 & 5).<sup>32</sup> The CEO's report to trustees highlights the priority of growth at AWF:

“...the fundamental dialogue in AWF has changed from ‘how do we get our house in order’, to ‘how do we grow into the organization that our mission statement requires of us for the African continent’.” (AWF 2007a: 6)

By 2004, AWF had become increasingly dependent on US Government (USG) sources of funding, with 40 percent of the annual organisational budget contributed from this source alone (Table 8.5), and 78 percent of AWF's restricted budget (Figure 8.2). As a result, AWF values began to be intertwined more fully with US foreign policy goals. AWF needed to integrate its funding, budget and policy to mirror its primary donor,

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<sup>32</sup> AWF's 10 year vision is to work in 25 Heartlands by 2018 and grow into a US\$ 75 million a year organization (AWF 2007: 1,6).

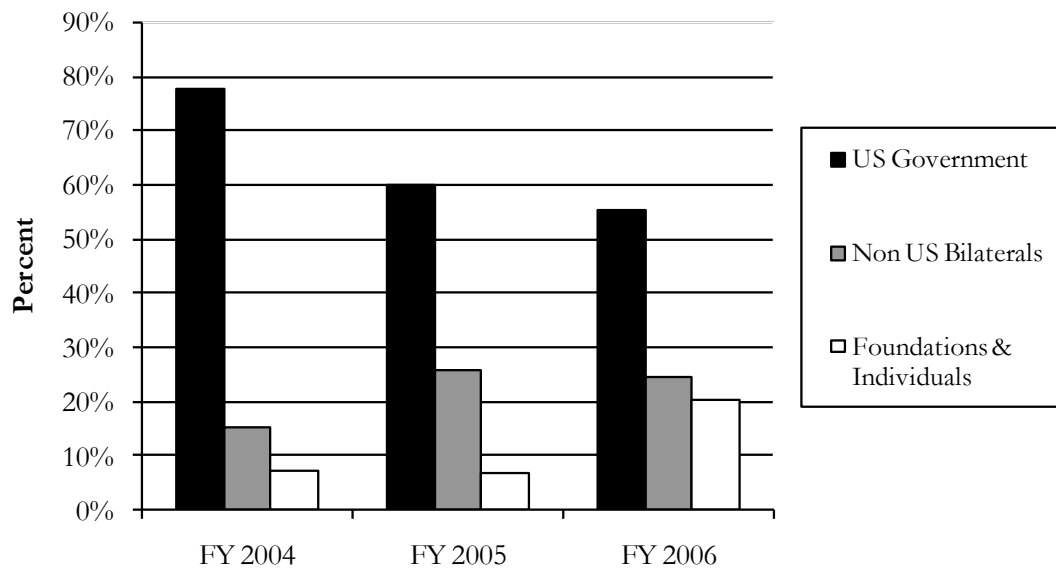
summed up by the CEO as: “Basically, AWF is becoming an extension arm of USAID in Africa.” (P. Bergin, *pers. comm.*, 2002 & 2003).

**Table 8.5: AWF restricted funding by centre and source per financial year** (Source: AWF 5 Year Funding Strategies for FY 2004-2006)

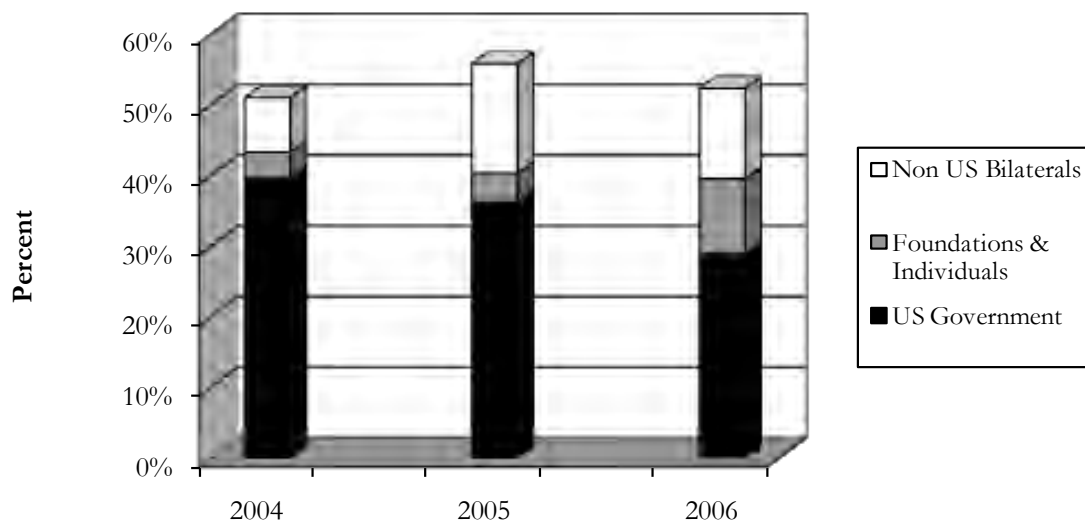
<b>AWF Restricted Funding Summary By Centre</b>								
<b>Centre</b>	<b>FY 2004</b>	<b>%</b>	<b>FY 2005</b>	<b>%</b>	<b>FY 2006</b>	<b>%</b>	<b>TOTAL</b>	<b>%</b>
Arusha	2,179,077	21%	3,232,013	28%	1,591,791	15%	7,002,881	21%
Kampala	2,325,603	22%	3,472,719	30%	860,176	8%	6,658,499	20%
Lopori Wamba	796,681	8%	1,019,047	9%	976,085	9%	2,791,813	9%
Nairobi	2,456,894	23%	2,442,123	21%	3,969,707	38%	8,868,725	27%
White River	417,857	4%	852,440	7%	725,859	7%	1,996,156	6%
Lusaka	2,288,481	22%	651,879	6%	1,005,365	10%	3,945,725	12%
Heartlands General			319,219	3%	1,351,528	13%	1,670,747	5%
<b>Total</b>	<b>10,464,593</b>	<b>100%</b>	<b>11,670,221</b>	<b>100%</b>	<b>10,480,511</b>	<b>100%</b>	<b>32,615,327</b>	<b>100%</b>
<b>Proportion of restricted funding by source</b>								
US Government	8,132,345	78%	7,005,552	60%	5,793,756	55%	20,931,653	64%
Foundations & Individuals	761,883	7%	801,297	7%	2,125,908	20%	3,689,088	11%
Non US Bilaterals	1,570,365	15%	2,989,372	26%	2,560,847	24%	7,120,584	22%
<b>Source of restricted funding as a proportion of total AWF budget</b>								
	<b>2004</b>		<b>2005</b>		<b>2006</b>		<b>Total</b>	
US Government	40%		36%		29%		35%	
Foundations & Individuals	4%		4%		11%		6%	
Non US Bilaterals	8%		15%		13%		12%	
<b>Total restricted funding by FY</b>	51%		56%		52%		53%	

AWF’s enterprise programs were designed to appeal to USAID’s models of business development, institution building and democratisation. AWF began to actively recruit former Peace Corps volunteers, which continues to be used as a tool to export American values (Perkins 2005). Partnerships established with the US Forest Service and National Parks Service facilitated AWF’s USG fundraising and ensured that its values remained close to American PA management. The importance of this relationship, however, has begun to change. The amount of aid from USG sources to AWF’s total budget declined steadily to 29 percent of the total annual budget by 2006 (Figure 8.3).

**Figure 8.2: Proportion of restricted funding by source FY 2004–2006** (Source: AWF 5 Year Funding Strategies for FY 2004-2006)



**Figure 8.3: Source of restricted funding as a proportion of total AWF budget** (Source: AWF 5 Year Funding Strategies for FY 2004-2006)



This has precipitated another metamorphosis in AWF. A primary catalyst in shifting donor flows from US Government sources was a new “Strategic Framework for US Foreign Assistance” following September 11<sup>th</sup> 2001 and related to the ‘War on Terror’. Formerly an independent agency, USAID was absorbed into the Department of State to “...ensure that our foreign policy and development programs are fully aligned to advance

the National Security Strategy of the United States...” (USAID 2003b), generally reflecting the increasing militarization of US foreign policy in Africa (Donnelly 2006, Garamone 2007, Pincus 2007).

The restructuring of USAID reduced the amount of funding available for biodiversity in the post 9/11 geo-political environment (Elliott 2006). USAID/Tanzania was one of only two USAID missions in Africa (with Botswana) that retained an ENR program, albeit downsized.<sup>33</sup> Non-environment related levels of US foreign aid to Tanzania significantly increased, primarily driven by Tanzania’s geo-political importance in the ‘War on Terror’. For example, Tanzania received an unprecedented aid package worth US\$ 885 million for roads, power and water projects (The Guardian 2007), in addition to increased investments in HIV/AIDS and the health sector. While USAID/Tanzania reduced biodiversity funding, it concurrently increased funding to the HIV/AIDS sector. Overnight, AWF tried to style itself as a health delivery agency in order to access funding to keep staff employed and operations going (AWF 2004b).<sup>34</sup> The bid was unsuccessful but illustrates the dilemma faced by growing, donor-dependent NGOs in a shifting institutional funding environment.

AWF’s new fundraising strategy to counter the drop in government funds was to focus on private individuals,<sup>35</sup> foundations and European multilateral funding (AWF 2007b: 2). In 2006, AWF announced a major partnership with Starbucks Coffee<sup>36</sup>—the same month that the company was accused of using its might to block an attempt by

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<sup>33</sup> Discussion, DM, USAID employee, Arusha, 2004.

<sup>34</sup> Known as the ‘tail wagging the dog’ phenomenon in fund-raising circles.

<sup>35</sup> A key constituency for AWF is the 1 million estimated individuals who contribute to wildlife conservation in U.S. markets (AWF 2007a: 21).

<sup>36</sup> <http://awf.org/content/solution/detail/3372/> accessed 5 March 2007.

Ethiopian farmers to trademark their most famous coffee bean types.<sup>37</sup> AWF's 2006 Annual Report illustrates this shift towards private fundraising with a US\$ 100 million capital campaign announcement that aimed to raise US\$ 65 million from individuals, corporations and private foundations and US\$ 35 million in official aid (AWF 2006: 3).

Fundraising from European multilateral agencies proved problematic as these donors perceived AWF to be an American organisation.<sup>38</sup> AWF realised that in order to be perceived as more 'African', it would need to have more of a real presence in Africa.<sup>39</sup> Former Presidents Ketumile Masire of Botswana and Benjamin Mkapa of Tanzania joined the board of trustees in 2006, giving Africans 20 percent representation on the board. AWF also moved its headquarters to Nairobi in October 2006 and promoted Dr. Helen Gichohi to President (Bergin retained the CEO title).<sup>40</sup> Gichohi made an excellent public face of AWF and its African values. But there is an element of symbolism in the change, with power and control still arguably held in Washington: Gichohi kept her current responsibilities, while organisational strategy, finance and administration, and fundraising would remain in Washington, and she continued to report to the CEO. The remaining VPs in the senior management team were based in Washington, DC and England.

This loss of power in Africa continued a longer trend. AWF's hierarchy traditionally comprised of a President and separate CEO in Washington (two different positions) and a VP for African Operations as AWF's senior manager in Africa. Prior to 2001, the

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<sup>37</sup> <http://www.guardian.co.uk/frontpage/story/0,,1931675,00.html> accessed 5 March 2007.

<sup>38</sup> Similar to the USG, European NGOs pressured their governments to allocate funding to them and not to American NGOs (discussions with AWF staff, Arusha and Nairobi, 2004 and 2005).

<sup>39</sup> This strategy was rewarded in 2007 when the Netherlands government awarded AWF its largest event grant of US\$ 14.5 million (AWF 2007a: 13).

<sup>40</sup> "With AWF positioning ourselves more and more as a truly African body, it seems essential to have the senior officer at the Nairobi Headquarters clearly identified as one of the Principals of the organization." E-mail, CEO to AWF staff, 25 January 2007.

President and CEO rarely travelled to Africa—delegated mostly to the VP for African Operations—and focused on private and government fundraising in the US. Following 2001, the post of VP for African Operations was abolished and several lower level directors reporting to the President and CEO appointed. Concern over this model rose amongst trustees and they insisted that new VP positions be created. Accordingly, a VP for Program (Nairobi), a VP for Operations (Washington, DC), a VP for Development (Washington, DC), and a VP of Technical Design and Knowledge Management (Oxford, UK) were appointed.

Another example of withdrawal of power from Africa was the Charlotte Conservation Fellowship Program. Since its inception, AWF had provided scholarships to support the education of a number of individuals who became influential in conservation in Africa.<sup>41</sup> The Charlotte Fellowship was established in 1996 to help Africans to study conservation at a university level. Candidates were identified by an African capacity director who administered the program from Nairobi. AWF leadership recognized that scholarships represented a powerful form of building influence, especially amongst government bureaucrats. This became even more important as AWF charted its expansion into southern Africa, a region with many wealthy and influential conservation organisations. The Charlotte Fellowships thus came to be influential in the growth of AWF and exercise of power. In recognition of this, the fellowship was relocated to Washington for several years so that the CEO could identify candidates of potential future strategic value to AWF.

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<sup>41</sup> <http://awf.org/section/about/history#1960> accessed 13 July 2007.

## Chasing the Burn Rate: The Consequences of Financial Success

“May your wishes be granted.”

— A Chinese curse

The growth of funding, of donor support and of a closer relationship with government, had a number of consequences to the financial and operational cultures of AWF. This should not be surprising since the organisation had been transformed over the ten-year period from the late 1990s. But such transformations can introduce problems of accountability to beneficiaries.

USAID referred to expenditure of its funding by NGOs as the ‘burn rate’. Organisations were required to report to USAID on a quarterly level regarding whether their ‘burn rate’ was being met. If not, they were required to explain why expenditure did not meet prescribed targets. The very term ‘burn rate’ did not psychologically lend itself to effective performance in terms of prioritising expenditure. The emphasis is on spending money, not spending it well. The reason for this is how aid agency incentive system work; opportunities for prestige and promotions are greater when aid agencies conduit more money (Gibson et al. 2005). Donor reporting policies called for the receipt of a spreadsheet of aggregated expenses and a slick narrative report; financial auditing was not conducted at an office level.

By not encouraging independent audits, donors contribute to a lack of financial accountability on the part of NGOs. This is part of the phenomenon of donor audit cultures (Townsend and Townsend 2004). NGOs are funded by donors and are rarely accountable to their beneficiaries, while donors are often only weakly accountable to



taxpayers. Thus, donors' self-legitimation in the interest of increasing governability can result in reduced concern for auditing and accountability (Townsend and Townsend 2004).

Another factor complicating the audit culture at AWF was that as a decentralised organisation, each AWF office managed its own finances with oversight from Washington. Independent auditors conducted an annual organisational audit in Washington where consolidated program expenses were examined based on information received from the field. Financial or program auditing was not conducted in field offices as part of this annual audit. The external auditor noted the limitations of the organisational audit:

“Accordingly, we do not express an opinion on the effectiveness of AWF’s internal control over financial reporting...Our consideration... would not necessarily identify all deficiencies in internal control that might be significant deficiencies or material weaknesses” (Raffa 2007: 16).

AWF Tanzania was also not financially audited by the government. In Arusha, pressure to achieve a high burn rate, coupled with a lack of program staff and financial management capacity, resulted in weak financial management. Following a USAID/Tanzania budget cut to AWF in 2004, an internal analysis of AWF Tanzania’s financial management—in which I took part—revealed a quagmire of budgeting and accounting problems, over-expenditure, and wrongly allocated finances. Subsequently, a number of staff in Arusha were made redundant, travel was curtailed, and activities scaled back. Washington began to take notice of the financial management problems in

Arusha. A new financial manager was hired to clear up financial and operational irregularities in the Tanzania program.

AWF's relationship with its donors could have been more conducive to spending money more effectively in the field. AWF adopted USAID's travel allowance rates (known as *per diem*) to compensate its own staff when they travelled.<sup>42</sup> Ironically, in 2002, AWF's annual budget was US\$ 9 million; USAID's was US\$ 9 billion. In rural Africa, where subsistence costs were often only a few dollars at most per day, USAID's *per diem* rate of US\$ 52 per day was a lucrative source of personal income for NGO staff and government partners.

*Per Diems* have become a general phenomenon in Tanzania's development sector. NGOs in Tanzania promoted the *per diem* system and made it a pillar of the development culture. Few NGO meetings will attract government attendance unless attendees are paid *per diems*. AWF adopted the widespread use of high *per diems* based on AWF experience in Tanzania where *per diems* had been a necessary part of AWF gaining access to, and legitimacy with, government bureaucrats. An AWF senior manager referred bluntly to *per diems* in managing community and district officials as "...basically we are bribing them".<sup>43</sup> *Per diems* contributed to pressure on the organisation to raise substantial funds to complement salaries, office expenses, workshops and transportation expenses.

In 2003 and 2004, expenditure exceeded revenues and AWF ended the year with budget deficits. In 2005, AWF faced a third consecutive budget deficit year and staff layoffs.

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<sup>42</sup> *Per diem* refers to travel and subsistence costs on business travel, meals, laundry and *ad hoc* expenditures.

<sup>43</sup> Discussion, AWF senior manager, Arusha, 16 June 2006.

The Board imposed budget balancing targets and senior leadership reduced travel allowances in 2005 and tightened up fiscal management to reflect realities in the field.

But other expenses also increased at this time. Between 2001 and 2006, the indirect cost rate steadily crept up from 11 percent in 2001 to 18.75 percent by 2006. Indirect costs are costs that cannot be identified with a single contract or grant. Each grant has the indirect cost rate deducted to fund activities of the organisation. Examples of indirect costs are office space rental, utilities, and clerical and managerial staff salaries (USAID 1992: 1).

However, the most important expenditure in the offices with which I was familiar were the operational funds—labour and benefits, professional services, institutional overheads, office expenses, travel allowances, workshops and vehicle running. It was not clear to me and several other senior staff how well conservation objectives were advanced by expenditure of these operational funds.<sup>44</sup> The highest allocation of AWF Tanzania's budget by far was staff salaries and benefits. This was the same model for AWF operations across Africa.<sup>45</sup> However, very few of these staff were actually based in a project area. In Tanzania, all staff resided in Arusha and travelled to the field intermittently for work. This may have contributed to the problems of engaging with conservation at the village level, which we will examine in the next chapter. Table 8.6 provides AWF Tanzania's Financial Year 2007 budget with an example of funding allocations grouped by AWF designated budget lines. It shows that operational funds consumed 63 percent of the total budget.

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<sup>44</sup> Discussions, senior AWF staff, Arusha, 2005; Discussion, senior AWF manager, Kenya, 2006.

<sup>45</sup> As part of the seven person technical design fundraising team charged with raising about fifty percent of AWF's funding from bi-lateral sources, I was intimately aware of budget needs, donor grants and funding forecasts in different AWF Heartlands.

**Table 8. 6: AWF Tanzania’s Budget for FY 2007** (Source: AWF Arusha)

<b>Budget Item</b>	<b>US\$</b>	<b>%</b>
Labour & Benefits	\$401,573	30%
Professional Services	\$141,272	10%
Office/General	\$65,609	5%
Travel	\$41,416	3%
Vehicle	\$30,397	2%
Workshops	\$77,716	6%
Field Expenses	\$32,800	2%
Construction	\$340,746	25%
Partner Support	\$40,000	3%
Miscellaneous	\$182,300	13%
<b>Total Direct Budget</b>	<b>\$1,353,829</b>	<b>100.0%</b>
AWF Indirect Cost	\$253,843	18.75%
<b>AWF TZ 2007 Budget</b>	<b>\$1,607,671</b>	

### **Closeness to Government and Relationships with other NGOs**

“Philanthropists—whether large foundations or small donors—often make grants and gifts based on limited information... At present, most donors—except possibly very large or highly specialized foundations—simply lack the necessary data to support informed decision making.”

—Paul Brest, President of the Hewlett Foundation, the fifth richest foundation in America<sup>46</sup>

When AWF was one the largest grantees of USAID/Tanzania funds, there were few other influential NGOs in Tanzania and AWF’s power was uncontested. But, although the civil society sector in Tanzania was nonexistent by 1985, it began to flourish in the 1990s (Mercer 1999). Outside AWF’s manicured lawns and fortified office complex in Arusha, a vibrant and well-connected environmental and pastoral civil society sector had

<sup>46</sup> <http://annualreport.hewlett.org/statement/index.asp> accessed 13 August 2007.

developed from the mid-1990s. These civil society organisations (CSOs) included local and foreign NGOs, tourism and hunting operators, with increasing international donor and NGO networks. As AWF increasingly focused on spending USAID funds, it decided not to engage with emerging CSOs in order to focus on government relationships. The private sector, NGOs and researchers often felt marginalised from AWF activities and this led to criticism of AWF. These CSOs claimed to speak for local communities; some had developed close links with communities in northern Tanzania. AWF responded to criticism defensively; it further isolated itself from CSOs.

Concern about how the government would perceive association with CSOs further limited AWF's engagement with civil society. For example, AWF chose not to engage with the Tanzania Natural Resources Forum (TNRF), an active civil society forum linking the private sector, NGOs, and academics. AWF was concerned that this organisation was perceived by the government as activist and association with it could result in government criticism. TNRF's structure as a member-based forum meant that it was more fluid as an organisation and difficult for the state to control. Therefore, it could engage in politically sensitive policy processes with more confidence than a single NGO.<sup>47</sup> AWF Tanzania's Coordinator aptly summed up these dilemmas as:

“AWF has adopted a position of constructive engagement with the Government (*visu*). This is in line with the Country Agreement.<sup>48</sup> We cannot be seen to openly challenge the government as the other NGOs and tour

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<sup>47</sup> TNRF is dealing with the consequences of its own fundraising success and growth. It is strategically using the model of AWF as an example of the risks inherent in scaling up. Discussions, NGO employee, Arusha, 2006.

<sup>48</sup> AWF's country agreement is a contract with the government which permits AWF certain privileges (like tax exemption) and specifies AWF's responsibilities with regards to government expectations. It is reviewed every few years which is an important reason explaining AWF's reluctance to challenge the government.

operators would like us do. We cannot be activists against the government. Some of the operators are direct competitors to sources of funding. The most recent examples are Sand County and Corbett (*sic*) Bishop who was openly hostile. AWF has to walk a thin line between government and the tour operator/NGOs and we often get bashed by both.”<sup>49</sup>

In the cases of Sand County Foundation and Corbett Bishop’s Ol Tukai Conservancy, mentioned above, AWF questioned the legitimacy of these organisations. Ironically, these organisations might have directly or indirectly supported AWF’s conservation mission. AWF’s reputation suffered as a result of its behaviour towards the private sector and CSOs. They felt that the organisation was characterised by a culture of institutional isolation and a worldview that bordered on arrogance.

## **Discussion**

As an American NGO, AWF became a preferential grantee for US government funding and a tool for exporting US models of democracy and enterprise to rural Africa. This suited AWF’s ambitions to scale up to a continental level. AWF’s transformation was successful in this regard, but it inevitably had consequences for the structure of the organisation. Donors contributed to AWF’s institutional weaknesses by their shifting foreign aid priorities and linking them to political or military objectives rather than poverty alleviation. Organisations seeking funds thus are encouraged to morph to suit the mindset of donors at a particular time. In the process of metamorphosis, organisations can lose sight of their original goals, instead focusing on fundraising and publicity to the detriment of projects in the field.

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<sup>49</sup> E-mail, James Kahurananga to AWF staff, 3 May 2006.

This chapter has sought to emphasise the dilemmas and contradictions which AWF faces. Choices taken at the time of scaling up (to expand, to pursue donors and government) often seem reasonable and the consequences of these choices may not have been clear at the time. In some ways, AWF is not entirely free in the choices it can make. AWF's dependence on US government funding and Tanzania government micro-management of its activities placed it in the situation of having to conform to different demands. These choices about funding and government relationships are important because they constrain the options available to the organization, and as I shall demonstrate have had profound impact on AWF's ability to fashion CBC interventions.

AWF managers may have become locked into certain ways of behaving and being which it was difficult to escape from. It is not clear whether less reliance on donors and concentrating less on government relations would have been a more beneficial approach for AWF. Adopting different practices may have brought about different costs and benefits. AWF thus experienced the challenges faced by organisations whose growth becomes a constraint when not properly managed.

I think that it is clear that the AWF's transition from a small organisation with a modest budget into a wealthy extension arm of USAID could have been managed better by both grantee and donors. In particular, AWF's upward accountability to the State and donors set up structures and institutional practices which may well compromise its local effectiveness on the ground. We must examine in detail in the next chapter what the local consequences of AWF's work have been in the Tarangire ecosystem.

## Chapter Nine

### **Social Justice and Accountability: AWF at a Village Level**

Ol Tukai village is one of two founding ‘partner’ villages of the Manyara Ranch (along with Esilalei village). Manyara Ranch is owned by the Tanzania Land Conservation Trust (TLCT). The TLCT was set up by AWF in 2001 to acquire and manage large land units in Tanzania for conservation. Manyara Ranch (44,000 acres) is the first such land unit of the TLCT (Sumba et al. 2005). AWF took a very active role in the day-to-day management of the TLCT; funding and staffing it and serving as its secretariat. Over six years, AWF invested approximately US\$ 2.5 million directly into this ‘flagship’ project. Ol Tukai subsequently entered into a community-based tourism partnership with Corbett Bishop Safaris (CBS) in 2004. CBS and the Ol Tukai Village Council also established the Ol Tukai Conservancy (OTC) – an NGO to facilitate anti-poaching and Ol Tukai village development through privately raised funds (Arusha Times 2006b).

The relationship between CBS and AWF was acrimonious at best; each accused the other of donor competition, ineffectiveness and community manipulation. The situation deteriorated when AWF tried to block the registration of OTC with Monduli District Council in 2005.<sup>1</sup> Furthermore since its inception, relations between AWF/TLCT and its ‘partner’ communities have faced a range of problems. Villagers complained that they were not treated as equal partners by AWF/TLCT (cf. Goldman 2006), and projects were undertaken without their full participation. One such project in Ol Tukai was an

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<sup>1</sup> Letter, AWF to Monduli District Council, 4 December 2005 ‘Re: Registration of Ol Tukai Conservancy Trust’ complained about OTC due to donor competition and duplication of activities at a community level.



AWF funded water trench project: long, deep trenches dug on village land to retain water in 2006.

