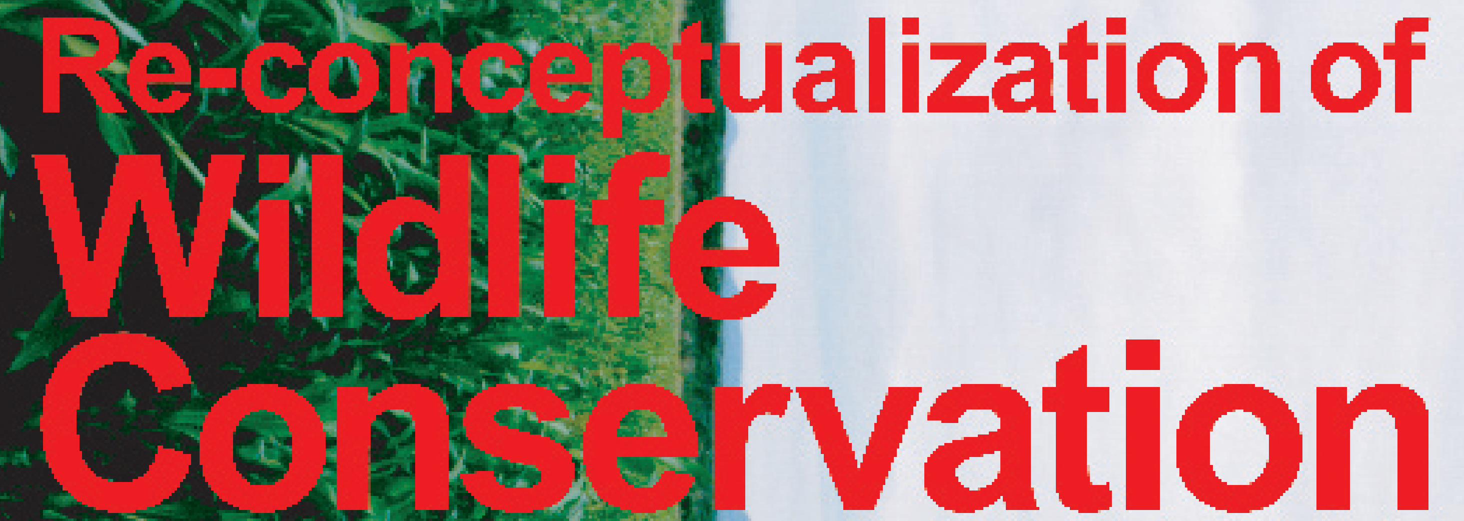

Re-conceptualization of Wildlife Conservation

Toward Resonation between Subsistence and Wildlife

Wildlife conservation in Africa is one of the hottest issues. There are increasing alarm about the destruction of nature and voices raised in the defence of conservation. However, what do they mean by "wildlife"or "conservation"? "Wildlife" seems to have so various local meanings that it refuses to be universalized just as "target of conservation." This workshop will re-conceptualize "wildlife conservation" so as to seek out "conservation" resonatable with local lives.

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Chapter 1 Introduction: Paradigms of Wildlife Conservation

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KEYWORDS: Integrated Conservation and Development Projects, Community-Based Conservation, Community Conservation, Community-Based Natural Resource Management, Consensus-Oriented Approach

1. Background

In the 1960s and 1970s, some researchers working in Africa realized the necessity for including human activities within the discussion of wildlife conservation. Since the 1980s, the roles of communities for biodiversity conservation have been given serious consideration globally (Western, 2003). There is a movement toward bottom-up and decentralization approaches. They differ from the "fortress conservation", which is characterized by its top-down and centre-driven strategy (Berkes, 2004; Hulme and Murphree, 2001a; Western and Wright, 1994). Sometimes, this change is described as a "paradigm shift" (Berkes, 2004; Brown, 2002). Although they share the same tendency explained as above, the fact is that they have different or opposite opinions with regard to some issues. It is important to understand the difference among such new approaches, or *Community Approaches*. Without it, one word may convey different meanings to different approaches. At beginning, this chapter conducts minute examination of new approaches so as to check that difference. After that, it is discussed in what way we should reconceptualize wildlife conservation.