**Figure 9.1: An Ol Tukai water trench** (© Corbett Bishop)



Problems with the trenches began almost immediately: villagers complained they were not adequately consulted; they were concerned about the risks of the trenches to people and livestock. Indeed, a child was injured after falling into a trench soon after they were dug. Three weeks later three zebra drowned in the trenches. At the same time, staff from AWF's Washington office were entertaining former President (and AWF trustee) Benjamin Mkapa and American billionaire Ted Turner on Manyara Ranch. AWF's executive office hoped that Turner would be suitably impressed with AWF's Tanzania program resulting in an unprecedented multi-million dollar donation to AWF from the Turner foundation.

CBS sent an anti-poaching team to Turner's mobile luxury tented camp on Manyara Ranch to report the zebra deaths. AWF resented the intrusion and saw an opportunity to silence CBS's owner. AWF reported Bishop to the local police allegedly on charges of arming and instigating villagers to invade the ranch during President Mkapa's visit. CBS complained to the US Embassy in Dar es Salaam about this incident after which USAID launched an audit from Washington, DC of AWF Tanzania's operations. The subsequent report identified shortcomings in AWF's communication with stakeholders, transparency, operations and leadership (USAID 2006b). The report highlighted that private sector and local community stakeholders were widely aggrieved by AWF's perceived lack of responsiveness to local peoples; unwillingness to collaborate with other NGOs; inefficiency; lack of transparency and communication; and lack of independent evaluations of AWF's community conservation work (USAID 2006a: 20). AWF's response to criticism was that these problems were a Tanzania-specific case of localized personal conflicts.

This chapter examines the extent to which problems like this were isolated incidents, or symptomatic of broader organizational problems and tensions. I will argue that, despite AWF's participatory and pro-poor rhetoric, and its desire to work outside PAs on communal, private, and State lands its operations were heavily influenced, if not governed by the importance of its relationships with donors and the government. The priority that AWF's leadership placed on becoming wealthier and politically powerful as an organisation resulted in weak community support. This chapter shows how AWF's engagement with pastoral communities in the Tarangire ecosystem and its role in increasing poverty in Simanjiro District arguably undermined its ability to effectively support wildlife conservation in the Tarangire ecosystem.

## Where the Money Goes

Like many other NGOs, AWF boosts donor confidence through the ‘15 percent rule’. Many NGOs publicly state that not more than 15 percent of total revenues go towards administration. In the case of AWF, its provisional indirect cost rate alone of 18.75 percent, as well as other administrative overheads in African cities and Washington, DC meant that the actual amount channelled to the field was less than 85 percent.<sup>2</sup> Non-profits are able to justify overhead costs of less than 15 percent through creative accounting such as allocating expenses for communications or fundraising in Nairobi or Johannesburg or Washington as a conservation program expense. Significant proportions of donors’ dollars were not directly benefiting wildlife or reducing rural poverty; in AWF’s case, its largest expenses were labour, professional services, travel, and construction (AWF 2007a: 41).

For example, consider the spread of AWF offices. In 2005, the CEO described his vision for purchasing a house in Nairobi and refurbishing it like the Arusha office (P. Bergin, *pers. comm.*, 2005). In 2007, AWF purchased a house in Nairobi in a million dollar project (AWF 2007a: 42) as “An organization that seeks to... position itself as a primary champion of Africa’s great conservation and tourism landscapes needs to look the part” (AWF 2007: 2). In 2006, the CEO announced the establishment of a significant presence in Johannesburg (Bergin 2006). Impressive urban offices lent an aura of legitimacy to donors and government but they are also ineffective instruments for building good relations with people in rural areas. Offices distant from actual Heartlands, and heavily invested with staff and infrastructure, aside from using up funds, often kept AWF far

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<sup>2</sup> Billings under cost reimbursable US government grants and contracts are calculated using provisional rates that permit recovery of indirect costs in accordance with AWF’s negotiated indirect cost rate agreement (NICRA) with USAID (Raffa 2007: 13).

from the realities of conservation on the ground. Furthermore AWF's fundraising model resulted in most program staff working largely or exclusively as relationship managers for donors and government bureaucrats. As a result, though successful in accruing funds, AWF struggled to spend these grants to achieve its declared conservation goals. The growth strategy skewed AWF's capacity towards urban grant-managers rather than rural extension agents, a core capacity required when engaging local communities in conservation and livelihood improvement.

Community-based conservation (CBC) offered a similar case. This was central to AWF's rhetoric as summed up in its 2006 Annual Report:

“We believe we have found ways to live much more fully AWF's core values of being a truly Africa-driven organization, and of being an organization that has always seen the well-being of Africa's people as an inseparable part of its mission” (AWF 2006c).

PAs often comprised a fraction of the land area in a Heartland meaning that a large part portion of AWF's conservation activities theoretically involved communal and private landowners. AWF needs to contribute to effective conservation practices on community and private lands if it is to effectively conserve these Heartlands. To do that, it must find ways of building local support for conservation through incentives, collaboration with PA managers and private tour operators, and improved local knowledge and capacity. Community conservation was not prioritised as a standalone component of AWF's approach. For example, most Heartlands were staffed with one or two 'community conservation officers'. These officers were usually junior in hierarchy and disempowered, undercapitalised and marginalised from AWF's management. It was

virtually unheard of for community officers to attend AWF program or annual meetings, yet these fora were where AWF's thinking and conservation learning took place. The organisation's lack of a strategy for engaging with communities probably curtailed its ability to adapt on this front.

The pressure to raise more resources, while achieving the quarterly burn rate refocused even well-intentioned staff towards donor and state relationship management. AWF Arusha employed two symbolic community conservation officers, both urban based. One managed donor projects and district relations from Arusha, and rarely had time to liaise with communities. The other, a Maasai woman, was confined to two modest women's enterprises as her capacity to influence male dominated communities was doubted by her male manager. Despite her disempowerment at a local level, she was promoted heavily in communication materials to illustrate AWF's role in empowering women in conservation.

Nurturing consistent, transparent communication with a community depends upon the allocation of field staff to develop these relationships. Furthermore, in order to impact livelihoods at a local level, an organisation needs to develop a good means of delivering rural extension services. In Uganda, US-based corporation Dunavant Enterprises operated an extensive network of mobile extension workers in order to build trust, local livelihoods and its supplies of raw cotton (Zachary 2007). AWF Tanzania was hesitant to decentralise community-based officers to a village level due to concerns about managing a network of villagers.<sup>3</sup> Another argument used against hiring rural community

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<sup>3</sup> Discussion, Coordinator, Arusha, 2004.

specialists was funding them;<sup>4</sup> though they would have been amongst the lowest within AWF's pay scale.

### **Conservation Enterprises and Livelihoods**

The primary strategy that AWF used to link biodiversity conservation to poverty alleviation and empowerment of local people was conservation enterprises.

Conservation enterprises are described by AWF as:

“...a commercial activity that generates economic benefits in a way that supports the attainment of a conservation objective...AWF's investment in its conservation enterprise program is yielding impressive results throughout the African Heartlands. Conservation tourism is one of the most promising sectors for conservation enterprises.”<sup>5</sup>

AWF's widely promoted enterprises like CBT, apiculture, livestock production, agricultural marketing, handicrafts and cultural tourism across its Heartlands.<sup>6</sup> The policy environment hampered the development of CBT on village lands, and the economic returns from apiculture, handicrafts, or cultural tourism were low compared with the investment to establish them.

These businesses included Manyara Ranch employee wages, tourism, handicrafts, and tourist hunting. The total amount generated over five years by AWF enterprises was US\$ 143,389. Wages from Manyara Ranch constituted the highest proportion of benefits (70

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<sup>4</sup> Discussion, Coordinator, Arusha, 2005.

<sup>5</sup> <http://awf.org/section/people/enterprise> accessed 9 March 2007.

<sup>6</sup> <http://awf.org/section/people/enterprise> accessed 8 March 2008.

percent). These salaries were generally paid from donor funds, or through the sale of ranch livestock. Generally, the amount of revenue generated per individual increased over the 5 years, averaging US\$ 23.91 per beneficiary per year. This amount translates to about 1 US cent per person per day using 4.6 dependents per individual in Monduli District.<sup>7</sup> Contrast this with the US\$ 10 to 20 earned as a *per diem* or ‘sitting allowance’ per person for attending an AWF meeting.<sup>8</sup> Without the skewed effects of Manyara Ranch salaries, the benefit of these conservation enterprises drops to US\$ 7.23 per person per year.

**Table 9.1: AWF Conservation enterprises - financial benefits, number of beneficiaries and cost to AWF per beneficiary, 2001 to 2005** (Sources: AWF Quarterly and Annual Reports; AWF Quarterly Reports to Strategic Objective Team 2; Interviews, Tour Operators and AWF staff; and AWF and TLCT grey literature)

Year	2001	2002	2003	2004	2005	Total	Beneficiaries
<i>Selela Village (Hoopoe Safaris)</i>	\$0	\$0	\$2,464	\$2,000	\$0	\$4,464	551
<i>Esilalei Womens Cultural Boma</i>	\$412	\$735	\$1,814	\$7,000	\$7,000	\$16,961	322
<i>Manyara Ranch (salaries)</i>	\$0	\$666	\$31,000	\$33,552	\$34,539	\$99,757	221
<i>QOGA Villages (Babati)</i>	\$0	\$13,402	\$0	\$4,000	\$0	\$17,402	450
<i>Mwada Village</i>	\$4,060	\$480	\$0	\$80	\$185	\$4,805	724
<b>Totals</b>	\$4,472	\$15,283	\$35,278	\$46,632	\$41,724	<b>\$143,389</b>	
<b>Total Beneficiaries by year</b>	1,046	1,046	1,094	2,268	543	<b>5,997</b>	
<b>\$ per beneficiary per year</b>	\$4.28	\$14.61	\$32.25	\$20.56	\$76.84	<b>\$148.53</b>	
<b>Mean number of beneficiaries/year</b>			<b>1,199</b>				
<b>Mean benefits per person per year</b>			<b>\$23.91</b>				
<b>AWF Cost per beneficiary</b>			<b>\$1,094.30</b>				

It is important to note that the majority of beneficiaries in most AWF Heartlands are highly dependent on tourism, as are many African PAs for operational funding. However, as illustrated following Kenya’s violently contested elections in December, 2007, tourism is highly sensitive to perturbation (Reuters 2008).

<sup>7</sup> <http://www.tanzania.go.tz/census/census/districts/monduli.htm>. In Selela and QOGA, I estimated beneficiaries as 25 percent of the 2002 village population.

<sup>8</sup> Discussions, AWF manager, Arusha, 2004 and 2005.

### **AWF and Wildlife Policy Reform: the Sinya ‘Battles’**

The complexity of community conservation enterprises, the time lag before results show, and local politics of space result in these programs returning erratic dividends. AWF undertook a strategic decision: it adopted an approach of working *through* government to enhance its legitimacy, networks of power, and donor relations. This approach compromised its ability to function as an independent civil society organisation. The infusion of millions of dollars into state and district agencies had the effect of providing AWF with government legitimacy in the belief that it was creating a cadre of Tanzanian bureaucrats committed to a specific vision of conservation (cf. Garland 2006). The PORI project invested the bulk of its resources into supporting protected areas management. PAs were considered the ‘anchors’ within an ecosystem, needing to be secured before expanding conservation away from PAs in concentric circles. Therefore, PA management took precedence over community conservation at AWF.<sup>9</sup> But the real weakness of AWF’s pro-poor policy reforms in Tanzania was more subtle and was best illustrated by withdrawal from the politically-laden conflicts over land tenure, money, and resource rights between pastoral communities and the state.

Since the late 1990s, AWF had worked with communities in the West Kilimanjaro area. Sinya Village in Longido District entered into partnership with Tanganyika Wilderness Camps (TWC) to establish a photographic tourism camp starting around 2000. By 2004, Sinya may have been generating up to US\$ 40,000 per year from tourism (Nelson et al. 2006: 22). TWC also established a tourism camp adjacent to Tarangire in Minjingu Village in the Burunge WMA. Both Sinya and Minjingu villages were located within

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<sup>9</sup> Igoe (2004) articulates problems such as AWF’s relationship with Maasai NGOs, not taking local people seriously, and the promotion of fortress conservation through community based conservation mechanisms.



tourist hunting blocks allocated to Northern Hunting Enterprises Ltd.<sup>10</sup> Northern Hunting sued TWC for violating its use rights in village lands allocated through the Ministry of Natural Resources and Tourism (MNRT). TWC subsequently ceased operations in both villages.

The WD had earlier mounted its own bid to evict TWC, based on the Tourist Hunting Regulations of 2000, and consistently supported Northern Hunting's case to exclusive control over the area. Actions like these were emblematic of the WD's ambiguity regarding CBC highlighted in a letter to AWF:

“I would like to assure you that the Government in general and the Wildlife Division in particular fully supports community based conservation endeavours countrywide. It should be made very clear that, the absence of a provision to create Wildlife Management Areas (WMAs) in our legislation (WCA) should not be a reason to impede community involvement in conservation, because the law does not prohibit the local communities to participate in conservation of wildlife in their communal land”.<sup>11</sup>

Tour operators engaged in CBT, and local NGOs keenly followed the proceedings of the TWC-Northern Hunting court case, concerned that, if Northern Hunting was successful, that it could set a legal precedent for hunting companies and the WD to evict photographic tourism operators from villages in tourist hunting blocks.

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<sup>10</sup> See Prologue.

<sup>11</sup> Letter, I.F. Ndunguru to Patrick Bergin, Ref. No. GD/4/54/67, 14 June 1997.

The basic background to these conflicts is that villages control land and make land use decisions while the WD administers hunting concessions on village lands. The WD has strong instrumental interests in the perpetuation of this system, as do the hunting companies that buy the concessions and engage in a lucrative industry. This situation is what breeds the conflict. CBC requires a reformation of this situation to one where communities control land and the benefits of wildlife—as the 1998 Wildlife Policy advocates.

Northern Hunting won the case and TWC relocated its camps to other villages. Maasai villagers felt disempowered losing control of their revenue source and land tenure. The case highlighted critical legal issues between land jurisdiction granted by the Wildlife Conservation Act (WCA) of 2004 over GCAs and jurisdiction granted by the Village Land Act (1999). The Commercial Court showed a disregard for village rights to enter into contracts and manage their lands as a corporate entity; rights established in the Local Government and Village Land Acts (TNRF 2005a). AWF, from its perspective, did not feel that supporting community interests was worth jeopardizing its legitimacy with the state by openly becoming a WD adversary.<sup>12</sup> AWF failed to support the villagers' cause against the government to the disappointment of the Maasai, private sector and local NGOs who felt that AWF, as an international organisation, should have been more creative with the State. Through its disengagement from contentious CBC rights issues in pastoral landscapes and from civil society, AWF inadvertently undermined policy reform and sources of tourism revenue to local communities.

The state was prepared to flex its muscle with NGOs. A shot was fired across AWF's bows when the WD instigated an audit of AWF in 2003. Conducted by the MNRT, the

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<sup>12</sup> Discussion, NGO employee, Arusha, 2004.

high level fact-finding ‘mission’ was headed by the Permanent Secretary in the MNRT, Philemon Luhanjo as well as Director of Wildlife (DoW) Emmanuel Severre and Lota Melamari (Director-General of TANAPA). The delegation reinforced the role that the state expected AWF to play and threatened to deregister AWF if it did not support its policies.<sup>13</sup>

Elsewhere, the Ministry of Education and Culture attempted to ban the widely respected NGO ‘HakiElimu’ for allegedly disparaging the image of the Tanzanian education system by providing critical data in relation to the education sector’s performance (URT 2005).<sup>14</sup> But this incident shows that a more robust response to this sort of sabre rattling is possible. Ninety-six national and international NGOs – including local and international conservation organisations – signed a statement challenging the legal basis for the ban and supporting the role of civil society to participate in national policy processes.<sup>15</sup> AWF was among several NGOs which did not endorse this statement illustrating its isolation from the wider civil society movement engendered by its donor and State ties.

### **Wildlife Management Areas: Participation or Coercion?**

All WMAs are to be facilitated by different NGOs. AWF had responsibility for those in Babati, Kiteto and Longido Districts. The WMAs are AWF’s primary community conservation implementation strategy in Tanzania. But this approach had weaknesses due to AWF’s poor rural extension strategies and the fact that this mechanism is so often contested at village levels. The Burunge WMA in Babati District was among the first to

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<sup>13</sup> Interview, Coordinator, Arusha, 16 June 2006.

<sup>14</sup> In a speech on the 8 September 2005, then President Mkapa supported the actions of Minister Joseph Mungai against HakiElimu.

<sup>15</sup> ‘Statement Regarding Rights and Responsibilities of Government and Civil Society Organizations (CSOs) in Tanzania’.

be gazetted in Tanzania. Different accounts report significant internal conflicts within the WMA with two villages, Minjingu and Vilima Vitatu claiming they never accepted a WMA (Igoe and Croucher 2007, Nelson et al. 2006). AWF is also responsible for facilitating the Enduimet WMA in Longido District in which Sinya village is found. Local people complained of attempts to 'force' them to accede to the WMA, by the DGO and facilitated by AWF (Nelson et al. 2006). A lack of understanding about the WMA has led to the defacement of several Enduimet WMA beacons and local level calls for the withdrawal of villages from the WMA (Nelson 2007).

AWF's third facilitation site, Makame WMA in Kiteto, had low community sensitization rates: "Villagers also noted that while beacons had been placed demarcating the WMA, this had not been done in a participatory manner and people were unsure of what this land designation meant." (Nelson et al 2006: 21). The future of these WMAs is uncertain as these conflicts play out (Nelson et al. 2006). More recently the Non-consumptive Tourism Regulations (URT 2007b) basically give the WD control over all revenues in WMAs and suggest that WMAs may serve mostly as a tool for the WD to increase its revenue capture from village lands.

Several programmatic issues are likely to have contributed to the conflicts in the Makame, Burunge and Enduimet WMAs. Nelson, Sulle and Ndoipo (2006) noted several failings:

1. A lack of efforts on the part of NGO and District facilitators to reach beyond local leadership and sensitize the wider community leads to inadequate knowledge of the WMA.

2. This focus on local leadership can foster unaccountable and non-transparent leadership. In other words, focusing time, effort and power in an elite.
3. This focus on a narrow elite is linked to the complexity of the WMA process which involves the establishment of new institutions at a community level (such as a community-based organisation) which could lead to conflict.
4. Treatment of community concerns as unfounded and illegitimate are guaranteed to undermine the WMA process. The beaconing and legitimacy of the zoning process were contested in all three WMAs facilitated by AWF.
5. Approaches that view communities as homogenous commodities upon whom conservation can be imposed assume a patriarchal approach, and are likely to encounter community resistance.
6. It is estimated that the cost of implementing a WMA is in the range of US\$ 150,000 to US\$ 300,000, resources clearly out of reach to the typical Tanzanian village. The institutional lethargy on the part of government in the implementation of WMAs provided NGO facilitators with opportunities to request substantial follow on funds from donors. The drawn out process of WMA implementation fit well within the framework of winning donor contracts and enhancing power through government networks of patronage.
7. The poverty alleviation benefits of WMAs have been questioned. Restrictions placed on villages over tourist hunting, the most significant commercial opportunity outside of PAs, currently limit this revenue stream at a local level. Some villages have been empowered to manage resident hunting, for example, the MBOMIPA Association<sup>16</sup> in Iringa District earned approximately US\$ 1,000 per

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<sup>16</sup> Asasi ya sMatumizi Bora ya Malihai Idodi na Pawaga.

village in 2003 from the sale of a resident hunting quota. However, these funds are insignificant when divided at a household level.

AWF is not in an easy position. If it adopts a strong line with the Tanzanian government it risks losing its access to power. Organisations like ‘Savannas Forever’ and ‘HakiElimu’ which have displeased the government have placed their whole operations in jeopardy. But by not placing pressure on government to reform the WMA process and provide greater support for community rights, AWF’s support for WMAs is effectively dysfunctional. AWF is contributing to slowing down reform in the wildlife sector. Its networks of power help to prop up a centralised and non-transparent state apparatus that, almost ten years after its WMA regulations were legislated, had failed to alleviate poverty or enhance resource rights by gazetting a single WMA.

### **Hunger and Conservation Displacement**

“Landscape-level conservation...also contributes to the livelihoods of the people living in the area. In turn, when local people benefit from the wildlife and wild lands, they are more likely to help conserve it.... the Maasai Steppe Heartland is a large-landscape conservation success story.” (AWF 2006a: 1).

Conservation displacement comprises forced removal of people from their homes, and economic displacement – the exclusion of people’s activities in lands they live in that affects livelihoods (Cernea 2005). Information on conservation displacements is sparse. Even more so, proving that an international NGO played a direct role in evictions and displacements is cited as difficult (Brockington and Igoe 2006).

AWF's rhetoric towards the role of displacement in conservation practice is underscored by AWF's CEO:

“...we must place a far greater priority in setting aside and protecting significant pieces of land to ensure the survival of any species, and secondly, the livelihoods and well being of African people must not be excluded by any wildlife conservation objective on the continent”.<sup>17</sup>

While AWF generally did not actively engage in physical displacements of local peoples for conservation, it has supported evictions. An AWF midterm PORI report reported “serious” encroachment in part of the Kwakuchinja Corridor by “unauthorized” immigrants in Minjingu and Vilima Vitatu villages, Babati District. It goes on to report that:

“The illegal immigrants were given alternative areas for settlement outside of the corridor. Special thanks go to Hadija Nyembo, the District Commissioner for Babati in resolving this issue” (AWF 2000).

The eviction exercise was captured on an AWF video. In this video, the DC arrives with a delegation including a variety of police, military and prison's officers. The ‘immigrants’ are threatened with physical removal and prison if they do not vacate the area. The corridor is in fact on village lands under the legal jurisdiction of Village Councils.

In addition to promoting CBC, AWF sought opportunities to increase the number of large land units it controlled or owned. AWF targeted underperforming government

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<sup>17</sup> <http://awf.org/content/headline/detail/1182/> accessed 7 March 2007.

ranches or private lands. The problem with these ‘wilderness’ areas was that people lived in them. AWF encouraged the removals, but these were undertaken by other agencies as AWF did not want to be associated with evictions. For example AWF promised to fundraise internationally for land management but based on the caveat that evictions were completed before AWF assumed management, such as with Saburi Estate adjacent to Manyara Ranch.<sup>18</sup> Makuyuni JKT, a 9,000 acre estate bordering Manyara ranch, was encouraged by AWF to relocate a district secondary school with several hundred students due AWF’s interest in the area. Near Moshi, AWF sought to acquire the 75,000 acre West Kilimanjaro Ranch where there were legal proceedings underway to determine the fate of squatters there. The case seemed to go in favour of the squatters and resulted in plans to reduce the size of the ranch. In other cases, AWF raised money for PAs only to withhold it until evictions were complete, as in the case of Mkungunero GR.<sup>19</sup> An NGO’s financial clout can increase the incentive for displacement, such that actors wanting to tap into its financial resources may feel compelled to deliver a wilderness devoid of people and legal liabilities.

Sometimes conservation displacements extend to communal lands near PAs. In one glaring case, AWF actively promoted economic displacement in communal land in Simanjiro District. An AWF newsletter in April-July 2006 self-congratulated:

“...a process of zoning and management planning... has recently received support from the Regional Government who issued a moratorium on land allocations to agriculture...” (AWF 2006: 5).

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<sup>18</sup> The term ‘squatter’ was problematic implying illegal occupation and trespass. In the case of Saburi, these people were former employees who had allegedly not been paid for several years. Destitute and brought to work there it did not seem appropriate to label them trespassers.

<sup>19</sup> Discussion, Coordinator, Arusha, 2004.



This statement reflected an extraordinary sequence of events which involved poor science, ignorance of socio-economic processes occurring at the village level, and networks of power. The Simanjiro Plains are an AWF ‘Priority Intervention’ (PI) – meaning that it requires focused investment on an annual basis due to its conservation value. PIs are about quick wins – there was pressure to report progress to donors each year in what were often very complex projects. After years of community resistance to formal conservation initiatives in Simanjiro, AWF saw an opportunity to use its government influence to limit farming in the Simanjiro Plains. I was summoned before Dr. Kahurananga and asked to hand over all my raw PhD data. I declined to do this. I was asked a suite of questions about my impressions. I stated that farming was increasing, but that pastoralists were dependent upon farming. Simanjiro District and NGO employees based in Orkesumet driving through the plains reported major agricultural change along the roads.<sup>20</sup> AWF reported an imminent threat to tourism revenues using inaccurate rates of agricultural change in the Plains. AWF did not conduct its own survey, consult researchers or remotely sensed imagery, but reported the following to a Strategic Objective Team (SOT) meeting:

“Agricultural encroachment in the Simanjiro Plains: This issue was presented to OC from TME.<sup>21</sup> There is increased unplanned agriculture in the Simanjiro Plains (about 50%) cultivated/threatening wildlife and livestock ecosystems in the Simanjiro. They will have adverse affects on migratory wildlife of the core protected areas of Tarangire and L. Manyara which greatly use the Simanjiro Plains for calving. OC Chare (*si*) noted concerns and called on members to react. RAS<sup>22</sup> Manyara requested AWF to prepare on

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<sup>20</sup> Discussion, LP, NGO employee, Arusha, 2005;

<sup>21</sup> Tarangire-Manyara Ecosystem.

<sup>22</sup> Regional Administrative Secretary.

the situation so that he can take an informed decision.” (USAID/Tanzania 2005: 1).

Following the SOT meeting, AWF obtained two non-empirical studies from the internet to support its claims on Maasai land use change and submitted them to the regional authorities: 1) a 1998-1999 case study from Monduli District (Conroy No date);<sup>23</sup> and 2), a cursory 1996 consultancy report (Sikar 1996).<sup>24</sup> These outdated, non-spatially specific reports were accepted by Manyara Regional authorities. The Manyara Regional Commissioner (RC) then sent a government directive to the Simanjiro District Commissioner (DC) directing the Simanjiro District Council (SDC) to immediately stop land allocations for agriculture in the Simanjiro Plains until village Land Use Plans (LUP) were completed. SDC staff were not consulted prior to the edict on the possible ramifications at a village level of such a ban. The letter justified this by referring to colonial times, when the former Masai District was declared for pastoralism and wildlife conservation only and claimed that the region was not suitable for agriculture. The letter states that colonial administrators: “...wisely made this decision after recognizing that these areas were unsuitable for agriculture due to their weather, soils and indigenous vegetation” (Manyara Region 2005).

The letter directly equates land use change with a decline of over fifty percent in wildebeest and zebra populations in Simanjiro (Manyara Region 2005). In response to the RC’s letter, the Simanjiro DC wrote to the VEOs of villages in the plains forbidding the allocation of land for agriculture until LUPs were completed. The letter threatened:

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<sup>23</sup> <http://www.lead.virtualcentre.org/en/enl/vol2n1/maasai.htm> accessed 9 March 2007.

<sup>24</sup> <http://www.fao.org/docrep/x0271e/x0271e00.HTM> accessed 9 March 2007 from

“For those of you who have already been allocated agricultural land to stop all agricultural activities in the plains until the plan mentioned above is completed. Anyone who disobeys this directive will be prosecuted” (SDC 2006).

This is exactly what the Maasai fear from external conservation interests. Village and district leaders were reluctant to share or discuss the RC's letter with their fellow villagers. I was given a copy by the acting Simanjiro District Executive Director (DED) with a warning not to show it to villagers due to its inflammatory nature. Even the District Lands Officer had not heard about the RC's letter until I asked him about it in May, 2006. The pronouncement had the potential to affect thousands of people. Not all villagers of Emboreet, Terat and Sukuro farmed in the plains: but almost all were inextricably tied to the overall agro-pastoral economy.

Village elites profited from the lack of transparency by ward and village leaders regarding the letter to interpret its message in their own way. In Emboreet, village leaders surveyed each of the sub-villages for external farmers using the letter as an opportunity to expel outsiders, and no doubt increase local land holdings for their own networks. As word slowly leaked out regarding the true nature of the letter, grassroots concern flared. Although no NGO is mentioned in the letter, people suspected NGOs of being behind the RC's letter. They also associated it with an address on national radio by President Kikwete calling for cattle de-stocking and preservation at a village level to protect the environment. Confusion reigned at a local level: villagers were confused why white commercial farmers were still permitted to farm in Simanjiro; they thought that the RC's letter was forged; or illegal in the face of the Village Land Act (1999); and it was a ploy for Tarangire to expand. Why did it state the land was unsuitable for farming when

people continued to farm the same plots year after year? The letter spoke of the wildebeest population; but why did it not reference growing human populations and their needs? Village leaders attempted to get a Village Assembly to approve an agreement to the RC's letter but without actually sharing a copy of the letter. Villagers reported that it felt like a colonial treaty that removed people from Mkomazi and Ngorongoro. One informant reported that large areas of Emboreet remained unfarmed in 2007 in compliance with the RC's directive:

“...all those big shambas of Waarusha and all other invaders are left the way they are, no tenant is allowed to farm in Emboreet”.<sup>25</sup>

Before any agricultural restrictions, Emboreet was dependent upon food aid. Each year of my fieldwork, trucks escorted by Red Cross vehicles delivered food aid to Emboreet village. At the height of the dry season, this was often the only source of grain for poorer pastoral families. As we have seen, many households were unable to depend on their livestock for their subsistence needs and required to farm in order to live and prosper. Restricting farming in this village was a direct threat to pastoral food security, in addition to the impoverishment effects of losing a revenue stream through crop sales. To put it mildly, the multiplier effects of reduced revenue from crops would have a massive effect on household economies. Crop sale values in Emboreet were closer to US\$ 100,000 per year in 2003 and 2004, not including the value of crop gifts and subsistence consumption.

AWF's ability to influence the state into a ban on agriculture was the dividend of years of investment in developing good relationships with the State. However, AWF's use of its

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<sup>25</sup> E-mail, Emboreet villager to H. Sachedina, 20 February 2007.

power to lobby for the regulation of pastoral livelihood activities conflicts with its rhetoric of empowerment, human rights and poverty alleviation. Not consulting scientific data, or researchers and not involving local people risked causing hunger.

### **Imposing Community Conservation**

As NGOs scale-up and rely more on official sources of funding their flexibility and ability to innovate can be affected. The increased dependence on official funding can change the relationship between NGOs and donors; in which the NGO moves from ‘partner’ to ‘contractor’ (Edwards and Hulme 1996a). In order to expend its ‘burn rate’, AWF relied on sub-contracting to other organisations. It is common for organisations which lack the capacity to implement activities themselves to award grants to do the work while retaining a share of the funding as an administrative overhead charge to centrally fund the organisation.

District Game Officers (DGOs) were the primary instruments for AWF’s community conservation approach, as the officer responsible for wildlife management at a district level. AWF usually advanced large sums of cash to implement projects, such as the implementation of WMAs, LUP and the beaconing of Village Natural Resource Management Areas (*pers. obs.*). DGO’s were considered extension staff by AWF, and were regular visitors to AWF offices for additional funds. Financial and programmatic accountability was relaxed with DGO’s: questionable receipts were submitted, unaccounted for travel advances ranged between US\$ 1,000 to 3,000 per DGO (*pers. Obs.*) and several AWF staff suspected fraud.<sup>26</sup> I saw some of the financial reports submitted by DGOs and indeed unofficial receipts were difficult to verify. DGOs

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<sup>26</sup> Discussion, AWF financial staff, Arusha, 2005 and 2006.

regularly overruled AWF's internal financial management policies. When queried for accounts (in some cases over a year late), DGOs on occasion would raise their voices in the office. The Coordinator, Dr. Kahurananga, instructed cheques to be authorized in order not to offend the DGOs (*pers. obs.*).<sup>27</sup> In this way, DGOs wielded significant power at AWF; they threatened to boycott AWF's work unless their conditions were met and a culture was created whereby AWF was beholden to certain bureaucrats to help it achieve its 'burn rate'.

DGOs often carried out AWF funded work in rural areas with little oversight from AWF or the District Councils. Their work was often in areas distant from district capitals and as we have seen in Simanjiro, wildlife management was a low district priority. Igoe & Croucher report that the Babati DGO was responsible for evictions of families within the Burunge WMA, that beacons marking Village Natural Resource Management Areas (VNRMA) were placed without Village Assembly agreement, and the DGO had bribed village leaders (Igoe and Croucher 2007). AWF did not get involved in the unsavoury business of displacements, but was aware of them in Burunge and continued to fund the work of DGOs (AWF 2000).

The decentralisation of the State and subsequent proliferation of NGOs resulted in new opportunities for government bureaucrats and a blurring of the State and NGOs as elites, in the face of diminishing State resources, co-opted the NGO sector as a lucrative mechanism for accumulation. It also represented an opportunity for NGOs to extend their sphere of influence. AWF awarded lucrative consultancy contracts to government officers in the WD, TANAPA and at Mweka through AWF projects. An e-mail from the

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<sup>27</sup> Discussions, AWF manager, Arusha, 2005 and 2006.

CEO summed up AWF's approach towards using consultancies as a relationship management tool:

“...because X is smart, a Tanzanian and on the TANAPA board....You should probably think of going ahead and using X to do some consultancy under us to help prepare the process—and so that we don't create any enemies”.<sup>28</sup>

AWF's networks of clientele extended to village levels. AWF initially approached villages through village councillors or elites within the village. It incentivised their participation in CBC meetings with *per diems* and 'study tours'.<sup>29</sup> AWF was able to promote its agenda at a Village Government level through village elites who in AWF saw opportunities for accumulation.<sup>30</sup> AWF opted for this approach over dealing with the larger Village Assemblies and the careful nurturing of community conservation at a sub-village level. Reports that villagers were not aware of community conservation developments, or village leadership were corrupt, were dismissed by AWF as local politicking. Individual village Chairmen were paid cash in order to foster patronage when they travelled to AWF's Arusha office to provide information.

### **Coping With Criticisms**

It should be clear now that there are a number of indications that the problems AWF faced were not as restricted as the USAID audit with which we began this chapter suggested. But as I was coming to terms with the nature of these problems I was also

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<sup>28</sup> E-mail, CEO to AWF staff, 21 October 2004.

<sup>29</sup> Trips to other areas which provided large *per diems*.

<sup>30</sup> Discussions, AWF manager, Arusha, 2004, 2005 and 2006.

concerned about the organisation's response to criticism. In May 2006, the expatriate director of an educational NGO working with AWF to implement a US\$ 600,000 grant to rebuild Manyara Ranch primary school reported to me that the contractor had complained that AWF staff had demanded kick-backs in exchange for awarding the contract. I had heard accusations of AWF staff requesting kick-backs from vendors in Arusha since 2002 but could not substantiate any of these allegations. I was shocked and disappointed: this was the first instance I spoke to someone reliable who reported the allegations I had heard repeatedly over the previous years. I spoke in confidence about the allegation with two VPs. I requested total anonymity because I was afraid of the CEO and CFO's reaction towards me for bringing such an allegation to light. I also feared the reaction of my colleagues if they found out I was the whistleblower.

AWF sent a new Financial Controller from Washington to Arusha to investigate. He was alarmed that AWF's reputation was so poor amongst local constituents, but reported that the contractor denied bribing any AWF staff.<sup>31</sup> He expressed surprise and concern that in Tanzania a culture had been created in which government facilitates the work of AWF through payments to government officers; and the high cost of AWF workshops relative to impact on the ground. He also said that he felt that Arusha represented a microcosm of AWF and that he would return to Washington and, in his role as Controller, try to address these problems. However, AWF chose not to investigate the claims further and reported to the board that there had been no financial impropriety and the matter dropped. An AWF Program Meeting in 2006 in Nairobi, Kenya reported that the issue of funds embezzlement in Tanzania had been discussed at the AWF Board level and that "...President Mkapa requested them to remove the allegation from the records and the

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<sup>31</sup> Discussion, JW, AWF Controller, Arusha, 16 May 2006.



Board agreed on it” (AWF 2006b). Approximately eight months after the Controller’s mission to Tanzania, the CFO announced the Controller’s departure from AWF.<sup>32</sup>

At the same time as the corruption allegations, a book entitled ‘On Safari with Bwana Game’ was circulated in Arusha. The book comprised the memoirs of a disgruntled European game officer in Tanzania. It alleged that AWF’s Tanzania Coordinator, Dr Kahurananga, was directly involved in poaching and intimidation while a Regional Game Officer with the Wildlife Division (Balson 2003: 116-127). The book was circulated by a colleague of Kahurananga’s on the board of the TLCT. Confidence in AWF leadership in northern Tanzania continued to erode among local NGOs and the private sector.

It was a tense time for AWF’s staff in Arusha during which time key senior staff resigned. AWF’s senior leadership realized some changes were needed to instil confidence in the Tanzania program. In response, AWF promoted Kahurananga to Program Director, where he focused on developing government relations and was distanced from management activities. AWF hired a new Coordinator with the mandate of improving AWF’s reputation. AWF also tried to discredit their critics by labelling them as racists who resented that AWF Tanzania was run by a Tanzanian.<sup>33</sup> AWF leaders claimed that anti-AWF sentiment from tour operators arose from their resentment for not receiving AWF’s tourism business when it hosted donors or trustees,<sup>34</sup> and jealousy of not playing “centre stage” in Manyara Ranch.<sup>35</sup>

AWF’s organisational structure seemed unwilling to learn from criticism, or accept that these had developed over several years dating to the transformational USAID-funded

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<sup>32</sup> E-mail, CFO to AWF staff, 4 February 2007.

<sup>33</sup> Discussions, Coordinator, Arusha, 2006.

<sup>34</sup> E-mail, CEO to AWF staff, 14 June 2006.

<sup>35</sup> E-mail, Coordinator to AWF staff, 3 May 2006.

PORI project in the late 1990s (Bonner 1993, Garland 2006, Goldman 2003, 2006, Igoe 2000, 2004). The CEO noted that:

“...over the past several weeks since I have been back in Washington, the negative signals I am getting about AWF’s reputation in Arusha are increasing in number and intensity”<sup>36</sup> and “...there is some sort of an organized campaign going on - driven by Corbett or somebody else. Unfortunately underperforming NGOs are more a norm than the exception. People may become cynical about NGOs but this seems to have way more energy behind it”.<sup>37</sup>

AWF seemed unwilling to accept that widespread and multi-sectoral concerns could actually be linked to problems in AWF’s performance. It sought to label the chorus of protests against AWF as the act of disgruntled individuals who were uninformed or lacked legitimacy. That did not seem an appropriate response to me. When I worked for AWF, I constantly heard a barrage of criticism of AWF from village, NGO and private sector sources in Kenya and Tanzania. Critics were both Tanzanian and American. Critics included an AWF trustee:

“I have been the recipient of AWF's bad press in X for years. Arrogance, insensitivity, grab for power... are at the root of the criticisms... I quit AWF as a board member because of X’s arrogance and retention of excessive control.”<sup>38</sup>

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<sup>36</sup> Email, CEO to AWF Arusha staff, 1 May 2006.

<sup>37</sup> Email, CEO to AWF Arusha staff, 13 June 2006.

<sup>38</sup> E-mail, former AWF Trustee to tour operator, 23 January 2007.

Tour operators and local NGO critics claimed their legitimacy from working closely with communities through CBT or development work. They encountered resistance to AWF at a grassroots level; some may have even fuelled this resistance in order to position themselves as community allies. They found that the AWF made a large and soft target – as a wealthy organisation concentrated in the rarefied atmosphere of government and donor circles, and unfocused and often clumsy at a grassroots level. The protests were a consequence of a growing and organised civil society collaboration and influence (such as through the Tanzania Natural Resources Forum) which challenged AWF’s conservation monopoly in the Tarangire ecosystem.<sup>39</sup> Civil society organisations also challenged AWF because its actions affected the ability of CSOs to advance their own CBC work. It also reflected increasingly vocal, discontented and connected villagers were able to more effectively organise themselves politically: people in remote villagers had access to cell phone networks and the internet meaning that access to information was increasingly freely available. As I observed AWF’s response to what I thought were well founded criticisms I became increasingly aware that my own informants were also afraid of AWF staff and how they could use their networks of power against people who presented such claims. Some feared for their physical safety, and their work permit status should AWF staff retaliate extra-legally. Their fear intensified my own: I resigned shortly after reporting the corruption allegation.

### **Are All NGOs the Same? Case Study of Flying Medical Service**

From 2004 to 2006, I volunteered for Flying Medical Service (FMS) in northern Tanzania. FMS is a volunteer, non-profit, non-sectarian organization which provides

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<sup>39</sup> I refer to civil society in this case as local natural resource and pastoral NGOs, private sector tour operators and community groups.

preventive, curative, and health related education services in Tanzania.<sup>40</sup> Its mission is to serve poor and marginalised people living in remote areas. It was established in 1983 by an American Missionary, and incorporated in Pennsylvania, USA. The bulk of FMS's work was conducted in Simanjiro, Kiteto and Ngorongoro Districts where twice a month FMS flew medical staff into remote Maasai villages with no other health care. FMS partnered with regional hospitals to ensure that patients needing extensive treatment were cared for. From 1983 to 2005 more than 270,000 Maasai benefited directly from the work of FMS, mainly through airstrip clinics and 'under-the-wing' paediatric clinics vaccinating pastoral children against potentially fatal diseases. Villagers were required to build and maintain an airstrip, and patients paid the price of half a chicken for treatment (just under US\$ 1).

In 2003, FMS treated 7,000 villagers, vaccinated 9,000 children against diphtheria, whooping cough, tetanus, measles, polio, and tuberculosis, checked and vaccinated 4,400 pregnant women, treated 421 tuberculosis patients, and evacuated 121 critically ill people. This accounted for 21,000 patients treated per year between 2003 and 2005.<sup>41</sup> Since 2003, this figure has increased to 24,000 patients per year (P. Patten, *pers. comm.*, 2007). Amazingly, FMS was able to do this on a total annual budget of US\$ 160,000. FMS was able to do this by maintaining its own aircraft, and employing volunteer staff enabling a cost per patient to FMS of US\$ 7.60. Pilots lived in a modest commune on the outskirts of Arusha at a clinic and handicapped school that the FMS founder had also established. FMS has raised US\$ 1 million towards a US\$ 1.6 million endowment to fund FMS in perpetuity.<sup>42</sup> Despite a compelling fundraising case, a strategic decision was made to

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<sup>40</sup> <http://www.flyingmedicalservice.org/> accessed 7 March 2007.

<sup>41</sup> Letter, Patrick Patten to Mr. Mugo, TCAA, 23 December 2006.

<sup>42</sup> This figure rose to US\$ 3 million in 2007 due to rising fuel prices (Pat Patten, *pers. Comm.*, 2007).

remain volunteer based and not to invest in expensive capital items such as new aircraft, offices, vehicles, hangars or expatriate staff.

I experienced FMS's work in a variety of settings. I accompanied FMS to village clinics in Simanjiro and Kiteto districts, during emergency flights within Kenya and Tanzania, and spent significant time with FMS at their headquarters and airport locations in Arusha. The dedication and cost control of FMS impressed me. The organisation existed to keep costs low for its end users: poor people living in remote areas with no health care facilities nearby. My time with FMS regularly humbled me. As a professional fundraiser, I recognised the strong fundraising case that FMS presented. The vision for gigantism was not shared by FMS, strengthening my personal impression that FMS's key strength was its commitment to its beneficiaries, and remaining small and effective.

My understanding of FMS's financial management was not comprehensive as I did not work in its finance department. FMS faced several limitations: volunteer pilots left to take up commercial opportunities. Village airstrip clinics were often very busy; a doctor was under pressure to treat each patient even if not sure of their ailment. Tanzanian authorities challenged FMS to register their planes in Tanzania; a move which would increase expenses. A major risk to FMS sustainability was who would run FMS with the same voluntary spirit and selfless commitment when its founder retired? Would religious orders who subsidized FMS still contribute to FMS without a priest at the helm?

AWF's annual organisational budget in 2005 was US\$ 19,341,007. The same amount would fund FMS's annual organisational budget for 121 consecutive years in which FMS (at current patient levels) would provide 2.6 *million* pastoralists with healthcare. AWF's conservation enterprises in Tanzania had 1,200 annual beneficiaries in contrast with

FMS's 21,000 beneficiaries. AWF Tanzania's cost per beneficiary was US\$ 1,094 compared with US\$ 7.60 for FMS. In comparative terms, AWF Tanzania had an annual budget 8 times larger than that of FMS, but FMS impacted 18 times more people.

### **Discussion**

International conservation NGOs inhabit spaces which makes it possible for them to accumulate wealth, influence and networks of power. The case of AWF in Tanzania illustrated what happens when the pursuit of wealth and certain networks of power (such as with the State and donors) conflict with programmatic delivery of its mission. The decisions that AWF took to work closely with government and donors have variously limited, handicapped, and sabotaged its desires to work with villagers, and sometimes mean it is actively working against them. Tragically, this view of AWF from below illustrates how the organisation contributed to impoverishment of pastoralists and stifled wildlife reform debate linked to empowerment of local peoples. AWF thus support the centralisation of State power through community conservation mechanisms.

AWF's organisational culture centralised power, and muted transparency and accountability in ways that excluded pastoralists from the conservation process and isolated AWF conservation staff in urban offices and well heeled lodges. Ironically, NGOs gain more legitimacy through accountability to donors and more access to policy reform, money and donor's hearts and minds. Many of these indicators point to a failure of donor-recipient models promoted in the conservation sector to conserve biodiversity or alleviate poverty. The people who end up mattering most to international conservation NGOs were donors in the west and African government elites, not poor communities marketed as key partners in glossy communications materials.

## Conclusion

“Out beyond ideas of right-doing and wrong-doing,  
There is a field.  
I’ll meet you there.”

—Jalaluddin Rumi

In the space of half an hour on a wintry November morning towards the end of my thesis, a professional hunter in Tanzania discussed the rampant corruption he had witnessed as well as the poaching and abuses that his colleagues in Tanzania regularly engage in to please clients.<sup>1</sup> An American wildlife researcher also directed me to information regarding the deaths of 25 wild dog (*Lycan pictus*) in Ololosokwan village (Nkwame 2007). Endangered since 1990 and declining, approximately 3,000–5,500 dogs remained in Africa.<sup>2</sup> By 1990, the known population in the Serengeti ecosystem was just 34 wild dogs (Burrows 1995), and by 1997 only remnant individuals remained (Fanshawe et al. 1997).

Wild dogs are not hunted commercially, sightings are rare and they are very commercially valuable in terms of non-consumptive ecotourism. That a significant number of wild dogs from the fabled Serengeti, arguably Tanzania’s flagship conservation area, had been killed at one go was a shock to most observers of conservation in Tanzania (Nkwame 2007). It was also troubling that this tragic event occurred in Ololosokwan—arguably Tanzania’s most successful example of community-based tourism (CBT) (Nelson 2004, Nelson and Ole Makko 2005).

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<sup>1</sup> Discussion, PH, 23 November 2007.

<sup>2</sup> <http://www.iucnredlist.org/search/details.php/12436/all> accessed 24 November 2007.

Villagers in Ololosokwan alleged that the dogs were poisoned by outsiders (Nkwame 2007). This could have been true. It could also have been an accident; poisoning of livestock carcasses as a predator deterrent was common in Tanzanian rangelands (Kissui 2007, Lichtenfeld 2005). A more cynical view is that a lucrative CBT example infusing wildlife revenues into a community for over a decade failed to protect an economically valuable 'flagship' species. Tourism revenues in Ololosokwan were relatively well-spent (Nelson and Ole Makko 2005). Ololosokwan was more of an exception in this regard. If tourism revenues failed conservation there, how would smaller tourism revenues in less well-managed villages be expected to change people's attitudes and behaviour towards conservation?

This incident occurred in the Loliondo Game Controlled Area (GCA), which is one of many areas outside of Protected Areas (PAs) in which wildlife is managed by the Wildlife Division (WD) on village lands. The primary revenue generating mechanism for the WD is tourist hunting. But, if the discussion I had with the professional hunter exemplifies attitudes pervasive in the tourist hunting industry and its watchdog the WD, what is the future of wildlife conservation outside of PAs in Tanzania, even on communal lands with lucrative streams of tourism revenues?

This vignette embodies some of the constraints to community-based conservation (CBC) in Tanzania. This thesis has attempted to examine how CBC interventions by the government and institutions has altered the human geography of communities in Simanjiro, and what this bodes for the future of conservation and human interactions in northern Tanzania. Let us review its findings.



## Thesis Summary

The decline of many African pastoral groups has reduced pastoral coexistence with wildlife (Anderson and Broch-Due 1999a, Brockington 1998, Galaty 1994, Homewood and Rodgers 1991, Little et al. 2001, Rutten 1992, Spear and Waller 1993, Thompson and Homewood 2002). This coexistence has been influenced, in part, by the exclusion of people and livestock from PAs and by areas of expanding agriculture (Ellis and Swift 1988, Homewood et al. 2001, Little et al. 2001, Ottichilo et al. 2001, Western and Gichohi 1993).

The Tarangire ecosystem is proclaimed a site of global biodiversity significance due to its large-scale seasonal migration of large mammals (Kahurananga 1979, 1981, Lamprey 1963a, 1964, Reid et al. 1998). Particularly important to conservation of the ecosystem's migratory wildlife populations are the grazing and calving areas in the Simanjiro Plains (Borner 1982, Borner 1985, Kahurananga 1997, TCP 1998). However, Simanjiro has had a long history of land tenure conflicts relating to wildlife conservation (Igoe and Brockington 1999, Igoe 2004) and is experiencing rapid agricultural conversion in the plains (Cooke 2007). As a result, most large mammal populations in this ecosystem have declined by over 50 percent in the last decade (Stoner et al. 2007). A wide variety of CBC interventions, led by the State, non-governmental organisations (NGOs) and the private sector, have attempted to stem the biodiversity loss while maximising the economic returns from valuable wildlife resources in the Tarangire ecosystem. This is a pertinent subject as wildlife are declining at national and international scales throughout sub-Saharan Africa (Caro and Scholte 2007).

This thesis attempts to analyse the impacts of these various CBC interventions on pastoral livelihood diversification and biodiversity conservation in Simanjiro District. I now synthesize my findings and conclusions and attempt to suggest recommendations to improve conservation

service delivery in northern Tanzania. Beginning with “Methods” (Chapter 2), I offered a methodological perspective of how antagonisms between local people and conservation contested and, at times, threatened to derail the research process.

In “Historical and Policy Perspectives of Pastoral Impoverishment” (Chapter 3) I analysed the historical context of conflict between conservation and pastoralists, and discussed how wildlife policy has traditionally served as a mechanism for the expansion of State authority in Simanjiro, implemented in a top-down manner through local officials and wildlife agencies, resulting in lawlessness and corruption. The tourist hunting industry strongly shapes the Tanzanian government’s wildlife management practices in general, including opportunities for community participation. In Tanzania, wildlife policy is dominated by personal patronage motives, with a high level of loss at the aggregate public level of society, and negative local perceptions of the State and its wildlife policies in Simanjiro. Pastoral animosity towards, and fear of, State conservation policy originated with evictions from Tarangire National Park (NP) in 1970 and forced moves during *Ujamaa*. Since then, pastoralists have vociferously rejected and obstructed conservation initiatives proposed for Simanjiro—such as the ‘Simanjiro Conservation Area’ in the 1980s, wildlife corridors in the 1990s, and Wildlife Management Areas (WMAs) in 2001—due to a fear of continued land loss.

Pastoral peoples have good reason to fear the centrality of power evinced through the State’s adoption of CBC. It is quite clear that, for the WD anyway, their interests are not supportive of CBC. The draft Wildlife Conservation Act (2004) sought to grant the Minister of Natural Resources and Tourism additional powers to unilaterally create PAs, migratory corridors, dispersal areas and buffer zones which may fall on village land (PINGOS and LARRI 2004: 9). The design of the WMA regulations, content of the new WCA, management of tourist hunting and PA expansion, all indicate that rather than decentralizing or devolving authority, Tanzania is

undergoing a process of centralising control through wildlife management. The result is the perpetuation of the basic challenges facing wildlife management in rural areas—namely declining wildlife populations as a result of lack of local incentives to conserve the resource—and new conflicts occurring in some rural areas over village land and resource rights (Nelson et al. 2007).

As Nelson *et al.* (2004, 2007a, 2007b) have persuasively argued, CBC is fundamentally about issues of resource rights and tenure. CBT examples have emerged in northern Tanzania in a cloudy legal environment and often with resistance from the WD and tourist hunting sector. Like other industries which do not operate in a clear operating environment, this has resulted in its own problems of transparency and probity; some unethical tour operators have profited from this situation by manipulating communities for access to their land and some village officials have misappropriated tourism revenues to the detriment of individual villagers. The Government of Tanzania's attempts to introduce regulation into the CBT sector are largely seen as an effort to centralize power through community-based conservation, not to empower villagers in the control of their land and resources (URT 2007b). Contradictions exist between the Land Acts (1999) and existing wildlife policies (URT 1974, 2002b, 2007b, forthcoming), the former empowering and recognizing village rights, the latter removing control.