This chapter take up the following four approaches, which are often reviewed as a "new paradigm" in wildlife conservation; Integrated Conservation and Development Projects (ICDPs), Community-based Conservation (CBC), Community Conservation (CC) and Community-based Natural Resources Management (CBNRM).

2. Original Ideas of Major Community Approaches

2.1 Integrated Conservation and Development Projects (ICDPs)

The conceptualization of Integrated Conservation and Development Projects (ICDPs) is done in Wells et al. (1992). ICDPs are said to be "new approaches to protected area management that are attempting to address the needs of nearby communities by emphasizing local participation and by combining conservation with development" (*ibid*: 1). The major targets are public protected areas, and the goal is biodiversity conservation inside of them.

The concept of ICDPs is one of the early attempts that try to form a new conservation strategy, and there are two originalities at that time. It is said that the exploitation and degradation of natural resources in the protected areas are brought by development projects, expansion of farmlands, illegal hunting and logging so on. In order to stop such situation and to realize the goal of ICDPs, "local

participation" is demanded; this is the first important feature (*ibid*: 1-2). The authors define this concept as a process to empower local people so that they can control resources and their lives (*ibid*: 42). The second distinguished feature is the integration of biodiversity conservation and rural development. Before ICDPs, it is said that, conservation and development were separately pursued. ICDPs aim to combine these two things (*ibid*: 25). As components of ICDPs, protected area management, buffer zones, and local social and economic development are mentioned, and then, it is said that the last one importantly discriminates ICDPs from the preceding projects (*ibid*: 25).

Although, the development components are vital for ICDPs, it is a means to achieve the goal of biodiversity conservation (*ibid*: 55). It seems that the practical methods of "local participation" is regulated by this strategy. Compensation and substitute are explained as major measures to bring economical benefit to the communities (*ibid*: 30), but then, local resource use is seen as something that should be regulated or prohibited for sake of biodiversity conservation. Also, the people are regarded as passive targets of outsiders' conservation education (*ibid*: 3).

2.2 Community-based Conservation (CBC)

The concept of Community-based Conservation (CBC) is constructed in Western et al. (1994). The fundamental belief of CBC is that "local participation in decisions and benefits could reduce hostility toward conservation efforts" (Western and Wright, 1994: 4). The goal of CBC is to form local conservation initiatives compatible with interests of outsiders (Western, 1994a: 500). The success of CBC is checked on by real progress of conservation. In other words, "success in community-based conservation ultimately must be measured by how deeply the effort is embedded in each community's aspirations and how effectively its members' efforts sustain it" (*ibid*: 510). CBC can have a wide range of measures (*ibid*: 507), but important thing is neither the nature of methods nor the initiative. Of most importance is whether it produces tangible local benefit (Western and Wright, 1994: 7). CBC gives serious consideration to local benefit because it thinks that local people are those "who bear the cost of conservation" (*ibid*: 7). The negligence to that cost is thought to be the central reason why the people have opposed to conservation initiative.

One reason why CBC is not overly concerned with the methods and the initiative is that it assumes conservation today cannot be carried out only by the local communities (*ibid*: 10). Of course, governments and other organizations should abandon the old-fashioned top-down approach, but the discussion includes recommendation for such organizations to play supportive and facilitative roles. With regard to the communities, CBC warns of having excessive expectations. It states that rights of the local people should be conferred with responsibilities and capabilities (*ibid*: 10). When it is said "local initiatives and skills must become the driving force of conservation" (Western, 1994b: 553), it is clear that CBC think the local people can and should take part in conservation activities with their abilities. Concerning local participation, while CBC mentions the role of education toward the local people, it has more positive evaluation of the local praxis. For CBC, which tries to form "aspiration", the people are not passive objects but subjects who can be the core of local conservation activities, even if they need some assists from the outside.