While Tarangire's global significance might be in question, its national importance is undisputed as an important economic engine. However, it is clear from aerial, road and anecdotal evidence that populations of large mammals have declined by over 65 percent in the Tarangire ecosystem over the last decade (TAWIRI 2004b, TNRF 2005b), a trend consistent throughout major wildlife areas in Tanzania (Stoner et al. 2007).

In “Wildlife is Our Oil: Conservation Benefits and Resistance” (Chapter 4) the analysis shifts to how wildlife management policies affect people at a local level in Simanjiro District. This

chapter examines the flows of wildlife financial benefits and how these affect people's perceptions towards wildlife conservation. In spite of wildlife tourism in the Tarangire ecosystem generating over US\$ 30 million per year, only a small fraction of this amount reaches a local level where it is concentrated in the hands of the elite. Yet villagers continue to experience demands on their land for conservation. The majority of tourist hunting revenues were channelled centrally while funds for 'community conservation' managed by Tanzania National Parks (TANAPA) and the Simanjiro District Council were prone to political manipulation and diversion. Since 2003, Emboreet received an average of over US\$ 59,000 per year from wildlife related activities—a near record level made available to villagers and roughly US\$ 136 per household per year. However, more than 90 percent of households received no household financial wildlife benefits, largely due to corruption and mismanagement within the Emboreet Village Council.

In terms of understanding natural resource management as the management of collective common pool resources, it is important to consider how a few leaders were able to appropriate these benefits. Leaders manipulated existing village institutional structures, oversight from the SDC was relaxed, and villagers had grown apathetic to leadership accountability after decades of local mismanagement and mistrust of government. In the context of Emboreet, an additional factor was the constant threat of land loss by conservation. This served as an opportunity for villagers to overlook the concentration of power in a few leaders due to the perceived crisis. In other words, the threat of land loss distracted villagers, and combined with negative feelings towards the government, perhaps provided people with less of an incentive to hold leaders accountable as long as leaders protected people's land from outside interests. Thus, in a way, conservation provided a smokescreen and 'wartime' environment in which villagers accepted possible abuses of office as long as local leaders protected their livelihood strategies. It was troubling, too, to note corruption amongst private sector tour operators engaging in community-

based tourism (CBT) in Emboreet. Tour operators, who clearly depend upon sustainable wildlife populations and also benefit from marketing their community ‘partnerships’, perversely undermined the ability of wildlife to contribute to local livelihoods in Emboreet.

In addition, despite arguments that farming contributed the most to wildlife declines in Simanjiro (Borner 1985, Kahurananga 1997, Kajuni et al. 1988, Otto et al. 1998), I argue that poaching and abuses in the district resident hunting and farm protection systems contributed significantly to these declines. The engagement in poaching by some villagers and lack of contribution to enforcement by others can be attributed to negative perceptions and a lack of incentives. In addition to the Simanjiro District Council (SDC) taking a more active role in ensuring transparent governance and participation at a village level, it is important that the SDC seals loopholes in the mismanagement of resident hunting and farm protection abuses. As a primary management agency at a local level, the district council needs to ensure that its wildlife management revenues are invested effectively in wildlife management and community development in villages of wildlife significance.

But most importantly, the State needs to consider a more equitable division of tourist hunting revenues and devolvement of wildlife management rights at a local level. In order to do this, CBC and wildlife policy reforms need to be prioritised by agencies entrusted with conservation in Tanzania such as TANAPA and the WD. More stringent internal audits need to be institutionalised within the SDC, TANAPA, and WD to detect and contain corruption. The Tanzanian Government’s recent attempt to centralize control over CBT in village lands (URT 2007b) has raised alarm amongst expatriate tour operators. However, it raises an important issue of oversight of CBT contracts with the private sector to ensure that tour operators act ethically and wildlife revenues are spent efficiently at a village level. Currently, arrangements differ from village to village, lack transparency and are *ad hoc*. While the location of this function within the

government risks further centralizing State power and limiting CBT opportunities, there is a need for some form of accreditation or regulatory mechanism to ensure that community rights are upheld by the private sector.

Having ascertained that while wildlife benefits are substantial they rarely contribute to household livelihood strategies in Emboreet, the analysis then examines quantitatively which are the important livelihood strategies for people in “Livelihoods in Emboreet” (Chapter 5). This chapter suggests that the livestock economy declined more rapidly from the mid-1980s in Simanjiro. There were two primary reasons for this: first, the inevitable increase of human populations diluted per capita livestock ratios; and secondly, livestock production was constrained following the cessation of State-provided veterinary services which made pastoral cattle more susceptible to tick-borne diseases (TBDs). The second factor would appear to be easier to address, but it faces a lack of political will to support pastoral livestock production (URT 2002a, VETAID et al. 2005) as well as State resources to provide veterinary services in rural areas (Ihucha 2008b, The Citizen 2006). Emboreet herders spent a fraction of veterinary expenses on acaricide and numerous attempts to run communal or private dips in Simanjiro had failed, alluding again to governance constraints at a local level.

Over 80 percent of households in Emboreet surveyed owned less than five tropical livestock units per adult unit equivalent, meaning that they could not subsist solely on livestock. The decline in per capita livestock holdings served as a catalyst for agricultural diversification, resulting in farming becoming a primary livelihood strategy for Emboreet households. This contributed to a modification of pastoral perceptions in which land became more valuable as a commodity than cattle. In Emboreet, livestock ownership was more skewed towards the rich compared with other parts of Maasailand (Bekure and Chabari 1991, Graham 1989, Thompson 2002). The wealthiest 20 percent of households owned 66 percent of livestock while the poorest

50 percent owned ten percent of livestock. Thus, cultivation was the most important household livelihood strategy to the poor. In terms of commodification, and in contrast to pastoralists around Mkomazi Game Reserve (GR), women from poorer households sold more milk (Brockington 1998); in Emboreet the opposite occurred: wealthy households sold the most milk as they had a surplus.

The hypothesis of conservationists working in pastoral areas of East Africa, that combined livestock and tourism returns at a household level will outweigh incentives for agricultural land use change, was disputable. Not only were wildlife revenues functionally non-existent at a household level in Emboreet, but the intrinsic value per km<sup>2</sup> of farming in Emboreet seemed to outweigh the combined returns per km<sup>2</sup> of livestock and tourism in 2004. An important qualifier is that some high volume photographic tourism operations using a relatively small area of land (like Kikoti Safari Camp) can yield high returns per km<sup>2</sup>, but still not more than current dryland farming returns in Emboreet. Additionally, tourist hunting returns per km<sup>2</sup> can be misleading as hunting utilises extensive areas and hunting operators contribute minute fractions of their turnover to legally mandated community development. Were Tanzanian wildlife policy reforms to include a higher share of tourist hunting revenues distributed at a village level, only then might land use returns per km<sup>2</sup> from wildlife in the Simanjiro Plains exceed farming returns. However, wildlife revenues which affected households were the highest form of off-farm income, which illustrates that wildlife revenues are a promising source of income when directed to a household level.

Clearly, though, new possibilities for accumulation and wealth originated in the tanzanite mines. “Brokers of the Birthstone: Tanzanite and Maasai Diversification” (Chapter 6) describes the influential role of tanzanite mining in politics and livelihoods in Simanjiro. It illustrates how gemstone mining was functionally more important as off-farm income to the largest proportion

of households, slightly behind wildlife revenues in terms of the actual amount of revenue generated. Most of the estimated 50,000 people in Mererani, the source of the approximately US\$ 500 million per year tanzanite trade, live in desperate poverty. However, a considerable number of Maasai in Simanjiro have benefitted from the gemstone brokering trade, to which the Maasai, as livestock brokers, are particularly well-suited. This chapter describes how tanzanite has possibly become the most powerful political force across Simanjiro. However, the role of tanzanite in furthering Maasai livelihoods and political goals is jeopardised by the finiteness of tanzanite: it is forecast to run out in less than 20 years. Just as various policy, environmental, and conservation uncertainties spurred mass diversification by Maasai men into gemstone brokering, tanzanite may also be terminally cut off in the foreseeable future from Maasai livelihoods.

Given that agriculture was important to household livelihood strategies in Emboreet, and the State and conservation agencies also perceived agriculture as a threat to wildlife conservation and pastoral livelihoods in Simanjiro (AWF 2006a, Borner 1985, CF 2004, EcoSystems Ltd. 1980b, Kahurananga 1997, Kajuni et al. 1988, Manyara Region 2005, SDC 2006, TANAPA 2002a, TCP 1998, TNRF 2005b), “Plains of Ochre: The History of Land Use Change in Emboreet” (Chapter 7) investigated the history and drivers of agricultural land conversion in Emboreet. This chapter examined the hypothesis that conservation (fear of it and wildlife revenues) drove agricultural conversion along with tanzanite revenues. Conservation was just one of many factors affecting land use change and the complex dynamics of land commodification. Nevertheless, because farming is seen as a means of saving the land from conservation, such rhetoric is giving farming an added moral authority in Emboreet. The internal village debates about the role of farming as a means of preventing conservation shows that conservation concerns are a vibrant village-level discourse.



Factoring in reported wildlife crop damage per year (which may have been lower than reported), the chapter speculated that only two percent of the village titled area needed to be farmed for each household to achieve food security from only maize. Considering livestock was a major source of food, less than two percent of the village might have been needed for caloric maize sufficiency in Emboreet. The concept of fixed food requirements is a misleading oversimplification (Pacey and Payne 1985 in Homewood and Rodgers 1991), but what was driving Emboreet villagers to farm more than they perhaps needed to?

The hypothesis that mining revenues are fuelling land use change appeared to be one factor—not the other way around. In testing the hypothesis that wildlife revenues fuelled land use change, households with wildlife revenue expanded their farms faster than other villagers. Paradoxically, the results suggest that households receiving income from wildlife related sources are certainly not reducing their investments in agriculture and households may indeed be investing this revenue into farming the Simanjiro Plains.

The conflicts over land in Simanjiro between pastoralists and the State and conservation interests, and the decline in per capita livestock populations, resulted in land becoming more important to Maasai identity and livelihoods than cattle. Communities felt the need to brand the land, allocating it and ploughing in order to show tenure. Prior to 1999, villagers had demarcated village boundaries (Igoe and Brockington 1999), though village boundaries were contested in Emboreet. Conservation organizations also branded the same lands, albeit in a slightly different way.

The net result of these different factors was that household level farming in Emboreet was clearly increasing, at an average of 16 percent per year. By 2004, almost half of the entire titled area of Emboreet had been allocated to villagers by the Village Council for farming. However,

only seven percent of the village titled area had been actively farmed, though 80 percent of large farms ( $\geq$  ten acres) were farmed by Emboreet villagers. Hypothetically, at existing rates of land use change, the entire village area of Emboreet would be farmed by 2022—in less than twenty years. However, villagers desired to farm at a pace that would have converted the entire village within less than two years. Considering that most of the farming was spatially located, Emboreet's portion of the Simanjiro Plains infers that they will be farmed first and sooner, functionally becoming inhospitable for wildlife. The estimated size of the Simanjiro Plains is 238,774 hectares and its overall increase in farming per year was 6.3 percent (D. Williams, *pers. comm.*, 2008). Village-based limitations on land use change in Sukuro and Terat villages lowered the rate below Emboreet's rate of change. Based on the amount of unfarmed plains in 2006 (136,038 ha) and assuming the aforementioned land use change rate, the Simanjiro Plains would theoretically be completely farmed by 2014, six years from the date of this thesis.<sup>3</sup>

The implications of this on one hand could be the functional end of the Tarangire migration into Simanjiro, the possible ecological collapse of Tarangire NP (Voeten 1999), and related reduction in tourism revenues. On the other hand, pastoral land tenure and food security from grain might be increased while livestock production might be constrained from reduced rangelands. It is clear that the perpetuation of traditional conservation efforts based on land appropriation and extension of State control over physical spaces is contributing to land use conversion, thereby undermining conservation in a vicious cycle. Villagers' livelihoods and rights will remain mutually exclusive with wildlife conservation interests resulting in continued degradation of the biodiversity value of the Tarangire ecosystem. State imposed farming bans like that of 2006 (AWF 2006a, Manyara Region 2005, SDC 2006) will likely induce displacement and impoverishment.

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<sup>3</sup> Realistically, the conversion rate could be expected to slow after a point due to insufficient land supply.

Promising land easement experience from Terat village (Foley 2007, Nelson and Sachedina In Prep) suggest that financial incentives to conserve land for wildlife and livestock do have credence in the Simanjiro Plains, and that slight shifts in policy and improved governance could rapidly and convincingly bring people into the conservation equation. Even in spite of Emboreet's complicated land and corruption issues, it is especially well placed to become an example of mutual inclusivity between conservation and people's livelihoods and rights. Few communities in Tanzania, and arguably in sub-Saharan Africa, have the right mix of factors which enable a village like Emboreet to generate over US\$ 50,000 per year from wildlife. But until the full impact of these revenues is felt at a village level, and especially at a household level, people's livelihoods, perceptions of conservation, and ultimately sustainable conservation itself, will probably not improve in Simanjiro.

Given this complex situation, what is the role of international conservation NGOs in influencing meaningful change that both benefits wildlife and people? Clearly, it was extremely difficult for any agency to conduct conservation work in Simanjiro given community antipathies and institutional dysfunction. This analysis suggests that there could also be clear approaches not to take in pursuing conservation strategies in Simanjiro such as:

- Engage with and confront the historical legacy of antipathy for conservation through dialogue and participation;
- Maintain an independent and critical voice on central government;
- Limit empowerment of corrupt bureaucrats, from village leaders dealing with revenues designed to simultaneously increase support for conservation and reduce household level poverty and farming dependence, to local and central government actors;
- Be clear in organisational values about who the organisation's primary beneficiaries are—be it wildlife and local people, or otherwise—and institutionally organise around this focus;

- Avoid conservation-induced displacement as a method of achieving conservation.

“Conservation Empire” (Chapter 8) and “Social Justice and Accountability” (Chapter 9) investigate the behaviour and influence of the African Wildlife Foundation (AWF), the most prominent international conservation NGO in the Tarangire ecosystem. Chapter 8 explores how the choices that AWF made in pursuing organizational growth constrained the available options to the organization as a result of the need to raise large amounts of aid agency funding and maintain strong relationships with Tanzanian central government institutions. AWF grew quickly into a large organisation, largely on a diet of USAID donor funds. This growth has brought AWF into much closer relations with USAID and the Tanzanian government, in particular WD and TANAPA. There was a fundamental contradiction here for international conservation NGOs seeking to support CBC in Tanzania: they were embedded in donor–state relations yet claimed to support politically contentious community claims to resources and their resultant economic benefits.

The interests of the WD and TANAPA relate to revenue, controlling resources and controlling international NGOs and not in the interests of CBC in the case of the WD. USAID interests are to fashion large-scale projects that move money, to avoid spending too much time and resources on learning and adaptation, to maintain good relations with host country governments as part of the diplomatic equation, and to pursue foreign policy interests (cf. Gibson et al. 2005). AWF’s continued relationship with its donors was dependent upon the first key relationship in that the Tanzanian government is required to approve large donor-funded projects in Tanzania. AWF then needed to internalise these interests by moving money, maintaining good relations with the State, and not promoting controversial institutional reforms such as devolutionary CBC. AWF’s behaviour was then controlled by mechanisms for enforcing donor-government over NGOs: the country agreement, tax exemption and control over staff work permits, and donor funds which

the government must approve. AWF's focus on these interests fostered a non-collaborative institutional culture which prevented AWF from forging strategic partnerships with local NGOs that could have enabled AWF to circumvent some of its own organisational constraints. Thus, we can see that AWF exchanged its ability to promote local community interests for donor funds and proximity to government.

AWF's choices, therefore, had a profound impact on its ability to fashion CBC interventions, which I explore in Chapter 9. This chapter argues that AWF's Tanzanian Heartlands depended on local community support to achieve conservation. AWF's pursuit of growth, donor funds, and networks of power created disincentives to AWF supporting local communities in their struggles to benefit from wildlife and manage their lands and resources in pursuit of locally defined natural resource management initiatives. AWF's ties to donors and government led it to prioritize close relationships with the State over communities, with the result that instead of supporting CBC locally, AWF supported evictions, the centrality of State power, undermined local livelihoods and ultimately its very own mission.

Declines of large mammals that defined the Tarangire ecosystem over the last decade raises questions about the optimal level of financial resources needed to conserve it. Tragically, it appears that conservation has failed the Tarangire ecosystem. The WD and SDC's wildlife management work in Simanjiro was under-resourced and not an organisational priority; TANAPA's CCS approach was *ad hoc* and prone to political manipulation. One might infer that the infusion of resources alone would have stemmed wildlife declines. In fact, since 1998 international donors granted AWF approximately US\$ 13 million for conservation in the Tarangire ecosystem. TANAPA invested millions more into the management of Tarangire and Lake Manyara NPs and CCS.

Where was this money spent? It largely funded park infrastructure, AWF's operations in Arusha, and Manyara Ranch. The average cost per km<sup>2</sup> to manage PAs in Africa ranged from US\$ 20 to US\$ 200 (Inamdar et al. 1999, Struhsaker et al. 2005). AWF's annual budget in Tanzania in 2007 was US\$ 1,353,829 which was spatially concentrated in Manyara Ranch. Over six years, US\$ 2.5 million was directly invested (not including AWF staff investments in fundraising in Washington, DC) in this ranch of 178.1 km<sup>2</sup>. This translated into US\$ 2,340 per km<sup>2</sup> per year. This disproportionate investment contributed to efforts across the landscape being spread thinly.

BirdLife International and the World Conservation Union estimate that Africa's estimated 1,200 PAs require US\$ 300 million per year to be effectively managed and staffed.<sup>4</sup> Scholfield and Brockington (2008) argue that existing levels of funding for the conservation NGO sector probably provide only about ten percent of what is needed. In other words, the conservation NGO sector in sub-Saharan Africa could usefully scale up its activities by one order of magnitude. They specify that this call is made in the absence of data about how efficiently funds are used. It is important that organisational performance, accountability and transparency are considered as conservation organisations continue to grow into a multi-billion dollar sector.

AWF's fundraising for the Tarangire ecosystem successfully exceeded the requirements recommended by BirdLife International. At an organisational level, AWF's use of funds was promoted as being cost-effective. AWF received the highest four star rating from Charity Navigator, an independent organisation which evaluates the financial health of America's largest charities.<sup>5</sup> The President of Charity Navigator wrote to AWF:

“Only 1% of the charities we've rated have received at least 6 consecutive 4-star evaluations, indicating that African Wildlife Foundation outperforms most charities

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<sup>4</sup> [http://www.birdlife.org/news/news/2005/02/africa\\_pa\\_shortfall.html](http://www.birdlife.org/news/news/2005/02/africa_pa_shortfall.html) accessed 12 July 2007.

<sup>5</sup> <http://charitynavigator.org/index.cfm> accessed 13 August 2007.

in America in its efforts to operate in the most fiscally responsible way possible. This "exceptional" designation from Charity Navigator differentiates African Wildlife Foundation from its peers and demonstrates to the public it is worthy of their trust".<sup>6</sup>

The Nature Conservancy (TNC) also received the four star rating from Charity Navigator.<sup>7</sup> Both NGO websites state that the organisations met all of the Better Business Bureau (BBB) Wise Giving Alliance Standards for Charity Accountability, another independent charity evaluator. What does it say about the state of the US non-profit sector that AWF is ranked within the top one percent of performing charities? What sort of questions do independent charity watchdogs collect? Independent charity evaluators are only asking specific sorts of questions.

This is not to say, however, that the majority of AWF's staff lacked capacity or were not dedicated to conservation and helping people. Most staff probably *did* believe they were doing the right things, but similar to me before I spent time with local people, simply lacked accurate information about AWF's impact at a ground level—a consequence of the urban-based structure and low accountability demanded by donors. We dutifully produced, and were some of the most avid consumers of AWF's beautiful marketing materials from urban bases far removed from local people and the realities of the field.

Critiques of AWF's attitudes and practices vis-à-vis community conservation were well documented. Investment in Manyara Ranch—primarily in ranch infrastructure—did little to transform livelihoods in its partner villages of Ol Tukai and Esilalei (cf. Goldman 2006). Goldman critiqued AWF's perceived patriarchal and coercive approach towards community conservation in Monduli District (Goldman 2003, 2006). In Simanjiro and Babati districts, Igoe

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<sup>6</sup> <http://awf.org/content/headline/detail/3908/> accessed 13 August 2007

<sup>7</sup> <http://www.nature.org/aboutus/leadership/art15505.html> accessed 13 August 2007.

suggested that AWF's community conservation approach disguised a fortress conservation philosophy that inhibited pastoral empowerment (Igoe 2000, 2004, Igoe and Croucher 2007). Bonner's (1993: 120) criticism of AWF included the concentration of power in the hands of expatriates and celebrity researchers, and using charismatic species for its own benefit. Scholars continue to propose that conservation NGOs like AWF contribute to power relations that are fundamentally colonial in nature (Brockington forthcoming, Garland 2006). My own research indicated that AWF had done little to counter these critiques or learn from them and that large sums of money did not automatically translate into better conservation.<sup>8</sup>

AWF found itself in a space in which it was entering unwittingly into a Faustian bargain, willing to sacrifice anything to satisfy a limitless desire for knowledge or power. In AWF's case, it has struck this bargain without realising it. AWF is not a development organization, but an organization that pursues developmental objectives as a means to the end of wildlife conservation. The lack of organisational will to engage with communities is described by Brosius and Russell (2004) as: "To the extent that such analyses do consider the concerns of local communities, it is through the lens of a stakeholder-based approach that reduces all needs, concerns and sentiments to 'interests'" (Brosius and Russell 2003). The reasoning for this is how NGO accountability affects the ability of NGOs to navigate the complex process of scaling up—the expansion of impact beyond a local level (Uvin et al. 2000)—due to the weaknesses of dependence on official aid (Edwards and Hulme 1996a). While NGOs are seen as a pivotal component of a healthy civil society and counterbalance to state power, NGOs are also questioned in other spheres about whether indeed they are the right vehicles to nurture equality and empowering development amongst the poor (Mercer 1999). In the case of AWF, I would

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<sup>8</sup> Some of these scholars told me that they refrained from publishing fuller critiques due to a fear of AWF. I, too, am afraid of powerful people within AWF and the potential repercussions on my career for contributing to the critiques. But hopefully the growing chorus will encourage self-examination and institutional development at AWF, where its energy is invested in saving more wildlife, improving rural people's lives, and becoming a more robust and sustainable institution.



argue that it was not actually a part of a non-state civil society but actually a bridge between USAID and the Tanzanian government and fundamentally tied to the needs of both States' different interests and institutions.

The case of AWF illustrates that large external NGOs seem to have budgets far in excess of the actual sustainable impact compared to local NGOs. Effectiveness is an issue, too, in that well-funded conservation projects have failed or significantly under-delivered. By their very nature it seems debatable whether BINGOs can implement effectively on the ground. The most promising approaches that are achieving "conservation" are local ones that in fact are intended by local communities to improve livelihoods, ensure food security and also fulfil some Western conservation agendas (Schelhas and Pfeffer 2008). The best support to these approaches does not necessarily require vast financial resources. Unfortunately, BINGOs are forever trying to squeeze these indigenous and holistic models into their Western mould and at best missing opportunities to truly integrate conservation with people's lives. At worst, they are actually undermining the more pressing agendas of food, health and development of interest to local people.

More generally substantial, but highly contested, criticisms have been voiced of the social consequences of BINGO's actions (Bonner 1993, Chapin 2004, Dowie 2005, 2006b, Garland 2006, Romero and Andrade 2004, Seligmann et al. 2005). Critiques about the consequences of conservation NGO activity are likely to increase if the sector gets bigger, especially if PAs continue to drive the core thinking and relationships governing landscape conservation work in areas primarily outside of PAs. Specifically, critics have noted NGOs' involvement in policies which can impoverish and disempower rural Africans. Conservation organisations, like development organisations, distribute fortune and misfortune. Scholfield and Brockington (2008) indeed predict that inequality within the conservation sector is likely to grow as private

philanthropy increases the wealth of the largest BINGOs. In that respect, the parallel body of research on development NGOs may offer social scientists models of how they can constructively engage with the conservation NGO sector.

### **Branding the Land**

Given that the BINGO CBC narrative faces some fundamental contradictions, if conservationists want CBC to deliver on its potential then alternative models may be needed—smaller NGOs which are fundamentally embedded as part of civil society. We need to recognize and understand BINGOs for what they are, which is very different from what they sometimes present themselves to be.

Like pastoralists branding the land through agriculture, the recent trend amongst conservation organizations has been towards branding entire regions as ‘flagship areas’. Recasting flagship areas is expensive, but it means that the money raised can be used to support a wide range of conservation projects. Marketing has assumed a central role in conservation organizations. Twenty years ago AWF learned the power of communications through its ivory ban campaign. Visitors to AWF’s website in 2008 are greeted not by a picture of a poached elephant but by a chance to adopt an African acre of land.<sup>9</sup> Conservation International (CI) has raised US\$ 750 million to protect biodiversity ‘Hotspots’. Scientific debate about ‘Hotspots’ remains contentious (Brahic 2006, Jepson and Canney 2001, Willis et al. 2007), but landscape conservation makes a compelling case to donors: it is the next logical step to scaling up. Between 1999 and 2006, AWF’s ‘Heartlands’ program raised US\$ 110 million. AWF’s representation of African landscapes using Midwestern values ironically contributed to the transformation of AWF as an institution.

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<sup>9</sup> [http://www.economist.com/world/international/displaystory.cfm?story\\_id=10486391](http://www.economist.com/world/international/displaystory.cfm?story_id=10486391) accessed 13 March 2008.

The disproportionate power of charismatic animals, and now flagship areas, are important strategies in conservation fundraising. Brockington (2002) observed the power of publicity to change reality and helped to create wilderness. Publicity works best with wilderness, not with the broader suite of publicity NGOs produce. Nor in fact does it work with all wildernesses all the time. Conservation groups can pick and choose what they want from their publicity and apply it as they see fit. Publicity about good community relations does not automatically create good community relations. This could be because conservation organizations present a reality that may not exist but is compelling to wealthy Western donors through the representation of images rather than complex social-physical realities.

CBC is a political process. Thus, BINGOs which fail to support local communities and are constrained by their own organizational and institutional incentives may contribute to harming rural people and undermining conservation. The example of Flying Medical Service illustrates that organisations can remain small and focused while still maintaining inspirational goals and impact. This is why I argue that more money will not automatically translate into better conservation impact. Rather it could arguably make conservation worse if BINGOs' value systems and behaviour do not change.

### **The Elephant and the Sapling**

It has been illustrated that wildlife resources are one of the highest direct revenue generating sectors in the Tarangire ecosystem. However, revenue from wildlife-based activities accruing to villagers is minimal. Unless it can be demonstrated that viable economic returns can be generated by pastoral rangeland without cultivating, it is likely that the corridors and wildlife dispersal areas of the Simanjiro Plains will be steadily converted over to crops. A fundamental

issue in the success of community-based conservation programs and their governance is the delivery of economic benefits, however small, at a household level. However, household level wildlife benefits are constrained by weak governance processes in community institutions for benefit sharing, corruption in the tourism private sector, the centralization of tourist hunting revenues in the State, and dysfunctional institutional cultures in government agencies.

Soon, the viability of tourism in Simanjiro may be damaged as wildlife decline due to institutional failure to direct revenues from wildlife to a village level. The approach of tour operators and government agencies and the policy environment combine, ultimately, to reduce the long term wildlife potential of Simanjiro and Tarangire to provide significant and stable returns from wildlife. This could result in a different sort of ecosystem—one which abounds with elephants (who tend to win their fights with people) and fewer wildebeest (who do not).

There is, however, one final twist to this tale. Despite the declines of many large mammals, the often deleterious role of AWF, government and other institutions, and the best efforts of the Maasai to keep conservation at bay, nature may bite back in unpredictable ways. A form of the Tarangire ecosystem may be conserved despite the failures of its conservators and the opposition of its neighbours (hence the analogy to the elephant and the sapling). Ultimately, as elephant numbers increase, they may proliferate such that their numbers make farming, and all sorts of other human presence, increasingly difficult. This could be a desirable outcome of sorts for some conservationists, but the processes involved—interactions with local people, inefficient use of funds, disempowerment, and failure to challenge the government—are less satisfactory. Should Tarangire's elephant population continue to grow, then ironically, Tarangire, with all its conservation efforts going on around it, could prove to be a case of 'epiphenomenal conservation'. 'Epiphenomenal' (or side effect) conservation is different from true conservation in that it refers to benign ecological outcomes which bear no relationship whatsoever to the

behaviour of management agencies or land users (Hunn 1982). It is usually ascribed to cases where conservation results but not intentionally. Here the intention is to conserve, but the outcome of policies outside of the national park is detrimental.

Community-based conservation in the Maasai Steppe is failing, not because of its basic conceptual premise, but because its implementation is governed by the individual interests of powerful actors. Rather than collaboratively promoting the devolution of powers to pastoralist communities, as CBC rhetoric calls for, they pursue their own interests in terms of power, money, and influence, all driven by the great wealth of wildlife that northern Tanzania provides. Bound by their own histories and interests, the collective vision in maintaining the Tarangire ecosystem is lost in the scramble, and both conservation and local livelihood interests fade into the background, like wildebeest disappearing into a haze of heat and dust on the horizon. Nevertheless, it seems inevitable that one way or another—whether intentionally or epiphenomenally—conservation will occur. But the question remains, at what price?

## Appendix I

**Emboreet Sub-Village Household Head Census, Wealth Ranking, Reported Livestock, and Survey Information (Anonymised)**Compiled by: John Ole Ndikon, Oltterere Lemtunde, Hassan Sachedina, Ray Teekishe - *Latest Version 8 September, 2006*

		Total Households: 437			Total Bomas 165		
	<b>Households %</b>		<b>Emboreet Village</b>	<b>%</b>	<b>Broad Scale Surveyed</b>		
Meinani	208 48%		Cattle	4,129 31%	Poor	55	24%
Middling	127 29%		Sheep	4,078 31%	Middling	70	31%
Wealthy	102 23%		Goats	5,143 39%	Wealthy	101	44%
<b>Total*</b>	<b>437 100%</b>		<b>Total</b>	<b>13,350 100%</b>	<b>Total</b>	<b>227</b>	<b>100%</b>

**GENDER UPDATED 13 APRIL 05**

	Female %	Male %		%
Meinani	21 75%	187 46%	Female	28 6%
Middling	5 18%	122 30%	Male	409 94%
Wealthy	2 7%	100 24%	<b>Total*</b>	<b>437 100%</b>
<b>Total</b>	<b>28 100%</b>	<b>409 100%</b>		

**Leadership/Coding Key**

<b>M</b>	Mwenyekiti Kijiji (Village Chairman)	<b>TAPHGO</b>	Tanzania Pastoralist, Hunter Gather Organisation
<b>M/EK</b>	Mtibu wa Elimu wa Kata (Ward Education Coordinator)	<b>Engopiro</b>	Assistant age-set Laigwanan
<b>DEO</b>	Katibu Tarafa (Division Executive Officer)	<b>Ujamaa CRT</b>	Dorobo's Community Resource Trust
<b>M/K</b>	Mwenyekiti Kitong'aji (Sub-village Chairman)	<b>CORDS</b>	Community Research and Development Services
<b>M/SK</b>	Mjumbe wa Senkali wa Kijiji (Village Govt. Councillor)	<b>SAHLC</b>	Sijiro Animal Health Learning Center
<b>VEO</b>	Mtendaji wa Kijiji (Village Executive Officer)	<b>ILRI</b>	International Livestock Research Institute
<b>WEO</b>	Mtendaji wa Kata (Ward Executive Officer)	<b>MAA</b>	Maasai Advancement Association
<b>LW</b>	Laigwanan (Mila or age-set)	<b>PINGOS</b>	Pastoralist Indigenous NGO Forum
<b>ED</b>	Executive Director	<b>TPTS</b>	Kikoti employee or TPTS driver/guide
<b>DC</b>	Mkuu wa Wilaya (District Commissioner)	<b>   Ndirito</b>	Ndirito age-set
<b>LFO</b>	Livestock Field Officer	<b>Mererani</b>	In Mererani
<b>Mwl.</b>	Teacher		
<b>M/W</b>	Mkuu wa Chuo (Headmaster)		
<b>Ke</b>	Mwanamke (Woman)		
<b>D</b>	Diwani (Councillor)		

**Wealth Categories based on Criteria**

1. Number of Cattle
2. Number of Shoats
3. Number of Wives
4. Farm acreage
5. Wage Employment
6. Number of Educated Children
7. Leadership Position
8. Affiliations with wealthy HH's

**B/S Sample Size**

52%

**BROADSCALE AND REPEAT ROUND SURVEYS & SAMPLES**

<b>Emboreet</b>	3.841	<b>437</b>	0.553	0.5	0.05	<b>436</b>	3.841	0.5	0.5
				464.1099505	1.09		0.96025		
			<b>Sample</b>	464.1099505	2.05025				
				<b>226.367492</b>					

Kitongoji	hh no	%	Sample	Wealth group	%	Check	Sample distribution	Completed	
Larkatal	42	9.6110	22	Rich	19%	1	4	7	26
				Middle	33%		7	10	
				Meinati	48%		10	9	
Meleleki	85	19.4508	44	Rich	14%	1	6	7	37
				Middle	29%		13	11	
				Meinati	56%		25	19	
Eslalei	47	10.7551	24	Rich	9%	1	2	2	28
				Middle	30%		7	10	
				Meinati	62%		15	16	
Emboreet	106	24.2563	55	Rich	31%	1	17	18	61
				Middle	18%		10	11	
				Meinati	51%		28	32	
Ingung	38	8.6957	20	Rich	16%	1	3	3	16
				Middle	32%		6	5	
				Meinati	53%		10	8	
Kati kati	39	8.9245	20	Rich	13%	1	3	4	20
				Middle	38%		8	7	
				Meinati	49%		10	9	
Lenaitunyo	80	18.3066	41	Rich	43%	1	18	14	38
				Middle	35%		15	16	
				Meinati	23%		9	8	
<b>Check</b>	<b>437</b>	<b>100</b>	<b>226</b>				<b>226</b>	<b>226</b>	<b>226</b>

	Total	%	Total	%
Rich	53	23	55	24
Middle	66	29	70	31
Meinati	108	48	101	45
<b>Total</b>	<b>226</b>	<b>100</b>	<b>226</b>	<b>100</b>

**REPEAT ROUND SURVEY**

**Emboreet**

Sample 37

Kitongoji	hh no	%	Sample	Wealth group	%	Check	Sample distribution	Sample
Larkatial	42	24.85	9	Rich	19%	1	2	9
				Middle	33%		3	
				Meinati	48%		4	
Esilalei	47	27.81	10	Rich	9%	1	1	10
				Middle	30%		3	
				Meinati	62%		6	
Lenaitunyo	80	47.34	18	Rich	43%	1	7	18
				Middle	35%		6	
				Meinati	23%		4	
<b>Check</b>	169	100	37				37	37

%	Actual	Sample
	2	10
	3	
	5	
	1	11
	3	
	7	
	4	16
	9	
	3	
	37	

	Total	%
Rich	10	27
Middle	12	33
Meinati	15	40
	37	

Total	%
7	19%
15	41%
15	41%
37	



**RR Survey Household Head and Sub Household Head Name List and Date Check-List (12 April 05)**

RR #	Name	S/Village	1st Visit	2nd Visit	3rd Visit	4th Visit	5th Visit	6th Visit
<i>Poor</i>								
1		Esilalei	1/3/2005	12/6/2005	8/7/2005	5/10/2005	3/12/2005	19/1/2006
1.1		Esilalei	1/3/2005	10/6/2005	7/8/2005	3/12/2005	19/1/2006	
1.2		Esilalei	1/3/2005	10/6/2005	7/8/2005	6/10/2005	18/1/2006	
1.3		Esilalei	1/3/2005	10/6/2005	3/12/2005	18/1/2006		
<i>Poor</i>								
2		Esilalei	2/3/2005		23/8/2005	9/11/2005		
2.1		Esilalei	2/3/2005	11/6/2005	23/8/2005	9/11/2005	8/12/2005	5/2/2006
<i>Middling</i>								
3		Esilalei	2/3/2005	12/6/2005	24/8/2005	12/10/2005	7/12/2005	19/1/2006
3.1		Esilalei	2/3/2005	12/6/2005	24/8/2005	12/10/2005	7/12/2005	19/1/2006
3.2		Esilalei		12/6/2005	24/8/2005	7/12/2005	19/1/2006	
3.3		Esilalei		12/6/2005	24/8/2005	12/10/2005	19/1/2006	
<i>Rich</i>								
4		Larkaitial	3/3/2005	13/6/2005	25/8/2005	18/10/05	6/12/2005	19-Jan-06
4.1		Larkaitial	3/3/2005	24/6/2005	25/8/2005	19/10/05	13/2/06	
<i>Poor</i>								
5		Larkaitial	3/3/2005	15/6/2005	29/10/05	11/12/2005	29-Jan-06	
<i>Rich</i>								
6		Larkaitial	3/3/2005	13/6/2005	26/8/2005	17/10/05	6/12/2005	29/1/06
6.1		Larkaitial	3/3/2005	13/6/2006	25/8/2005	17/10/05	6/12/2005	29/1/06
6.2		Larkaitial	3/3/2005	13/6/2007	26/8/2005	18/10/05	6/12/2005	29/1/06
6.3		Larkaitial	3/3/2005	13/6/2008	25/8/2005	17/10/05	6/12/2005	29/1/06
6.4		Larkaitial	3/3/2005	13/6/2009	25/8/2005	18/10/05	6/12/2005	29/1/06
6.5		Larkaitial	3/3/2005	13/6/2010	25/8/2005	18/10/05	6/12/2005	29/1/06
<i>Poor</i>								
7		Larkaitial	3/3/2005	13/6/2005	25/8/2005	19/10/05	7/12/2005	29/1/06
7.1		Larkaitial	3/3/2005	13/6/2006	25/8/2005	20/10/05	15/12/05	29/1/06
7.2		Larkaitial	3/3/2005	13/6/2007	25/8/2005	20/10/05	15/12/05	29/1/06
7.3		Larkaitial	3/3/2005	13/6/2008	25/8/2005	20/10/05	15/12/05	29/1/06
<i>Poor</i>								
8		Esilalei	22/3/2005	12/6/2005	23/8/2005	6/10/2005	8/12/2005	
8.1		Esilalei	22/3/2005	11/6/2005	6/8/2005	6/10/2005	2/12/2005	6/2/2006
<i>Poor</i>								
9		Esilalei	23/3/2005	11/6/2005	23/8/2005	11/10/2005	4/12/2005	18/1/2006
9.1		Esilalei	23/3/2005	11/6/2005	24/8/2005	11/10/2005	4/12/2005	18/1/2006
<i>Middling</i>								
10		Larkaitial	31/3/2005	13/6/2005	26/8/2005	27/10/05	12/05/2006	30-Jan-06
10.1		Larkaitial	31/3/2005	13/6/2005	26/8/2005	27/10/05	12/05/2005	30/1/06
<i>Middling</i>								
11		Larkaitial	31/3/2005	27/8/2005	6/12/2005	03-Feb-06		
11.1		Larkaitial			27/8/2005	27/10/05	05/12/2005	03/02/2006
11.2		Larkaitial		22/6/2005	27/8/2005	28/10/05	02/03/2006	
<i>Middling</i>								
12		Esilalei	1/4/2005	29/6/2005	11/9/2005	2/11/05	16/12/05	
12.1		Esilalei	1/4/2005	20/6/2005	8/9/2005	12/10/2005	08/02/2006	
<i>Rich</i>								
13		Esilalei	1/4/2005	20/6/2005	8/9/2005	7/10/2005	16/12/05	
13.1		Esilalei	1/4/2005	20/6/2005	8/2/2006			
13.2		Esilalei	1/4/2005	20/6/2007	8/9/2005	7/10/2005	8/2/2006	
<i>Poor</i>								
14		Larkaitial	31/3/2005		12/9/2005			
<i>Poor</i>								
15		Larkaitial	2/4/2005	15/6/2005	23/9/05	8/12/2005		
15.1		Larkaitial	2/4/2005	15/6/2006	27/8/2005	27/10/05	5/12/2005	10/2/2006
<i>Middling</i>								
16		Larkaitial	2/4/2005	15/6/2005	27/8/2005	29/10/05	4/12/2005	04-Feb-06
16.1		Larkaitial		15/6/2006	27/8/2005	27/10/05	4/12/2005	4/2/2006

<i>Middling</i>								
17		Esilalei	2/4/2005	10/6/2005	9/9/2005	10/10/2005	9/12/2005	18-Feb-06
17.1		Esilalei	2/4/2005	10/6/2005	N/A	N/A	N/A	N/A
17.2		Esilalei			6/8/2005			
<i>Poor</i>								
18		Esilalei	3/4/2005	16/6/2005	10/10/2005	13/12/2005	19/1/2006	
18.1		Esilalei	3/4/2005	16/6/2006	24/8/2005	20/10/05	10/12/2005	19/1/2006
<i>Poor</i>								
19		Esilalei	3/4/2005	24/6/2005	24/8/2005	8/10/2005	12/12/2005	19/1/2006
19.1		Esilalei	3/4/2005	16/6/2006	24/8/2005	12/12/2005	19/1/2006	
19.2		Esilalei	10/12/2005	19/1/2006				
<i>Poor</i>								
20		Esilalei	3/4/2005	16/6/2006	24/8/2005	22/10/05	19/1/2006	
20.1		Esilalei	3/4/2005	16/6/2007	24/8/05	14/10/05	10/12/2005	19/1/2006
20.2		Esilalei	3/4/2005	16/6/2008	24/8/2005	20/10/05	9/12/2005	19/1/2006
<i>Rich</i>								
21		Lenaitunyo	4/4/2005	28/6/2005	10/8/2005	13/9/05	8/11/2005	8/1/2006
21.1		Lenaitunyo	4/4/2005	28/6/2006	11/8/2005	18/9/05	8/11/2005	8/1/2006
21.2		Lenaitunyo	4/4/2005	28/6/2007	11/8/2005	15/9/05	8/11/2005	8/1/2006
<i>Poor</i>								
22		Lenaitunyo	4/4/2005	27/6/2005	12/8/2005	13/9/05	23-Jan-06	
22.1		Lenaitunyo	4/4/2005	28/6/2005	11/8/2005	15/9/05	9/1/2006	
22.2		Lenaitunyo		28/6/2006	11/8/2005	16/9/05	9/1/2006	
<i>Rich</i>								
23		Lenaitunyo	5/4/2005	17/9/05	18/1/05	24-Jan-06		
23.1		Lenaitunyo	5/4/2005	17/9/05	12/1/2006			
23.2		Lenaitunyo	5/4/2005	17/9/05	18/1/05	12/1/2006		
<i>Middling</i>								
24		Lenaitunyo	5/4/2005	2/7/2005	16/9/05	8/11/2005	12/1/2006	
24.1		Lenaitunyo	5/4/2005	2/7/2005	14/9/05	8/11/2005	11/1/2006	
24.2		Lenaitunyo	5/4/2005	2/7/2005	16/9/05	8/11/2005	11/1/2006	
24.3		Lenaitunyo	5/4/2005	2/7/2005	16/9/05	8/11/2005	11/1/2006	
<i>Poor</i>								
25		Lenaitunyo	5/4/2005					
25.1		Lenaitunyo	5/4/2005	11/8/2005	18/9/05	8/11/2005	11/1/2006	
<i>Middling</i>								
26		Lenaitunyo	6/4/2005	5/8/2005	16/9/05	16/1/05	16/1/06	
26.1		Lenaitunyo	6/4/2005	5/8/2005	16/9/05	10/11/2005	14/1/06	
<i>Rich</i>								
27		Lenaitunyo	6/4/2005		3/10/2005	17/1/05	14/1/06	
27.1		Lenaitunyo	6/4/2005	5/8/2005		10/11/2005	14/1/06	
<i>Poor</i>								
28		Larkaitial	31/3/2005	13/6/2005	26/8/2005	28/10/05	5/12/2005	28/1/06
<i>Middling</i>								
29		Lenaitunyo	7/4/2005	11/8/2005	14/1/06	12-Jan-06		
29.1		Lenaitunyo	7/4/2005	11/8/2005	18/9/05	14/1/06		
29.2		Lenaitunyo	7/4/2005		17/9/05	15/1/06		
29.3		Lenaitunyo	7/4/2005			14/1/06		
<i>Middling</i>								
30		Lenaitunyo	13/8/2005	29/9/05	18/1/05	12/1/2006		
30.1		Lenaitunyo	15/8/2005	30/9/05	19/1/05			
30.2		Lenaitunyo	15/8/2006	30/9/05	17/1/05	16/1/06		
<i>Middling</i>								
31		Lenaitunyo	12/8/2005	15/9/05	15/1/06			
31.1		Lenaitunyo	15/8/2005	16/1/05	15/1/06			
<i>Middling</i>								
32		Lenaitunyo	17/8/2005	14/9/05	18/1/05	15-Jan-06		
32.1		Lenaitunyo	18/11/05	16/1/06				
<i>Middling</i>								
33		Lenaitunyo	19/8/2005	15/9/05	17/1/05	15/1/06		
33.1		Lenaitunyo	16/8/2005		16/1/05	15/1/06		
<i>Rich</i>								
34		Lenaitunyo	20/9/05	17/1/05	15/1/06			
34.1		Lenaitunyo						
<i>Poor</i>								
35		Lenaitunyo	20/9/05	15/1/06				
35.1		Lenaitunyo	16/1/06					

<i>Middling</i>								
<b>36</b>		Lenaitunyo	16/11/05	16/1/2006				
<b>36.1</b>		Lenaitunyo	16/11/05	16/1/06				
<b>36.2</b>		Lenaitunyo	16/11/05	N/A	N/A	N/A	N/A	N/A
<b>36.3</b>		Lenaitunyo		16/1/06				
<i>Middling</i>								
<b>37</b>		Lenaitunyo	16/11/05	10/1/2006				
<b>37.1</b>		Lenaitunyo	16/11/05	10/1/2006				
<b>37.2</b>		Lenaitunyo	16/11/05	10/1/2006				

Sub Village Larkaiñal															
Boma	Head of Household		Notes	Meinati	Middling	Wealthy	Cattle	Sheep	Goats	Rdm	GPS Coordinates		RR	B/S #	RR #
	Last Name	First Name									UTM	UTM			
11				1						14	37M02 13304	9563850			
10				1						20	37M02 13460	9562552			
10				1			2	23	15	7	37M02 13460	9562552	1	91	
10				1						22	37M02 13460	9562552			
11			Ke	1			8	12	16	23	37M02 13304	9563850	1	86	28
7				1			0	9	11	27	37M02 12454	9561848	1	115	14
4				1			9	28	31	17	37M02 12549	9562029	1	160	
5				1						11	37M02 12142	9562060			
3			Prev C/Man	1			10	35	44	23	37M02 12895	9561300	1	14	7
5				1						13	37M02 12142	9562060			
1				1			4	0	4	18	37M02 12945	9561428	1	8	
4				1						15	37M02 12549	9562029			
7				1			6	11	8	20	37M02 12454	9563850	1	88	15
7				1						10	37M02 12454	9563850			
7				1						27	37M02 12454	9563850			
2				1						13	37M02 12945	9561428			5
2				1						13	37M02 12945	9561428			
1				1			0	1	3	21	37M02 12945	9561428			
8				1						27	37M02 12533	9563998	1	92	
6			Ke	1			2	0	2	19	37M02 12442	9562964	1	90	
													9		
6					1		10	4	17	32	37M02 12442	9562964	1	76	
6			MK		1		8	11	27	36	37M02 12442	9562964	1	141	
1					1		8	5	4	35	37M02 12945	9561428	1	12	
1					1		22	18	42	39	37M02 12945	9561428	1	13	
1					1					40	37M02 12945	9561428			
7					1		3	20	12	40	37M02 12454	9563850	1	84	16
7					1		5	15	35	32	37M02 12425	9561848	1	87	
7					1		5	40	22	41	37M02 12454	9561848	1	89	
11					1		4	20	50	32	37M02 13304	9563850	1	126	10
3			B/hde supervisor		1		6	20	25	39	37M02 12895	9561300	1	23	
8			Karatu		1					42	37M02 12533	9563998			
9					1					31	37M02 13262	9562552			
11					1		32	18	26	43	37M02 13304	9563850	1	127	
8					1		10	60	45	42	37M02 12533	9563998			11
													10		

1						1	17	9	14	49	37M0212945	9561428	1	5	6
6						1	15	1	16	50	37M0212442	9562964	1	85	
						1							1	66	
11						1	400	50	109	50	37M0213304	9563850	1	146	
1						1	35	5	27	49	37M0212945	9561428	1	7	4
7						1				50	37M0212454	9563850			
11						1	60	8	44	46	37M0213309	9563850	1	65	
11						1	60	12	23	48	37M0213309	9563850	1	128	
													7		
11 Bomas	<b>Subtotals</b>					20	14	8	741	435	672				
	<b>Totals</b>					42			1,848			Total B/S surveyed		0	
	<b>Percentage of total</b>					47.6%	33.3%	19.0%	40.1%	23.5%	36.4%	Total # of women HH's		2	

<b>Sub Village Meleleki</b>														
Boma	Head of Household		Notes	Meinati	Middling	Wealthy					GPS Coordinates		B/S	#
	Last Name	First Name					Cattle	Sheep	Goats	Rdm	UTM	UTM		
14				1			2	0	0	45	37M0214400	9556904	1	35
20				1			2	7	12	11	37M0214593	9557078		
15				1			0	6	2	33	37M0213449	9555063	1	172
27				1			0	0	0	40	*	*	1	147
15				1						13	37M0213428	9555264		
18				1			0	5	7	24	37M0213259	9556588	1	109
18				1						50	37M0213259	9556588		
18				1						28	37M0213259	9556588		
14				1			8	6	13	39	37M0213449	9555063		
23				1			4	14	15	44	37M0215617	9556897	1	46
23			Karatu	1						21	37M0215618	9556898		
23				1			10	24	16	34	37M0215619	9556899	1	176
23				1			5	11	16	22	37M0215616	9556896	1	30
16				1						24	37M0213619	9556002		
22			Ke	1						10	37M0214594	9557079		
15				1						13	37M0213428	9555264		
23				1			0	5	5	15	37M0215618	9556898	1	101
16				1			5	8	13	7	37M0213619	9556002	1	204
18				1			4	4	7	36	37M0213259	9556588		
23				1			3	3	9	7	37M0215618	9556898	1	202
18				1						22	37M0213259	9556588		

18		Ke	1						36	37M0213260	9556589		
13		Ke	1						50	37M0213589	9554718		
20			1			2	7	12	49	37M0214400	9556904	1	1
22			1						13	37M0214594	9557079		
23			1			0	5	29	44	37M0215616	9556896	1	100
22			1			1	15	14	23	37M0214594	9557079	1	178
22		TPTS-Kikoti	1			4	10	1	14	37M0214595	9557080	1	112
24			1						39	37M0214727	9555375		
24			1						28	37M0214728	9555375		
24		Ke	1						46	37M0214729	9555375		
25		Karatu	1			4	17	76	41	37M0214738	9555601	1	135
24		Karatu	1						28	37M0214729	9555375		
24			1						48	37M0214730	9555376		
24		Karatu	1						29	37M0214731	9555377		
25			1						48	37M0214738	9555601		
24			1						29	37M0214729	9555375		
25			1			0	1	6	35	37M0216484	9559816	1	41
14			1						36	37M0213448	9555062		
21		Ke	1						21	37M0213259	9556388		
17			1			4	4	8	39	37M0213619	9586002		
17			1			2	0	4	25	37M0213747	9556161		*
16		Ke	1						38	37M0213619	9556002	1	77
20			1						28	37M0214400	9556904		
18			1			2	4	12	12	37M0213259	9556588	1	23
14			1			10	3	1	22	37M0213450	9555064	1	144
13		Ke	1						18	37M0213589	9554718		
25			1						20	37M0214738	9555601		
												19	
22			1						68	37M0214593	9557078		
14			1						67	37M0213448	9555062		
14			1			12	10	14	54	37M0213450	9555064	1	36
14			1						58	37M0213450	9555064		
14			1			25	17	20	61	37M0213453	9555067	1	185
13			1						73	37M0213589	9554718		
23			1			2	0	0	57	37M0215618	9556898	1	177
23			1						59	37M0215618	9556898		
22		TPTS-Kikoti	1			5	4	30	61	37M0214593	9557078	1	67
12			1						59	37M0213979	9555112		
12		Ke	1						58	37M0213980	9555113		

16				1					60	37M0213619	9556002		
18			Prev. C/man	1		3	0	0	53	37M0213259	9556588	1	119
19				1		0	2	4	65	37M0214296	9557102	1	71
14			doesn't farm	1		40	110	68	58	37M0213746	9556588	1	171
17				1					58	37M0213746	9556160		
18				1					61	37M0213259	9556588		
18			Karatu	1					75	37M0213260	9556589		
21				1		10	37	25	72	37M0213987	9555078	1	32
19			NCAA immigrant	1		40	60	48	74	37M0214296	9557102	1	21
19			NCAA immigrant	1					55	37M0214297	9557103		
19			NCAA immigrant	1		8	25	9	69	37M0214296	9557102	1	140
19				1		3	1	17	73	37M0214400	9556904	1	49
18			Kifaru Lodge	1					64	37M0213260	9556589		
13				1					53	37M0213589	9554718		
												<b>11</b>	
14			Village C/Man		1	70	62	85	84	37M0213448	9555062	1	29
14					1				80	37M0213451	9555065		
14					1	8	6	13	89	37M0213452	9555066	1	97
13					1				79	37M0213589	9554718		
23					1	10	16	7	78	37M0215616	9556896	1	203
23			Mererani		1				87	37M0215617	9556897		
16					1	300	110	10	88	37M0213619	9556002	1	48
16			M/SK		1	150	157	170	81	37M0213619	9556002	1	31
12			MK		1	10	50	36	81	37M0213977	9555110	1	6
12					1				88	37M0213978	9555111		
18			MK-Kali Kati		1	8	56	74	89	37M0212945	9561428	1	66
21			CORDS Driver		1				83	37M0213988	9555079		
												<b>7</b>	
16 Bomas	<b>Subtotals</b>			<b>48</b>	<b>25</b>	<b>12</b>	<b>776</b>	<b>882</b>	<b>908</b>				
	<b>Totals</b>			<b>85</b>			<b>2,566</b>			<b>Total B/S surveyed 37</b>			
	<b>Percentage of total</b>			<b>56.5%</b>	<b>29.4%</b>	<b>14.1%</b>	<b>30.2%</b>	<b>34.4%</b>	<b>35.4%</b>	<b>Total # of women HH's 8</b>			

<i>Sub Village Esikalei</i>														
Boma	Head of Household		Notes	Meinati	Middling	Wealthy	Cattle	Sheep	Goats	Rdm	GPS Coordinates		B/S	RR #
	Last Name	First Name									UTM	UTM		
40			Non-Maasai	1			0	0	0	9	37M0216508	9554987	1	104
41			Non-Maasai	1			0	0	0	19			1	163
35				1						23	37M0215953	9554762		

35			1						13	37M0215954	9554763			
28			1			2	4	15	14	37M0218129	9552710	1	139	18
None		No livestock in Embore	1			0	0	0	29	37M0216654	9555672	1	17	
30			1			2	6	7	10	37M0215477	9560006	1	186	
28			1						17	37M0218129	9552710			
28		MK	1			2	5	7	10	37M0218129	9552710	1	9	19
28			1			2	0	4	25	37M0218130	9552711	1	187	20
28			1						11	37M0218133	9552714			
39			1			10	20	37	18	37M0217237	9557488	1	10	2
32		Narakauo	1						11	37M0215489	9560005			
30			1			11	18	12	31	37M0215477	9560006	1	193	
29			1						10	37M0216014	9554352			
29		Refused survey	1						7	37M0215494	9560002			
36			1			1	9	6	7	37M0216654	9555672	1	11	1
33			1			4	9	4	22	37M0216818	9555027	1	137	9
36		Kibaya	1						24	37M0216654	9555672			
35		L'soit	1						8	37M0215955	9554764			
35		Mererani	1			2	5	0	13	37M0215956	9554765	1	211	
35		TPTS-Kikoti	1						31	37M0215957	9554766			
37			1			5	9	8	15	37M0215616	9556896	1	28	8
37		Refused RR sur	1			10	6	4	24	37M0215617	9556897	1	114	
37		Karatu	1						31	37M0215618	9556898			
37		Il Derto	1						23	37M0215619	9556899			
39		Il Derto	1			0	0	0	16	37M0217237	9557488	1	184	
31			1						21	37M0215547	9560034			
31			1			0	0	11	10	37M0215548	9560035	1	162	
												16	7	
39			1			50	110	47	42	37M0217237	9557488	1	80	
38			1			15	27	29	41	37M0215489	9560006	1	136	
38			1			10	15	20	40	37M0215490	9560007			
30		Engopiro- L'wan	1			13	34	47	43	37M0215477	9560006	1	194	3
28		TPTS-Kikoti	1						47	37M0218132	9552713			
39		TPTS-Kikoti	1			110	60	53	46	37M0217237	9557488	1	116	
32			1			12	13	14	36	37M0215488	9560004	1	111	
38		Dorobo Ltd Guide	1			5	10	9	43	37M0215487	9560004	1	110	12
34			1			1	8	5	41	37M0216014	9554352	1	192	17
30		Ke	1						45	37M0215477	9560006			
33			1			3	0	14	48	37M0216819	9555028	1	161	
35			1			10	20	6	44	37M0215953	9554762	1	27	



35					1					44	37M0215954	9554763		
34					1		3	13	11	44	37M0216024	9554352	1	18
												<b>10</b>	<b>3</b>	
38					1	157	0	0		53	37M0215487	9560004	1	208
38					1					52	37M0215488	9560005		
34			VEO		1	10	30	123		53	37M0216024	9554352	1	4
34			Ujamma CRT		1					53	37M0216024	9554352		
												<b>2</b>	<b>1</b>	
14 Bomas	<b>Subtotals</b>				<b>29</b>	<b>14</b>	<b>4</b>	<b>450</b>	<b>431</b>	<b>493</b>				
	<b>Totals</b>				<b>47</b>			<b>1,374</b>			Total B/S surveyed		<b>0</b>	
	<b>Percentage of total</b>				<b>61.7%</b>	<b>29.8%</b>	<b>8.5%</b>	<b>32.8%</b>	<b>31.4%</b>	<b>35.9%</b>	Total #ofwomen HH's		<b>1</b>	

<i>Sub Village Emboreet</i>														
Boma	Head of Household		Notes	Meinati	Middling	Wealthy	Cattle	Sheep	Goats	Rdm	GPS Coordinates		B/S	B/S #
	Last Name	First Name									UTM	UTM		
163							0	0	0	51			1	53
103				1			0	0	0	46	37M0215466	9559992	1	54
105				1			0	0	0	47	37M0215393	9560776	1	145
106			Survey twice	1			0	0	0	27	37M0215667	9560242	1	190
82				1			0	0	5	33	37M0215400	9560476	1	74
146			Ke & M/SK	1			0	0	20	11	37M0215267	9561054	1	73
83			not surveyed	1			0	0	0	22	37M0215703	9562537		
96			Ke	1			0	0	0	58	37M0216482	9559582	1	52
96				1			0	0	0	20	37M0216483	9559583	1	44
95				1			0	0	7	28	37M0216482	9559582	1	40
85			VEO Komolo	1						27	37M0215278	9561906		
85				1						41	37M0215279	9561907		
86				1			0	0	8	40	37M0214669	9569029	1	167
85				1			8	4	5	22	37M0215458	9560821	1	189
122			Ke	1			6	0	0	33	37M0216325	9559708	1	78
113				1			0	10	15	27	37M0216292	9559672	1	61
89				1			3	6	4	48	37M0215098	9563716	1	108
145			Ke	1						36	37M0215450	9560006		
87				1						51	37M0215451	9560007		
147			NCAA immigran	1			4	5	10	10	37M0216325	9559708	1	125
97				1			0	0	4	39	37M0216482	9559582	1	33
164				1						22	37M0215447	9568294		
114				1			0	0	0	8	37M0215524	9560085	1	99

85			1						50	37M0215458	9560871		
111			1			0	0	0	40	37M0216489	9561906	1	149
116			1						37	37M0215446	9560923		
117			1						58	37M0215145	9563436		
118			1						50	37M0215145	9563456		
85			1			19	5	10	46	37M0215458	9560821		*
85			1						31	37M0215459	9560822		
147		In NCAA	1						16	37M0216325	9559708		
120			1						39	37M0215531	9560112		
123			1			0	0	0	42	37M0215127	9558704	1	47
100			1			0	0	8	24	37M0215524	9559992	1	56
92			1						14	37M0216219	9559852		
91			1			0	0	0	24	37M0242162	9629426	1	195
153			1			0	2	9	18	37M0215906	9554742	1	98
94			1						46	37M0216528	9559641		
165			1			0	0	0	21	37M0216219	9559852		*
128			1			0	0	17	32	37M0215523	9559962	1	55
129			1			0	0	0	27	37M0215506	9560018	1	64
130			1			0	0	1	15	37M0215932	9554514	1	148
156			1			0	8	12	37	37M0216056	9559688	1	69
143		Ke	1						15	37M0215458	9560821		
155			1			6	9	12	46	37M0216489	9559816	1	38
85			1			0	0	0	12	37M0215458	9560871	1	188
74			1			5	12	11	36	37M0215389	9560832	1	25
161		Ke	1						42	37M0215647	9562308		
135			1						26	37M0215503	9560377		
136			1						58	37M0215994	9563856		
74			1						9	37M0215390	9560833		
162		Ke	1			0	0	0	23	37M0215944	9563620	1	191
85			1			19	5	10	52	37M0215278	9561906	1	72
141		Ke- Anusha	1						19	37M0215514	9560208		
142		Ke	1			0	0	0	48	37M0216056	9559688	1	19
												32	
98			1						74	37M0215194	9559937		
101		Refused survey	1						65	37M0215594			
107			1			0	0	3	76	37M0215360	9561078	1	57
108			1						67	37M0215491			
81			1			0	0	15	75	37M0215342	9561179	1	2
109		Ke- refused	1						73	37M0215602	9560458		

95			MSK	1	5	15	50	77	37M0216482	9559582	1	70
111				1	0	4	50	75	37M0216489	9559955	1	37
89				1				74	37M0215227	9563956	1	168
137				1	2	22	12	71	37M0210101	9562159	1	79
115				1	0	0	2	63	37M0215255	9561858	1	63
94				1	10	26	25	78	37M0216527	9559640	1	59
93				1	0	0	0	78	37M0216315	9559955	1	39
127			No l'stock (3 in Arusha)	1	0	0	0	75	37M0215502	9560024	1	45
159				1				61	37M0215526	9560214		
132				1				69	37M0215247	9561109		
3			MMbulu	1	8	1	3	43	37M0212895	9561300	1	113
134				1				76	37M0215580	9562832		
79			Refused survey	1				74	37M0217128	9556562		
											<b>11</b>	
99				1				91	*	*		
80				1	8	3	5	95	37M0215368	9561094	1	196
84				1	0	0	27	91	37M0215602	9560458	1	169
110			Mwl	1	0	0	0	112	37M0215645	9559639	1	60
85			MSK	1	20	18	16	88	37M0215278	9561906	1	120
112				1				91	37M0215267	9561054		
113			NCAA immigrant	1	0	0	0	90	37M0216325	9559708	1	61
113			Ke/Diwani	1	0	56	80	102	37M0216325	9559708	1	62
87				1	20	17	35	89	37M0215887	9586471	1	107
88			TPTS- guide	1				92	37M0215450	9560006		
119				1				108	37M0215244	9560942		
121			WEO	1	1	8	10	95	37M0215816	9560470	1	50
125				1	0	0	0	88	37M0215539	9560160		
77				1				115	37M0215407	9560893		
91			LFO	1	9	0	50	113	37M0216219	9559852	1	42
126				1				89	37M0215587	9562725		
154				1				80	37M0215526	9559878		
131			ILRI Facilitator- no l'stock in Emboreet	1	0	0	0	102	37M0215816	9560476	1	34
144			Ke	1	0	0	42	100	37M0215073	9560452	1	75
74			MSK	1	8	40	20	106	37M0215314	9560838	1	26
76			M/K	1	0	3	27	105	37M0215294	9560722	1	15
75			MW- SAHLC	1				111	37M0215288	9560726		
74			MAA Driver	1				92	37M0215389	9560832		
74			ED MAA	1				94	37M0215391	9560834		
74			ED PINGOS	1				95	37M0215392	9560835		

133		MEK			1	30	60	60	87	37M0215908	9560003	1	16
90					1	38	43	152	84	37M0216494	9559888	1	22
90					1	0	0	0	90	37M0216495	9559889		
90		Mako Mining Co.			1				88	37M0216497	9559891		
136		Padre			1				113	37M0215993	9563855		
138		DEO			1	9	40	40	94	37M0216214		1	3
85		DC			1	200	98	284	110	37M0215278	9561906	1	20
78					1	0	4	13	88	37M0214201	9563718	1	198
												18	
92 Bomas	Subtotals		54	19	33	438	524	1,189			Total B/S surveyed		29
	Totals		106			2,151					Total # of women HH's		12
	Percentage of total		50.9%	17.9%	31.1%	20.4%	24.4%	55.3%					

Sub Village Ingung														
Boma	Head of Household		Notes	Meinati	Middling	Wealthy	Cattle	Sheep	Goats	Rdm	GPS Coordinates		B/S	B/S #
	Last Name	First Name									UTM	UTM		
47			Ke	1						19	37M0220101	9562152		
47			Ke	1						11	37M0220101	9562152		
43				1			2	10	2	14	37M1221901	9562912	1	95
51			Il Derito	1						17				
44				1						16	37M0221402	9562913		
44				1			0	2	3	8	37M0221401	9562912	1	175
45				1						6	37M0221512	9563642		
49				1			8	5	7	19	37M0218007	9560894	1	68
51				1			6	6	2	19			1	199
43				1			0	5	10	7	37M1221901	9562912	1	183
43			Mererani	1						13	37M1221902	9562913		
42				1			5	8	0	15	37M0221178	9564362	1	96
51			L'soit	1						18				
51			Ke- L'soit	1						12				
44				1			4	0	0	9	37M0221402	9562913	1	200
49			NCAA immigran	1						7	37M0218007	9560894		
48				1			12	40	25	6	37M0215728	9559598	1	93
48				1						11	37M0215728	9559598		
42				1						12	37M0221178	9564362		
48				1						6	37M0215729	9559599		
												8		

47				1					31	37M0220102	9562153		
47			Mererani	1					23	37M0220102	9562153		
43				1		10	15	13	30	37M1221902	9562913		
48				1		10	15	20	25	37M0215729	9559599	1	51
44				1		5	12	25	29	37M0221401	9562912	1	118
46				1					27	37M0220503	9562556		
43				1		*	*	*	29	37M0221901	9562912	1	207
42			Mererani	1					23	37M0221179	9564363		
42				1						37M0221179	9564363		
49			Ke	1		4	0	0	29	37M0218007	9560844	1	201
43				1						37M0221901	9562912		
49			NCAA immigrant	1		4	4	4	24	37M0218008	9560895	1	173
												5	
42			M/K	1		10	23	5	35	37M0221178	9564362	1	117
42				1		15	3	17	33	37M0221178	9564362	1	138
50				1					39	37M0215797	9580049		
49			TAPHGO	1					34	37M0218007	9560894		
44				1		50	35	43	38	37M0221401	9562912	1	170
46				1					34	37M0220503	9562586		
												3	
10 Bomas	<b>Subtotals</b>			<b>20</b>	<b>12</b>	<b>6</b>	<b>145</b>	<b>183</b>	<b>176</b>				
	<b>Totals</b>			<b>38</b>			<b>504</b>			<b>Total B/S surveyed</b>		<b>16</b>	
	<b>Percentage of total</b>			<b>52.6%</b>	<b>31.6%</b>	<b>15.8%</b>	<b>28.8%</b>	<b>36.3%</b>	<b>34.9%</b>	<b>Total #of women HH's</b>		<b>4</b>	

<i>Sub Village Kati Kati</i>														
Boma	Head of Household		Notes	Meinati	Middling	Wealthy	Cattle	Sheep	Goats	Rdm	GPS Coordinates		B/S	B/S #
	Last Name	First Name									UTM	UTM		
52			Mererani	1						9	37M0214523	9548486		
52			Mererani	1						19	37M0214524	9548487		
55			Mererani	1						10	37M0215191	9549608		
52				1			0	25	32	14	37M0214523	9548486	1	82
54				1			5	0	0	21	37M0215192	9549609	1	181
53			Il Ndiito	1			0	0	0	25	37M0214525	9549076	1	81
53			L'sirret	1			15	25	17	15	37M0214525	9549076	1	174
53				1			4	19	19	17	37M0214527	9549078	1	159
53				1						13	37M0214528	9549079		
55				1						17	37M0215192	9549609		
52				1			0	35	12	23	37M0214523	9548486	1	103

53				1			1	8	9	20	37M0214527	9549078	1	179
52			Refused	1						18	37M0214524	9548487		
52				1						9	37M0214528	9548491		
56				1						25	37M0213619	9555110		
54				1						8	37M0215458	9549200		
55				1						24	37M0215192	9549609		
52				1			4	2	4	18	37M0214527	9548490	1	205
53				1			4	0	0	29	37M0214524	9548487	1	228
													9	
55				1						30	37M0215192	9549609		
54			Ke	1						34	37M0215458	9549200		
54				1						29	37M0215191	9549608		
53				1						31	37M0214524	9549075		
55				1						43	37M0215191	9549608		
55				1			40	80	50	39	37M0215191	9549608	1	182
52				1			4	12	9	42	37M0214527	9548490	1	164
52				1						50	37M0214525	9548488		
52				1			20	34	34	49	37M0214525	9548488	1	206
56				1			17	13	21	38	37M0213619	9555110	1	227
52				1			20	5	6	36	37M0214525	9548488	1	105
52				1			10	24	19	34	37M0214526	9548489	1	166
52				1			3	34	22	30	37M0214527	9548490	1	165
52				1						34	37M0214523	9548486		
53				1						33	37M0214523	9548486		
													7	
53						1	70	22	15	48	37M0214523	9549074	1	134
53						1	50	40	30	48	37M0214527	9549078	1	123
52						1	10	55	34	51	37M0214524	9548487	1	180
52						1				51	37M0214523	9548486		
52						1	100	90	100	49	37M0214524	9548487	1	83
													4	
5 Bomas	Subtotals			19	15	5	377	523	433					
	Totals			39			1,333			Total B/S surveyed 16				
	Percentage of total			48.7%	38.5%	12.8%	28.3%	39.2%	32.5%	Total #of women HH's 1				

Sub Village Lenaitunyo															
Boma	Head of Household		Notes	Meinati	Middling	Wealthy	Cattle	Sheep	Goats	Rdm	GPS Coordinates		B/S	#	RR
	Last Name	First Name									UTM	UTM			
60				1						17	37M0217589	9546960			
72				1						10	37M0217885	9548926			
60				1						14	37M0217589	9546960			25
65				1						18	37M0218220	9548745			
73				1						14	37M0214981	9546804			35
69				1			5	50	20	19	37M0219600	9547124	1	219	
64				1						19	37M0217925	9547117			
57				1						11	37M0215786	9547625			
63				1			10	9	8	12	37M0216067	9545548	1	133	
63				1			3	12	7	13	37M0216067	9545548	1	157	
63				1			6	10	6	11	37M0216068	9545549	1	158	
57				1			1	2	1	14	37M0215786	9547625	1	154	22
72			not in village	1						9	37M0217886	9548927			
57				1			20	0	1	8	37M0215786	9547625	1	132	
61				1						13	37M0215791	9545306			
60				1			1	0	4	12	37M0217589	9546960	1	221	
63				1			10	9	8	9	37M0216067	9545548			
63				1			8	0	0	13	37M0216068	9545549	1	226	
													8		
60					1		30	19	8	41	37M0217583	9546954	1	142	24
60					1		35	25	18	30	37M0217586	9546957	1	215	
60			M/SK		1		30	51	24	42	37M0217584	9546955	1	150	
60			L'wanan-Landisi		1		9	0	22	23	37M0217585	9546956	1	129	36
68					1		35	25	21	31	37M0218743	9546556	1	106	26
62					1		30	25	25	28	37M0216067	9545548	1	151	
65					1					49	37M0217924	9547116			
65					1					31	37M0218219	9548744			
66					1		30	50	40	37	37M0218088	9547278	1	102	
66					1		25	28	15	36	37M0218088	9547278	1	122	
67					1					34	37M0218204	9547342			
57					1					37	37M0215786	9547625			
73					1					31	37M0214982	9546805			
69					1		20	80	50	28	37M0219600	9547124	1	220	29
64					1		20	7	7	39	37M0217924	9547116	1	209	
58					1					40	37M0215543	9547858			31
58					1		37	45	52	29	37M0215543	9547858	1	124	37
57					1		15	14	0	43	37M0215787	9547626	1	131	
67					1					38	37M0218204	9547342			32

60				1		20	0	16	48	37M0217588	9546959	1	218	
58			Mererani	1		5	55	50	36	37M0215543	9547858	1	155	33
68				1					52	37M0216744	9546557			
70				1		10	30	35	32	37M0216743	9546556	1	214	
62				1					43	37M0215789	9545304			
64			Mererani	1					44	37M0217925	9547117			
58				1					49	37M0215543	9547858			
63				1					48	37M0216067	9545548			30
64				1		5	10	5	40	37M0217926	9547118	1	213	
												<b>16</b>		
60				1		70	34	13	69	37M0217587	9546958	1	121	23
70				1					72	37M0218219	9548744			
59				1					71	37M0216743	9546556			
70				1		100	11	40	66	37M0218219	9548744	1	217	
68			refused survey	1					75	37M0216743	9546556			
57				1					60	37M0218088	9547278			
57				1		25	3	7	86	37M0218080	9547280	1	156	
57				1		40	50	25	68	37M0218089	9547279	1	224	
57				1		25	24	280	66	37M0218089	9547279	1	223	
64				1					60	37M0217926	9547118			
70				1					86	37M0218219	9548744			
63				1		20	60	55	66	37M0216068	9545549	1	222	
57			M/K	1		80	25	110	71	37M0215785	9547624	1	143	21
65				1					59	37M0218088	9547278			
73				1		50	95	120	76	37M0214982	9546805	1	225	
65				1					90	37M0218088	9547218			
65				1					64	37M0218089	9547219			
68				1					87	37M0217892	9546586			
68			Mererani	1					70	37M0217893	9546587			
72				1					75	37M0217885	9548926			
72				1		40	13	10	71	37M0217886	9548927	1	212	
72				1					61	37M0217887	9548928			
71				1					86	37M0218380	9548948			
72				1					65	37M0217885	9548926			
72				1		200	35	27	60	37M0217885	9548926	1	152	
68				1		62	67	80	71	37M0216743	9546556	1	210	
68				1					70	37M0216744	9546557			27
69				1					87	37M0216743	9546556			34
69				1					79	37M0216744	9546557			



62						1				68	37M02 15873	9545444			
61						1	20	20	22	66	37M02 15789	9545304	1	153	
61						1				86	37M02 15790	9545305	1	216	
64						1	50	107	40	70	37M02 17924	9547116	1	130	
59						1				69	37M02 16743	9546556			
													14		
17 Bomas	<b>Subtotals</b>					<b>18</b>	<b>28</b>	<b>34</b>	<b>1,202</b>	<b>1,100</b>	<b>1,272</b>				
	<b>Totals</b>					<b>80</b>			<b>3,574</b>			<b>Total B/S surveyed</b>		<b>38</b>	
	<b>Percentage of total</b>					<b>22.5%</b>	<b>35.0%</b>	<b>42.5%</b>	<b>33.6%</b>	<b>30.8%</b>	<b>35.6%</b>	<b>Total # of women HH's</b>		<b>0</b>	

Village:

Sub-village:

HH:

Date :

Interview # :

## Appendix II



INTERVIEW #

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### **BROAD SCALE HOUSEHOLD SURVEY QUESTIONNAIRE EMBOREET VILLAGE, SIMANJIRO DISTRICT, TANZANIA**

Introduction

13th February 2005

This survey is a PhD research project. My name is *Hassan Sachedina*, son of *Sadrudin Sachedina*. I am a University researcher gathering information about the activities that landowners in this area are engaged in. The purpose of this is to arrive at a method of measuring the costs of and returns to various income-earning options in this area – for example, how much landowners earn from livestock or from growing crops. It is our hope that you will give us correct and accurate information - even if only an estimate - wherever possible so that the decisions arrived at later will be fair ones. This information will be held in total confidentiality.

**Kwa yeyote anayehusika,**

**Utangulizi**

Matembezi haya yanahusu mradi wa utafiti wa shahada ya Tatu ijulikanayo kama PhD. Napenda kujitambisha tena kwenu, na kwa Jina, mimi ni Bwana Hassan Sachedina, Kijana wa Sadrudin Sachedina, nchini Marekani. Mimi ni mtafiti ninajitegemea kabisa, na ninafanya utafiti juu ya hali ya maisha ya jamii ya wafugaji ya Kimaasai, hasa kuhusu kubadilika kwao katika hali yao ya maisha ya kawaida, nikikusanya habari juu ya shughuli za matumizi ya ardhi katika eneo hili. Sababu hasa ya kufanya hivi ni kujaribu kutumia njia ya kipima gharama na faida ya njia mbali mbali ya kupata kipato katika eneo hili- kwa mfano, ni kiasi gani cha kipato mtu mwenye shamba anapata kutokana na mifugo au kilimo? Ni matumaini yetu basi kwamba mtatupa taarifa za kweli na sahihi (hata kama ni za kukadiria) panapowezekana ili basi maamuzi yatakayofikiwa baadae yawe ni ya haki. Habari hizi zitawekwa na kushikiliwa kwa njia ya uaminifu kabisa. Natanguliza Shukrani zangu za dhiti.

Wenu katika ushirikiano

Bwana Hassan Sachedina

Village:

Sub-village:

HH:

Date :

Interview # :

**A. BACKGROUND INFORMATION**

Respondent's personal details (can be filled out before or after the interview):

1. Name of interviewer:	
2. Name of research technician:	
3. GPS Coordinates:	
4. Start Time:	
5. End Time:	
6. Boma number in sub-village	
7. Name of head of HH	
8. Age set of respondent	
9. Age of respondent	years
10. Gender (1=male 2=female)	
11. Marital status: <input type="checkbox"/> Single <input type="checkbox"/> Separated <input type="checkbox"/> Married <input type="checkbox"/> Divorced <input type="checkbox"/> Widow <input type="checkbox"/> Widower	
12. Where was your father born? (District and village)	
13. Where was your mother born? (District and village)	
14. What is your place of birth? (District and village)	
15. When did you move here?	
16. Why did you move here?	
17. When did you move into this boma?	
18. Level completed in school	
19. Leadership <sup>1</sup>	
20. Ethnic Group- <i>Ormaasinda</i> ?	
21. Clan- <i>Orgilata</i> ?	
22. Languages spoken	Maa English Kiswahili Other
<b>Size of household (Fill after interview)</b>	
23. Adult males: Number	
24. Adult females: Number	
25. Children (5-14 yrs): Number	
26. Children (0-4 yrs): Number	

<sup>1</sup> **1**= major influence on village resources (MP, Chairman, VEO, councilor, member of village government, member of village natural resources management committee, govt. or district officer); **2**= minor influence on group ranch resources (e.g. member of women's collective, leadership position on a farming cooperative, preacher); **3**= No leadership position

Village:

Sub-village:

HH:

Date :

Interview # :

**B. DEFINITION OF HOUSEHOLD-** Please define your household (number of people living in the household; others considered part of the household but living elsewhere, etc.)

No	Name	Relation (to hhh)	sex	Approx age	Education grade reached	District of birth	Wage earner (as what?)	Lives where now?
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								

Village:

Sub-village:

HH:

Date :

Interview # :

No	Name	Relation (to hhh)	sex	Approx age	Education grade reached	District of birth	Wage earner (as what?)	Lives where now?
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
31								
32								

Village:

Sub-village:

HH:

Date :

Interview # :

### C. Economic Life History

Please tell us about the economic activities you have been involved in up to the current point in your life (Begin with **year of birth** and work forward in time)

Activity	Year Begun	Year Stopped	Reason WHY begun/stopped?
- End of WWI 1918	<b>1920</b>		
	<b>1930</b>		
- Kuanza (WWII) 1938	<b>1940</b>		
- End of WWII 1945	<b>1950</b>		
- Alarari Lelaikini 1949	<b>1960</b>		
-Uhuru wa Tanganyika 1961	<b>1970</b>		
-Mapinduzi ya Zanzibar 1964			
-Operation Embarnat 1978	<b>1980</b>		
-Ilkimunyak 1982			
-Olkiyioi Lekurum 1987	<b>1990</b>		
-Eunoto Or Landisi 1991			
-Nadondolit 1996			
- El Nino 1997			
- Ilkiponi 1998	<b>2000</b>		
- Esajata or papeet 2001	<b>2002</b>		
- Orngeher 2002			

Comments:

Village:

Sub-village:

HH:

Date :

Interview # :

**D. LIVESTOCK PRODUCTION**

Herd structure – In order to understand how the land is being used for livestock production, we need to know what animals are using the land and therefore have to ask you some very detailed questions about your herds. This information will be kept in total confidentiality.

1	What is your <b>total cattle herd size</b> now in this compound together with calves ( <i>Oloho</i> )?	
---	--	--

Cattle		Number (today)	Breed of Animals*	No. last Year
2. Males	* Breed types: <b>Zebu, Sahiwal, Boran</b> and crosses of each type			
3. Females				

**Herd structure for sheep and goats**

Sheep		Number (today)	Breed of Animals*	No. last Year (same month)
4. Males	* Sheep: <b>Red Maasai, Dorper, Black headed persian (Esuk)</b>			
5. Females				
Goats				
6. Males	Goat: <b>Indigenous, Galla, Akamba</b>			
7. Females				

8	Of the cattle, how many are milk cows in milk today?	
9	Do you have herds anywhere else?	
10	What types of cattle are in that herd? (steers? Lactating females? Heifers? Mix?)	
11	How many cattle are they?	

**E. LIVESTOCK INPUT COSTS:**

i). If you dip or spray some of your animals, please provide the following information:

	Cattle	Shoats
1. Frequency:		
	<i>Dry season</i>	
	<i>Wet season</i>	
2. How much do you spend on dipping?		
	<i>Wet</i>	
	<i>Dry season</i>	
3. Totals		

Village:

Sub-village:

HH:

Date :

Interview # :

## ii). Can you please estimate your veterinary expenditure for 2004 (vaccines, injectibles, dewormers)

Veterinary expenditure for vaccines, injectibles, anti-biotics and dewormers, and mineral supplements	Total Cost per year
4. Cattle	
5. Sheep & Goats	
6. Total Expenditure per year	

## iii). Purchase of livestock feed

7	In the previous year, have you used <b>hay, purchased cornstalks or other feedstuffs</b> to feed your animals ( <i>i.e Pumba za maharage</i> )?	Yes	No
8	What type of feed did you use?		
9	How much did you use during this year's drought (Trailers)?		
10	How much did you pay for it this year? (Tshs per trailer)		
11	<b>Renting of Pasture:</b> Do you rent land for grazing your animals?	Y	N
12	How much do you pay for renting pasture per acre?		

## iv). If you pay for watering your animals, how much do you pay per animal?

13. Year	Wet Season		Total
	Dry season		Total
14. Do you own a dam?		Y	N
15. Do you earn revenue from your dam? How much?:		Wet season	Dry season

## F. LIVESTOCK PRODUCTS

	Check if yes	Amount Sold in 2004	Price per quantity sold
1. Manure		Lorry <sup>1</sup>	
2. Hire out steers for traction		How much revenue do you receive for it on a yearly basis ?	

## G. WEALTH/POSSESSIONS

## 1. Do you, or any members of your family, own any of the following?

Bicycle	Car	Radio	M/bike	Tractor	Hand-pump	Plough

2. Roofing material *Note the following (no need to ask questions)*

Maasai traditional	Grass	Mabati	other

## 3. Walls

Mud	Earth brick	Planks	Cement	Other

<sup>1</sup> (indicate size of lorry – 5 ton, 2 ton etc)



Village:

Sub-village:

HH:

Date :

Interview # :

**H. CROP PRODUCTION**

1	Do you practice crop farming?	<b>Y</b>		<b>N</b>					
2	If not this year, have you ever cultivated- which was the last year you harvested?								
3	If not- why do you not cultivate?								
4	Have you previously farmed fields which you no longer use? (perhaps in a different location from your current fields)?								
5	Where were these fields (sub-village)?								
6	Why do you no longer use them?								
	<b>Plot #</b>	<b>Plot 1</b>	<b>Plot 2</b>	<b>Plot 3</b>	<b>Plot 4</b>				
8.	Farm size (acres) in 2004								
9.	Sub-village of your fields?								
10.	Have fields changed in size since 2003?								
11.	The year before- 2002?								
12.	When did you put these fields in?								
13.	What future plans do you have for changing acreage?								
14.	Type of land preparation? (1= tractor, 2= oxen, 3= by hand)	<b>2003</b>	<b>2004</b>	<b>2003</b>	<b>2004</b>	<b>2003</b>	<b>2004</b>	<b>2003</b>	<b>2004</b>
15.	How many acres of each crop did you grow in each plot? (M=maize, B=beans)								
		<b>M</b>	<b>B</b>	<b>M</b>	<b>B</b>	<b>M</b>	<b>B</b>	<b>M</b>	<b>B</b>
16.	Why did harvest from any plots fail completely?	<b>2003?</b>							
		<b>2004?</b>							
17.	Did you buy any of these plots? If so, how much/acre?								
18.	Do you have a lease? <ul style="list-style-type: none"> <li>Regional title deed</li> <li>District deed</li> <li>Village letter of transfer</li> <li>No lease</li> </ul>								
19.	Total <b>Crop</b> from these plots <b>G</b> =gunia (120kg) <b>D</b> =debe (20kg)	<b>Maize</b>	<b>Beans</b>	<b>Other</b>	<b>Other</b>				
i.)	<b>2003?</b>								
ii.)	<b>2004?</b>								
	<b>Year</b>	<b>2003</b>				<b>2004</b>			
20.	Number of gunias given away (outside your hh)? - <i>Esotwa</i>	<b>M</b>	<b>B</b>	<b>M</b>	<b>B</b>	<b>M</b>	<b>B</b>	<b>M</b>	<b>B</b>
21.	Number of <i>gunias</i> retained for consumption?	<b>M</b>	<b>B</b>	<b>M</b>	<b>B</b>	<b>M</b>	<b>B</b>	<b>M</b>	<b>B</b>
22.	Number of <i>gunias</i> sold?	<b>M</b>	<b>B</b>	<b>M</b>	<b>B</b>	<b>M</b>	<b>B</b>	<b>M</b>	<b>B</b>
23.	Total harvest sales?								
24.	When was the last time you sold part of your harvest?								

Village:

Sub-village:

HH:

Date :

Interview # :

25. Where? ( <i>Terat/Sukuro Mnada's, Emboreet, Arusha or other</i> )			
26. How much per bag (Tshs)?			
27. How did you invest the profits from agriculture?			
29. When did you last have to buy maize?			
30. How did you arrange labour to plant, weed and harvest crops? (e.g. help from family members? Hired help, others)			
31. If family help, did you make arrangements for help in cultivation (like taking another wife, adopting a child?)			
32. Where are hired helpers from?			
33. Do they have their own fields in the village?			
34. Are your aims to increase your farming, or livestock production over the next two years?			
35. If you had 100 more cattle, how many would you sell some to farm?			
36. Have you obtained any credit in the last 5 years?			
37. Can you give me details of this loan? (From which organisation, Purpose, Amount obtained, Repayment period, Interest rate)			
No. Cows/ Shoats Sold in order to plant and maintain crops?	<table border="1"> <tr> <td><b>2003</b></td> <td><b>2004</b></td> </tr> </table>	<b>2003</b>	<b>2004</b>
<b>2003</b>	<b>2004</b>		

#### I. COSTS OF AGRICULTURE (2003)

What were the various costs of inputs for your agricultural activities?		2003		2004	
1	Renting of Shambas				
2	Village or district land tax				
3	Seeds				
4	Insecticides				
5	Fertilizer / Manure				
6	Land Preparation				
7	Weeding				
8	Harvesting				
9	Ulinzi				
10	Kusomba Mazao				
11	Gunia (bags)				
12	Kupukuchua (de-cob)				
<b>TOTALS for agricultural production</b>					

Village:

Sub-village:

HH:

Date :

Interview # :

**J. Land Tenure**

1	How many shambas have you been allocated in or outside Simanjiro? (acres)	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>
2	In which sub-village are the Shambas?								
3	Do you lease your land? If yes, to whom?								
4	How many acres do you lease (per yr or cropping season)?								
5	How much rent do you receive per yr or per cropping season per acre?								
6	Have you sold any of your shambas?								
7	How many acres did you sell?								
8	What did you get in return for this sale?								
9	How did you invest the proceeds?								
10	How much did you contribute (Mchango) in 2004 for village/ district development projects?								

**For non-Maasai respondents**

11	Who did you buy/lease your land from?	
12	Can you tell me about the transaction?	
13	Date of purchase, price, and length of lease?	
14	Do you want to increase the amount of land that you cultivate?	
15	When did you first start to farm in this village?	
16	How many more acres do you plan to farm?	
17	How will you go about trying to get this land?	

Village:

Sub-village:

HH:

Date :

Interview # :

**K. OFF-FARM INCOME:** Apart from the sources of income that we've already discussed (crop, livestock), **please tell us about any other income-earning activities of household members** -including yourself- and describe what they are doing:

Profession/activity:	No. of persons	Relationship to household head*	Living within the household =1; living elsewhere=2	Frequency of contributions to the household (1=occasional; 2=monthly)	Estimate of average monthly income from this source *				
					<10,000	10-50,000	50-100,000	100-200,000	>200,000
Firewood/charcoal sales									
Mining									
Teacher									
Tourism employee									
Government employee									
Selling honey									
Full-time (Formal Sector) specify									
Livestock trader (specify no. and type of animals per week/season):									
Informal Sector Business person/shop owner (specify business or trade; year-round/seasonal)									
Other (specify):									
Other (specify):									

\* (1=household head; 2=spouse; 3=son; 4=daughter; 5=other)

Village:

Sub-village:

HH:

Date :

Interview # :

**L. Interactions with Wildlife**

Based on the movements and locations of your livestock what type of wildlife were near/had an effect your livestock during the:

		2003	2004	
1	<b>Shamba damage (estimated acreage loss?)</b>			
2	<b>Other (specify) e.g. loss of grazing; human injuries; livestock kills; increased askari labour (estimate costs)</b>			
3	Is there tourism in this village?	<b>Yes</b>	<b>No</b>	<b>Don't Know</b>
4	Were you consulted when the tourism project started?	<b>Yes</b>	<b>No</b>	<b>Don't Know</b>
5	Can you remember when the program started?			
6	Does your household currently benefit from wildlife?[include Direct vs. Indirect benefits]	<b>Yes</b>	<b>No</b>	
7	If yes, how?			
8	If no, does the village receive benefits from wildlife tourism?	<b>Yes</b>	<b>No</b>	<b>Don't Know</b>
9	If yes, how?			
10	Are there more or fewer wildlife in your area now than 10 years ago?	<b>More</b>	<b>Less</b>	<b>Don't know</b>
11	Is there a negative impact of tourism in this area?	<b>Yes</b>	<b>No</b>	<b>Don't Know</b>
14	How?			
15	Do you personally benefit from the presence of Tarangire NP?	<b>Yes</b>	<b>No</b>	<b>Don't Know</b>
16	Why/ why not? How?			
17	If not, Does the village benefit from the presence of Tarangire NP?	<b>Yes</b>	<b>No</b>	<b>Don't Know</b>
18	Why/ why not? How?			
19	Have the boundaries of Tarangire changed since Operation Embarnat (1978)?			
20	If you farm land near the park boundary do you think that it makes park expansion less likely or more likely?			
22	I have heard that Maasai in the Ngorongoro Conservation Area live in different conditions to Simanjiro? What is the difference?			
23	Does the situation in NCA affect Simanjiro?			
24	On the whole, does wildlife contribute more in losses or gains per year to you personally?	<b>Loss</b>	<b>Profit</b>	<b>Both</b>
25	If so, how?			
27	How much do you pay in school fees per year?			

**Thank you for your time. Do you have any questions for me?**



HH Number:

### Appendix III

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## REPEAT ROUND SURVEY- HOUSEHOLD HEADS

Emboreet Village, Simanjiro District, Tanzania

### 1. Background Details

Head of Household:	Interviewer:
Research Assistant:	Sub-village:
Date:	RR HH No:

### 2. Family List

	Name	Relationship		Name	Relationship
1			17		
2			18		
3			19		
4			20		
5			21		
6			22		
7			23		
8			24		
9			25		
10			26		
11			27		
12			28		
13			29		
14			30		
15			31		
16			32		

3. Livestock in- *In the last 2 months have you bought or otherwise received any livestock?* Y  
or N

Livestock in- reason	Animal	Sex/Type	Price
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

4. In the last 2 months have you sold or otherwise lost any livestock (debt payment, death, slaughter, gift)?  
Y or N

Livestock out of herd- reason		Animal	Sex/type	Reason
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
Notes:				

B. Listed and Residual Cattle Herd- *what livestock have you loaned, entrusted elsewhere? Perform this exercise on each visit. Also ask if named cows have been bought and sold or slaughtered. Combining off-take and inputs of the residual herd with the same from the women's herds provides a means of checking the responses to question 3 i.e. all the sales of the named cattle should be at least as great as the total sales recorded by the household head.*

No	Name of Cow	Notes	No	Name of Cow	Notes
1			37		
2			38		
3			39		
4			40		
5			41		
6			42		
7			43		
8			44		
9			45		
10			46		
11			47		
12			48		
13			49		
14			50		
15			51		
16			52		
17			53		
18			54		
19			55		
20			56		
21			57		
22			58		
23			59		
24			60		
25			61		
26			62		
27			63		
28			64		
29			65		
30			66		
31			67		
32			68		
33			69		
34			70		
35			71		
36			72		

**C. Stock Counts**

	Gate count of entire boma	Reported livestock of HHH
Cattle		
Goats		
Sheep		

**4. Veterinary Medicines- In the last 2 months have you bought any of the following? Y or N**

Type	Where	Quantity	How much (price/quantity)?	
Acaracide				
Worm Drugs				
Vaccinations				
Tetracyclin				
Oxytetracyclin				
Berenil				
Butalex				
Parvexon				
<b>Totals</b>				

**5. Purchase of Crops- In the last seven days (week) have you purchased Y or N**

Foodstuff	Specify purchase/ gift	Quantity	Notes: From where, who?	What was used in the exchange?	
				Cash	Other
Maize					
Medicine (dawa)					
Tobacco					
Beans					
Sugar					
Rice					
Maize grinding					
Cloth					
Other					
<b>TOTALS</b>					

**6. Multi-Round Agricultural Data – In the last 2 months did you pay for any of the following? Y or N**

	Notes (from/by?)	Quantity?	When-Date?	How much?	
Renting of Shambas					
Seeds					
Insecticides					
Fertilizer / Manure					
Land preparation					
Weeding <sup>1</sup>					
Harvesting					
Ulinzi- security <sup>2</sup>					
Transport of crops					
Bags (gunias)					
Kupukuchua (de-cob)					
Transport to market					
Fencing					
<b>Total</b>					

<sup>1</sup> Including expenses to feed Kibaruas and provide tobacco and medicines.

<sup>2</sup> Including expenses for torch batteries.



**7. Multi-round harvest data**

In the last 2 months, have you sold/exchanged any grain or beans?	Yes	No
When?		
Quantity sold		
Where?		
For how much?		
What was the money used for?		

**8. Other Income: *In the last 2 months have you made any income from any of the following:***    Y  
or    N

	When?	Quantity sold	Income received	Notes: How were proceeds used?
Mining brokerage				
Wage labour				
Handicrafts				
Honey				
Charcoal				
Remittance from HH members				
Land leases				
Small business?				
Others:				
<b>TOTALS</b>				

**Thank you for your time- Do you have any questions for me?**



HH:	SHH:
-----	------

### Appendix IV

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EMBOREET VILLAGE REPEAT ROUND SURVEY- WOMEN

**1. Background Details**

Head of Household:	Wife's Name:
Date:	Sub-village:
HH #:	SHH #:
Interviewer:	Research Assistant:

**2. Family List**

Name	Relation	Age	Kgs	Name	Relation	Age	Kgs

**3. Distribution and Consumption of Milk- In the LAST WEEK ONLY**

a.) Have you received milk as a gift?	YES	NO
b.) From who, how much, and what reason?		
c.) In the last week, have you sold any milk	YES	NO
d.) Where did you sell milk?		
e.) What quantity did you sell?		
f.) What did you earn from milk sales?	<i>Total</i>	
g.) What did you use the money for?		
h.) Did you give any milk as a gift?	YES	NO
i.) To who, how much, and what reason?		

**4. Gifts given or received in the last month                      Y    or    N**

	Gifts Given	Gifts Received	Value Tshs.
1			
2			
3			
4			
5			
6			
7			

**5. Listed and Residual Cattle Herd- OWNS CATTLE?**                      Y    or    N

No	Name of Cow	Notes	No	Name of Cow	Notes
1			18		
2			19		
3			20		
4			21		
5			22		
6			23		
7			24		
8			25		
9			26		
10			27		
11			28		
12			29		
13			30		
14			31		
15			32		
16			33		
17			34		

**6. Small stock- reported**

Goats:	
Sheep:	
Donkeys:	

**7. Milk Container (Gourd) Weights**


**8. Milk Yields**

	Name of Cow	AM	Name of Cow	PM	Small-stock milked?
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
	<b>Total AM</b>		<b>TOTAL PM</b>		
	<b>Total Daily Amount</b>				

**9. 24 Hour Food Recall - Food cooked**

Date	Time	What foodstuff?	What quantity?	Number of people who ate

**10. Livelihood activities- In the last week, have you sold/exchanged anything to buy any of the following?**

	Quantity	Price	Notes
Maize			
Beans			
Other Crops:			
Meat			
Cooking oil			
Tea			
Sugar			
Diesel/kerosene			
Soap			
Salt			
Tobacco/matches			
Cloth			
Beads			
Medicine			
Veterinary drugs			
Household items			
Water			
Grind Maize			
Water			
Others (list):			
<b>TOTALS</b>			

**11. Repeat-Round Agricultural Data- In the past 2 months did you pay for any of the following?**  
Y or N

	Where From	Quantity?	When-Date?	How much?	
Renting of Shambas					
Seeds					
Insecticides					
Fertilizer/ Manure					
Ploughing					
Weeding					
Harvesting					
Ulinzi-security					
Transport of crops					
Bags (gunias)					
Kupukuchua (de-cob)					
Transport to market					
Fencing					
<b>Total</b>					

**12. Other Income:** *In the last 2 months have you made any income from any of the following:* Y  
or N

	<i>When?</i>	<i>Who?</i>	<i>Income received</i>	<i>How were proceeds used?</i>
Wage labour				
Handicrafts				
Honey				
Charcoal				
Remittance from HH members				
Land leases				
Sale of chickens				
Mererani Mining brokerage				
Small business? <sup>1</sup>				
<i>Others? (list)</i>				
<b>Total</b>				

Thank you for your time- Do you have any questions for me?

---

<sup>1</sup> Ask whether tobacco (*Ugoro*), Pombe, and any other?

## Appendix V

## National Parks and Game Reserves Gazetted in Tanzania since 1992

No.	Name	Status	Size (Sq.Km)	Year of Gazettement
1.	Udzugwa NP	National Park	1,900	1992
2.	Grumeti Game Reserve	Game Reserve	2,000	1993
3.	Ikorongo Game Reserve	Game Reserve	3,000	1993
4.	Pande Forest Game Reserve	Game Reserve	12	1994
5.	Kijereshi Game Reserve	Game Reserve	300	1994
6.	Muhesi Game Reserve	Game Reserve	2,000	1994
7.	Msanjesi Game Reserve	Game Reserve	210	1995
8.	Lukwika/Lumesule Game Reserve	Game Reserve	444	1995
9.	Rukwa Game Reserve	Game Reserve	4,000	1995
10.	Usangu Game Reserve	Game Reserve	4,000	1995
11.	Mkungunero Game Reserve	Game Reserve	700	1996
12.	Swagaswaga Game Reserve	Game Reserve	871	1996
13.	Lukwati Game Reserve	Game Reserve	3,146	1997
14.	Mpanga- Kipengele Game Reserve	Game Reserve	1,574.25	2002
15.	Liparamba Game Reserve	Game Reserve	570.99	2000
16.	Kimisi Game Reserve	Game Reserve	1,026.23	2002
17.	Saadani NP	National Park	1,100	2003
18.	Kitulo NP	National Park	402	2003
<b>TOTAL SURFACE AREA</b>			<b>27,256 km. sq.</b>	

## Appendix VI

### Protected Areas, wildlife infrastructure, game controlled and open hunting areas of Tanzania (from Baldus and Cauldwell 2004)

**Western Tanzania**

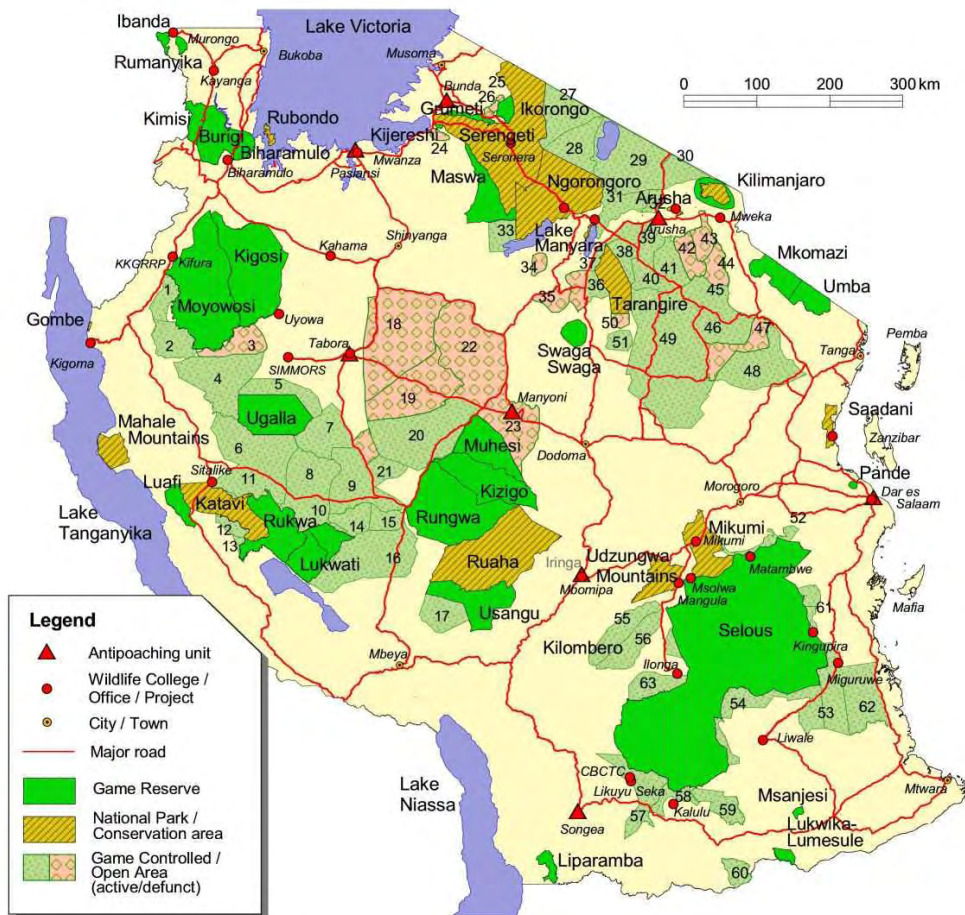
1 Makere Forest	6 Msima GCA	12 Mlele South GCA	18 Wembere OA North
2 Uvinza OA	7 Ugunda GCA	13 Lake Rukwa GCA	19 Wembere OA Central
3 Gombe GCA	8 Inyonga West GCA	14 Piti West OA	20 Wembere OA South
4 Luganzo GCA	9 Inyonga East GCA	15 Inyonga East	21 Itulu Forest East
5 Ugalla OA	10 Rungwa River GCA	16 Chunya OA	22 Singida OA
	11 Mlele North GCA	17 Utengule Swamp OA	23 Manyoni OA

**Masailand**

24 Maswa OA	31 Mto wa Mbu GCA	38 Lolkisale	45 Ruvu Masai
25 Nyichoka OA	32 Monduli Juu	39 Simanjiro West	46 Kitwai North
26 Sibora OA	33 Maswa Makao	40 Simanjiro Kitangare	47 Kitwai Central
27 Loliondo GCA	34 Yaeda Chini OA	41 Simanjiro Naberra	48 Kitwai South
28 Loliondo South GCA	35 Lake Balangida	42 Simanjiro East	49 Masai OA
29 Lake Natron GCA	36 Babati OA	43 Sanya Lelatema	50 Mkungunero
30 Longido GCA	37 Burunge	44 Ruvu Same	51 Kondoa OA

**Selous / SE Coastal**

52 Gonabis / Jukumu WMA	56 Kilombero GCA South	60 Tunduru Forest	63 Mahenge OA South
53 Liwale OA North	57 Namtumbo WMA	61 Tapika OA	
54 Liwale OA South	58 Tunduru WMA	62 Kilwa OA North, Central & South	
55 Kilombero GCA North	59 Sasawara Forest		



## Appendix VII

### Ecotourism and the Private Sector: The Simanjiro Wildlife Forum

#### Conservation is Good Business

The potential role of ecotourism as a powerful tool for conservation and sustainable development is clearly articulated (Ashley and Goodwin 2007, Charnley 2005, Davenport et al. 2002, IIED 1994, ODI 2007). Problems in the fluidity of the term 'ecotourism' mean that it is presented and interpreted in different ways (Carrier and Macleod 2005). The benefits of ecotourism to local people, and their participation and empowerment, has been questioned (Honey 1999, Kiss 2004, Mbaria 2007). Questions have been raised whether 'ecotourism' labelling is primarily sought by tour operators to enhance their marketing (Mburu 2007, Wight 1993). Hunting outfitters were legally required to help villages and invest in anti-poaching. Dealing with communities took time and resources: staff, fuel, transport, communication costs, and few companies wanted to internalise these costs.<sup>1</sup>

Igoe (2007: 247-248) described the idea of 'privatizing' African conservation using the case of Paul Tudor Jones US\$ 40 million investment into Grumeti and Ikorongo GRs. A tourist hunting concession, the new lodges, expatriate staff, and infrastructure reverberated in the local economy and international media (Poole 2006). This reflected a dynamic of wealthy westerners with an interest in wildlife purchasing hunting companies and gaining access to enormous concessions in Tanzania. Sub-Saharan Africa had long

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<sup>1</sup> Interview with PP, tour operator, Arusha, 28 April 2006; Recorded interview, BRJ, outfitter manager, Arusha, 21 April 2005; Interview, BH, tour operator, Arusha, 15 May 2006; Interview, CB, tour operator, Arusha, 4 November 2005.



attracted celebrities and billionaires who owned private wildlife conservancies.<sup>2</sup> Opportunities were increasingly limited and expensive.<sup>3</sup> A loophole in Tanzania enabled westerners to purchase a hunting outfitter for approximately US\$ 2-3 million through which they gained access to huge swathes of wilderness for a fraction of the cost of conservation ‘estates’ elsewhere in Africa. Americans controlled stakes in 26 concessions through outfitters like Tanzania Game Tracker Safaris, Wengert Windrose Safaris, Tanzania Bundu Safaris, Grumeti Reserves and TAWICO.

Examples abounded tour operators employed the strategy of establishing ‘non-profit’ conservation organisations linked to their companies. By appealing to the moral sensitivities of their clients, they obtained donations for ‘conservation’ activities that subsidized their business operations, increased profits, and enhanced their marketing. Tourism companies their engagement in community or environmental issues using the example of their trusts. These trusts provided a convenient channel to enhance community relations and invest in tourism concessions without compromising profits. There are ethical issues associated with for-profit companies soliciting donations for ‘non-profit’ causes. It is likely, however, that significant funds were invested in good work. However, some tour operators viewed conservation as a source of free money. They perceived the apparent ease of fundraising by AWF, the George Adamson Wildlife Preservation Trust in Mkomazi GR, and Lewa Wildlife Conservancy in Kenya as examples of how conservation was “good business”.<sup>4</sup>

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<sup>2</sup> Such as Nicky Oppenheimer in Namibia, Richard Branson in South Africa, Paul Tudor Jones in Zimbabwe, and Alec Wildenstein in Kenya.

<sup>3</sup> As an example, Ol Pejeta Ranch in Laikipia, Kenya was initially placed on the market in 2000 for approximately US\$ 20 million. It is 360 sq. km. Land tenure insecurity and the high price put off individual investors. Eventually, international conservation NGO Fauna and Flora International purchased it for an undisclosed sum.

<sup>4</sup> Interview, tour operator, Arusha, 4 November 2005.

### **Fashion, Fundraising and the Constitution: The Simanjiro Wildlife Forum**

*Iyolo endoki naor'oi elatia e-sikiria* (Maa: A union of likeminded people will break apart if they squabble over donkeys)  
—Maasai proverb, OL, Korianga man, 2006

At an Emboreet Village Council meeting in May 2004, Tanzania Photographic Tours and Safaris (TPTS) introduced a concept for a community-based conservation (CBC) forum. Modelled on South African and Kenyan wildlife fora,<sup>5</sup> its aim was to unite seven villages adjacent to Tarangire—Loiborsoit 'A', Loiborsirret, Sukuro, Narakauo, Terat, Kimotorok and Emboreet—as an organisation to promote CBC and to manage hunting and photographic tourism. The Emboreet meeting supported the forum concept – primarily as a land protection strategy against conservation.<sup>6</sup> One councillor likened the forum to: “A unified voice that will protect the resources of the village”<sup>7</sup>

A former client of TPTS, clothing designer Calvin Klein, reportedly pledged US\$ 2.5 million over 5 years to support the SWF. The vehicle through which the funds would be disbursed was the ‘Africa Nature Conservation Trust’ (ANCT), a locally registered foundation initiated by TPTS. TPTS also established a hunting outfitting company named ‘Savannah Gametrackers’. In order to access the funds, TPTS insisted that resident hunting in Simanjiro be stopped and secondly, that sport hunting blocks be redrawn with the 7 villages forming a single block for the exclusive use of Savannah

<sup>5</sup> Interview, PP, tour operator, Arusha, 10 August 2005.

<sup>6</sup> Emboreet Village Council meeting minutes, 23 May 2004, Ref. KIJ/EMB/352/SK/1/1/04.

<sup>7</sup> Kiswahili: *‘Umoja wa sauti ambaye italinda rasmilabi ya kijiji’*. Ward Education Coordinator, Emboreet Village Council meeting, 23 May 2004.

Gametrackers.<sup>8</sup> No documentation confirming Klein's support was publicly shared by TPTS. It transpired that TPTS received US\$ 20,000 to lobby against resident hunting in Simanjiro.<sup>9</sup> The US\$ 500,000 per year amount reflected a target that ANCT's donors would try to raise, not what had been officially pledged to the SWF. TPTS promoted these sums as fact to generate support for its ideas at a local level.

The case illustrated how a tour operator sought to expand their commercial interests through a through a thinly veiled conservation organisation. One of the most successful ground operators in northern Tanzania, TPTS had a vision for growth. It operated a fleet of new vehicles, luxury mobile camps and Kikoti Safari Camp. Unlike photographic tourism operators who generally tended not to engage in tourist hunting, TPTS saw an opportunity for growth in tourist hunting. TPTS unsuccessfully attempted to purchase Bundu Safaris which controlled the block around Kikoti.<sup>10</sup>

Bundu Safaris conflicted with tourism operations in the Lolkisale GCA, including with Dorobo Safaris (Dorobo Tours 1997: 3), whom they considered were "illegally" in their block.<sup>11</sup> Tension existed between Dorobo Safaris and TPTS and the relationship was not one of trust nor collaboration.<sup>12</sup> TPTS's owner was also not considered transparent by tour operators and commercial farmers.<sup>13</sup> Tellingly, the first time a Dorobo director

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<sup>8</sup> TPTS allegedly paid over US\$ 40,000 in incentives to government officers in order to obtain blocks (discussion, PH, Arusha, 16 January 2005).

<sup>9</sup> Interview with TPTS Director, Emboreet, 23 May 2004.

<sup>10</sup> Bundu complained to the WD about TPTS disrupting hunting safaris, while TPTS threatened legal action and *'not being able to control 500 to 600 murrans turning up to close the Bundu camp'*. Interview, TPTS Director, Kikoti, 25 July 2004.

<sup>11</sup> Interview with CH, PH, Lolkisale, 31 March 2005.

<sup>12</sup> Recorded interview, DP, tour operator, Arusha, 15 April 2005; interview, TP, tour operator, Arusha, 3 February 2005.

<sup>13</sup> Interview, PO, tour operator, Arusha; Recorded interview, JF, commercial farmer, Loiborserrit, 4 June 2005; Discussions, TP, tour operator, Arusha.

visited Kikoti Safari Camp was in 2004 for the SWF meeting, despite the fact that their camps had been a few kilometres apart for close to a decade.<sup>14</sup>

Due to increasing competition for land and products amongst tour operators, TPTS saw in establishing a forum of villages—in which TPTS had exclusive commercial rights—would be extremely profitable. TPTS perceived individual clients as a source of flexible investment funding for tourism infrastructure assuming they believed they were granting the money to a poverty alleviation and development program.

TPTS's director, along with former MP Kone travelled to Babati and secured Manyara Regional endorsement for the SWF. Concurrently, TPTS forged consensus through meetings in each of the 7 villages. This culminated in a stakeholders meeting called by the Manyara Regional Administrative Secretary (RAS), on behalf of the Regional Commissioner (RC),<sup>15</sup> Colonel (Ret.) Anatoly Tarimo, to discuss the SWF.<sup>16</sup> The RAS also wrote to the Principal Secretary (PS) of the MNRT inviting the WD to this meeting.<sup>17</sup> Allegedly, during a heated phone conversation between the DoW and MP, Severre insisted that the proposal be presented to him in Dar es Salaam and that the meeting should not be held.<sup>18</sup> Kone stated that as WMAs were two years late the WD should be open to new approaches. Allegedly, Severre also phoned the RC and asked him to cancel the meeting.<sup>19</sup> When the RC refused, the DoW boycotted the meeting.

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<sup>14</sup> Discussion, TP, Kikoti, 5 October 2004

<sup>15</sup> The RC is the President's Regional Representative holding the status of a Minister of State.

<sup>16</sup> Letter, Manyara RAS, P.L. Nnko, to Simanjiro District Executive Director (DED), Kumb. Na. RC/MNR/G.1/11, 23 September 2004.

<sup>17</sup> Letter, RAS, P.L. Nnko, to PS-MNRT, Kumb. Na. RC/MNR/G.1/8, 20 September 2004.

<sup>18</sup> Discussion with former MP Kone, Emboreet, 2 October 2004.

<sup>19</sup> Interview, TPTS Director, Arusha, 4 October 2004.

Kone gauged that not supporting the SWF could mean political suicide for CCM in the upcoming parliamentary elections held in 2004. He expressed frustration that the DoW was more powerful than an MP, and even the Minister of Natural Resources and Tourism; that too much control was vested in this individual.<sup>20</sup> It was rumoured that the WD objected to the SWF as it undermined the revenue source of a senior officer who received money from an outfitter. More broadly though, the SWF risked upsetting the *status quo* and the WD's absolute control over wildlife management.

### A Historic Meeting

*“Kaeni sawa sawa. Kaeni sawa na serikali, na wananchi watafurabi...”* (Follow the right procedures. Follow government policies and citizens will be happier)

— Simanjiro DC, Philemon Shelutete, to SWF meeting, October, 2004

The meeting was held at Kikoti Safari Lodge, symbolically chosen for its CBT example within Simanjiro. It was attended by the RC, MP, and DC – as well as senior regional, district, divisional, ward, village leaders and tourism representatives. Chaired by the RC, the meeting elicited passionate responses. All seven villages unanimously backed the SWF. Two additional villages, Loswaki and Komolo, officially requested to join the SWF. Villagers spoke of massive wildlife declines due to poaching,<sup>21</sup> and threats to villagers by hunters. They called strongly for resident hunting to be stopped in Simanjiro.

<sup>20</sup> Discussion with former MP Kone, Emboreet, 2 October 2004.

<sup>21</sup> *“Tukicheza, baada ya miaka mitatu wanyama wataisha!”* (If we play around, there will be no wildlife left in three years!), Village Chairman to SWF meeting, 2 October 2004.

The DoW's decision to boycott the SWF meeting angered village leaders. They threatened to farm up to the park boundary, remove all wildlife from Simanjiro, and harass hunters unless the DoW recognised their rights. A village chairman likened wildlife management to 'colonialism'. DGO Muyengi represented the WD at the meeting. He clearly opposed the SWF, stating that the only way would be for it to be brought through a WMA which the Maasai opposed. He was offended by claims of hunting abuses in Simanjiro, and disputed that wildlife declines had occurred in the ecosystem. The DGO angered the RC stating that it was against the constitution to stop resident hunting at a district level, as well as illegal to establish a forum of villages. Village leaders viewed the SWF a potential avenue to lobby the government to degazette the Lolkisale GCA making more of this land legally village land. Villagers perceived the SWF as empowering them to independently enter into wildlife business contracts without government interference, all without a WMA.

District Councils request a resident hunting quota from the WD. It is the district council's responsibility to control poaching along with the WD in the district. Simanjiro District Council (SDC) officials admitted that they did not have the resources or capacity to effectively monitor wildlife populations or conduct law enforcement. Muyengi was asked why he tried to hide these problems from the meeting. A District CCM official recommended that Muyengi be placed on the SWF's steering committee stating privately: "That 'witchdoctor' will disrupt things – put him on the committee so he's responsible for rearing the 'child'".<sup>22</sup>

The meeting unanimously agreed to establish a forum. TPTS proposed to purchase the entire resident hunting quota, ensuring that fewer wildlife were shot while the SDC

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<sup>22</sup> Simanjiro CCM Deputy Chairman, Emboreet, 2 October 2004.

retained its revenue stream. The SDC accepted the recommendation to shut down resident hunting for two calendar years from 2004 to 2006 at the SWF meeting (SWF Committee 2004a,b). Village participants had high hopes that the SWF would become a national model for CBC. One councillor likened it to “A cow about to give birth”.<sup>23</sup> Despite initial enthusiasm, villagers were not comfortable with the ‘wildlife’ in the SWF name which hinted towards trouble to come.

### **The Aftermath of the SWF Meeting**

Kone’s primary competition for the district parliamentary seat, Christopher Ole Sendeka was not invited to the SWF meeting. Kone promoted his involvement in the SWF and bet his political fortunes on it. Since Sendeka’s previously unsuccessful campaign for the MP’s seat his influence and tanzanite funding base had increased. The night of the SWF meeting, he travelled to Emboreet and spent the night in the village to symbolise his protest at being snubbed for the Kikoti meeting.

In November 2004, Sendeka allegedly manipulated party elections in Emboreet in his role as District CCM Chairman.<sup>24</sup> Sendeka campaigned that the SWF meeting was a veiled attempt to impose a WMA in Simanjiro.<sup>25</sup> Village leaders who participated in the meeting were systematically voted out of office, labelled as ‘land sellers’ and replaced by Sendeka supporters.<sup>26</sup> In Emboreet, an NCAA immigrant and NGO employee provided a print out from the TPIS website which decisively swayed public opinion. It claimed

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<sup>23</sup> Terat Ward Councillor, SWF meeting, Emboreet, 2 October 2004.

<sup>24</sup> Discussion with Emboreet CCM Secretary, Emboreet, 2 November 2004.

<sup>25</sup> Interview OL, participant, Village Council meetings, Emboreet, 3 and 7 January, 2005; Recorded interview, former VEO, Loiborsoit ‘A’, 14 June 2005.

<sup>26</sup> Similar to the U.S. system of an ‘Electoral College’ to decide the presidency, parliamentary seats in Tanzania were decided by nominated village representatives thus explaining Sendeka’s efforts to install his supporters throughout villages.

that Kikoti Safari Camp was situated on a 35,000 acre ‘ranch’ on 5 villages, and employed 50 villagers as anti-poaching scouts.<sup>27</sup> Villagers claimed that this represented that land had been ‘sold’ to the organiser of the SWF. The SWF was systematically rejected in each village which initially embraced it due to party politics.

Following the backlash against the SWF, TPTS abandoned it—as did the SDC which reopened resident hunting a few months later in 2005. The SDC argued it was the WD that did not accept the resident hunting ban citing Tanzanians’ constitutional right to hunt.<sup>28</sup> Given the problems of poaching and resident hunting abuses documented in this thesis, it seems counter-intuitive that the WD opposed the resident hunting closure, even when TPTS offered to buy the resident quota without shooting it.

Kone, a TANAPA trustee, actively solicited support from tourism and hunting operators to fund his political campaigns. Sendeka focused on tanzanite barons in Mererani as his core base of support. Ultimately, Kone’s downfall was his association with conservation,<sup>29</sup> and anti-farming rhetoric.<sup>30</sup> His underestimation of resistance to these suggested he was disconnected from his constituents.<sup>31</sup> He did not seem to care about the parliamentary elections. He encouraged people to vote for him because his proximity to President Kikwete guaranteed him a powerful position in the government. After he

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<sup>27</sup> <http://www.tzphotosafaris.com/docs/conservation.htm> accessed 15 October 2004 & 23 October 2007. TPTS-Emboreet village contract specified 5,000 acres. The webpage listed a slew of fictitious claims about support given by TPTS to Simanjiro.

<sup>28</sup> Quota approval letter from A.A. Raphael of the WD, to SDC DGO, Ref. GD/G.20/17/181 dated 6 July 2005. The request included Eland (10) and Hartebeest (20) – both species which had declined precipitously in Simanjiro; Recorded interview, EL, District Natural Resources Officer, Orkesumet, 20 July 2005.

<sup>29</sup> Kone occasionally traveled to Emboreet in a TANAPA vehicle which he sent to collect his supporters for meetings from their *bomas*. Villagers viewed his use of TANAPA assets as their support for his campaign.

<sup>30</sup> Interview, VK, MP, Emboreet, 26 June 2005.

<sup>31</sup> Kone was supposedly derided at a national level for his ineffectual ability to lobby for his constituents. Recorded interview, commercial farmer, Arusha, 20 April 2005.



lost the parliamentary seat, the President promoted him to Regional Commissioner for Singida.

This vignette illustrates how some of the actors and forces at play in the Tanzanian wildlife sector manipulate CBC for personal or institutional gain. There is arguably a conflict of interest in a tourism company accepting donations to fund activities and costs which would otherwise be borne by the company. In the case of the SWF, an individual company wanted exclusive rights to an entire district. It is possible that this might have translated into higher wildlife returns amongst more villages, and perhaps more funding for community-based wildlife management. However, given TPTS's issues of transparency more generally this is questionable. Despite unified calls that wildlife was declining from village leaders and TANAPA, it was ironic that the SDC and WD opposed a resident hunting moratorium. This alluded to the interests of power and control being more significant drivers than conservation in these institutions.

## Appendix VIII

### Calculation of Mortality and Fertility Rates from Bosography Data (From Brockington 1998)

Summary: The methods used to collect and analyse data on the life history of cows and their offspring are described. These data give estimates of changing fertility and mortality rates over a given period of time.

#### *How the Data Were Collected*

Women generally remember the fate and history of each named animal in the herd allotted to them for some time. This store of knowledge is a valuable source of information about the history of herds in an area. 'Bosography'<sup>1</sup> refers to data on the history of the cattle in the sub-household herd of each woman in Maasai families. I traced the history of a number of animals, establishing when they were born and when they had died or were sold, slaughtered or given away, how many offspring they had and what was the fate of each animal.

I found that I was generally able to date when animals had been born, died or were sold. Dating events was difficult. It was not easy to convert the reported timing into calendar years. Dating was easiest if the household head, woman or one of her co-wives had been to school. Sometimes histories were worked out in conjunction with men, combining women's knowledge of the cows with men's awareness of timing.

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<sup>1</sup> The term was coined by Dan Nettle.

In sum, for each cow, we recorded how many times it has given birth, whether the animal born was male or female, and what has happened to the offspring of that animal, whether it is still alive, whether it died, was sold, given away or slaughtered.

### **What cows make up the record of the bosography data**

The bosography is only a record derived from named cattle. As cattle are only named if they give birth this automatically means that infertile animals are not included in the list of named animals about which we have information. It may be the case that a fertile, named cow has a daughter who is infertile. We would have a record of that daughter's sterile years, but it is not a long record. The period studied here goes back until the early 1980s, but cattle born from the 1990s onwards featured more regularly.

There is a tendency in cattle history data to pick up survivors, and not to hear about family lines which have died out. Both problems apply to these data.

We only asked about existing animals, their children and, where possible, their mothers. If cattle die en masse it is possible for whole families to die and for there to be no offspring left of whom histories can be asked. The diagram below illustrates the problem. In the cow family tree below, asking about surviving cattle means that the deaths of some animals will be completely unrecorded. Only if one animal survives is it possible to ask about the fate of its siblings.

It is theoretically possible to find out about a cow's siblings' families by working laterally along bovine family trees. However it is often not possible to get reliable data like this.

Instead therefore, we just asked after each animal's own offspring and that of its mother. This means we do not know about families which have all died.

As to the other problem, a cow could only be on this survey by being alive and present in the herd. We could not easily hear about, and so could not research the histories of, already dead or sold animals. A cow which has given birth and which has been recorded on the register has a high chance of being alive and a low chance of dying. Deaths of calves can be recorded but the mortality rates given below also include the cows which, in order to be mentioned at all must have been alive. Therefore the mortality rates must be taken to be minimum possible estimates.

### ***Calculating Fertility and Mortality Rates from these Data***

Fertility and mortality rates are not measured per animal, but in terms of the amount of time in which a cow is at risk of dying or giving birth. The unit of time is a 'cow year at risk'. The purpose of this is easiest to see when considering fertility. A herd of 20 cows may include 10 animals which are too young to give birth. Relevant fertility rates must only include the mature animals. Furthermore it is important to know for how long each of these 10 mature cows is at risk for during the year. Two cows may be sold in June and thus will only have been at risk of giving birth for 6 months, another may only have matured in May and so will only be at risk of giving birth for 7 months.

These data recorded the timing of events by calendar year. It was not possible to determine when in the year an animal died. Thus some assumptions had to be made when calculating cow years at risk. Moreover there are gaps in the data which mean more assumptions have to be made.

If a fertile animal is present at the beginning of the year and at the end of the year there are 12 months at which it is at risk of giving birth or dying. If it dies, it is assumed to die in the middle of the year; it is therefore assumed to be present for just 6 months, and so is only at risk of giving birth for 6 months.

When an animal is born it is assumed to be born in the middle of the year and so present for just 6 months. In the first year of its birth it is only at risk of dying for 6 months. An animal is considered to be fertile 4 years after it is born. In the first year when it becomes fertile it will only be at risk of giving birth for 6 months as it was born halfway through the year.

June 30<sup>th</sup> is a busy night for pastoralists.

For most animals I know when they were born, when they started giving birth and when they left the household herd through death, slaughter, sale or being given away. However for some animals information is less complete. First, some animals were born or died in an unknown year. For these I do know when they first gave birth. For some animals I do not know when they were born at all. However I do know when they first gave birth. These animals are also assumed to become fertile 1 year before they give birth. For the purposes of this analysis an animal which left the household herd *through any means* is considered to have died. It is not included in the calculations of cow months at risk. These results then are a record of the fertility of the managed herd, not of a cattle population.

***Summary of Cow Months at Risk Calculations***

Fertility

Cow months at risk comprise:

1. Fertile cows present at the beginning of the year and which do not die. Count 12 months at risk of giving birth each.
2. Animals that were born before the operation that are estimated to become fertile this year. Count 6 months at risk of giving birth each in the year when they become fertile and a full 12 months thereafter each year unless they die.
3. Animals of unknown year of birth which are estimated to become fertile this year. Count 6 months of giving birth each in the year when they become fertile and a full 12 months thereafter each year unless they die.
4. Named cattle for whom births are recorded, and whose own year of birth is known, become fertile when they are four. Count 6 months at risk of giving birth each in the year when they reach four years old and a full 12 months thereafter each year unless they die.
5. Female offspring of named cattle on the register which reach four years old become fertile. Count 6 months at risk of giving birth each in the year when they reach four years old and a full 12 months thereafter each year unless they die.

6. Cattle who give birth before they reach four years. Count 6 months at risk each in the year when they first give birth and a full 12 months thereafter each year unless they die.
7. Fertile animals which died this year. Count 6 months at risk of giving birth each in the year when they die.

General Fertility rates.

To get general fertility rates the number of cow months at risk is converted into cow years at risk by dividing the number of months by 12. The general fertility rate of a given calendar year is the number of births per number of cow years. These calculations are also shown in the table attached.

Mortality.

Cow months at risk of dying are calculated thus:

1. All animals starting and finishing a year are at risk of dying for 12 months.
2. Animals dying, sold or given away as presents in a year were at risk of dying for 6 months of that year.
3. Animals which were born bought or received as gifts in a year were at risk of dying for 6 months of that year.

Indices of mortality of deaths per cow year can be calculated by dividing the number of deaths in a calendar year by the number of cow years at risk lived that calendar year.

Additional indices of sales, gifts, slaughters and general off-take can also be worked out with similar calculations.

Calf mortality has also been calculated. This was not expressed in terms of calf years at risk of dying but simply lists the number of calves of a given cohort which die before they reach two years old. In practise because I only know the year and not the month of a calf's birth these rates are all underestimates. This is because a calf born in November of 1998 is recorded as being alive in 1998. According to the crude categorisation of these data by 2000 it has lived two years, although in actual fact it is only 11 months old. The error is compounded for 2005 and 2006 when the amount of time that calves had had to die was shortened by the fact that I gathered the data in late 2005 and early 2006. In actual fact most of the deaths that could have occurred seem to have been picked up. Mortality rates of these prematurely adult animals are low.



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