2.3 Community Conservation (CC)

An idea of Community Conservation (CC) is explored in Hulme and Murphree (2001a). Adams and Hulme (2001: 13) define CC as "those principles and practices that argue that conservation goals should be pursued by strategies that emphasize the role of local residents in decision-making about natural resources". As the background of CC, a shift from state-centric to community involvement, the concept of "sustainable development", and neo-liberal thinking are mentioned (Hulme and Murphree, 2001b: 1). CC sees the free market as a useful tool to advance wildlife conservation.

CC emphasizes "the role of local residents", and it is stated that CC includes all of ICDPs, CBC and CBNRM (Adams and Hulme, 2001: 13). CC as a whole does not have a concrete objective. Sub-categories of CC have own respective goals. Barrow and Murphree (2001: 32) show three major sub-categories with two criteria; land tenures and objectives. The first sub-category is protected area outreach (PAO). It is practiced on state owned lands or resources with an objective of ecosystem conservation, with "rural livelihoods being secondary" (*ibid*: 33). As well as ICDPs, PAO tries to bring some benefit to rural livelihood by using protected areas, but local resource use is denied. The second one is CBC, which is an approach that seeks sustainable rural livelihoods on lands and resources owned by local people. CBC put emphases on economic incentives, devolution of authority and responsibility, and development of communal institutions. It seeks to "create an enabling legal and policy context for local people to manage their own resources sustainably" (*ibid*: 34). In this strategy, the conservation of natural resources is "an element of land use" (*ibid*: 32). Thus, this definition completely differs from CBC by Western et al. (1994) in many aspects. The last one is collaborative management (CM). Its object is conservation with some rural livelihood benefits. CM is practiced on the state-owned lands, but it calls for agreements for joint management between communities and states. CM differs from ICDPs in that it allows local people to use resources directly. An agreement is essential for CM, and it can be either conservation-prioritized (like PAO) or development-prioritized (like CBC). CC has much wider scope than ICDPs and CBC, and covers various activities with different objectives.

2.4 Community-based Natural Resource Management (CBNRM)

Whereas the term of CBNRM has been used for various resources worldwide, but Turner (2004: 1) says that CBNRM has been used with the specific meaning in the realm of wildlife conservation in southern Africa. In this section, a book (Child, 2004a) written by the chairman of SASUSG (Southern Africa Sustainable Use Specialist Group) is referred to for checking current conceptualization of CBNRM for wildlife.

The core belief and experiences of CBNRM are "that conservation will be most effective when placed in that hand of landholders made responsible by sensible institutions that empower landholders and align and internalize costs and benefits at the level of land units" (Child, 2004b: 4). For the conceptualization or modification of CBNRM, wildlife policies of Zimbabwe and Namibia are mainly referred because of their "outstanding economic and ecological success" (Jones and Murphree, 2004: 64). CBNRM adopts the common feature of these two countries, such as sustainable use as a conservation paradigm, economic instrumentalism, devolution, and collective proprietorship (*ibid*: 64-66). In addition to this, CBNRM has "the price-proprietorship-subsidiarity paradigm" (*ibid*: 66). This means "if the resource is valuable (price), if this value is captured by landholders (proprietorship) and if the principle is followed that no management action, decision or benefit is arrogated to a higher level when it is better and more appropriately conducted at lower level

(subsidiarity)” (*ibid*: 66). With this paradigm, CBNRM puts more emphases on the market economy than ICDPs, CBC and even CC. In the explanation of “economic instrumentalism”, it is admitted, “where wildlife cannot be made economically competitive, its displacement by other forms of land use must be accepted” (*ibid*: 65). CBNRM intends “the switch from fortress to incentive-led conservation” (Child, 2004c: 248), and the emphasis of local benefit is similar to ICDPs and CBC. However, the difference is that CBNRM basically measures benefit in the term of market economy.

3. The Change of Ideas of ICDPs and CBC

Table 1 summarizes the major features of community approaches. All of them call for more local participation and correction of unfair power and benefit balance, but in detail, their emphases vary. One major change from ICDPs to CBNRM is that the superiority of conservation over development is becoming weak, though CC keeps both conservation- and development-prioritized project. Confirming this tendency is not casual, it is better to examine the recent usages of ICDPs and CBC.

Table 1. Major Community Approaches

	Main targets	Goals	Important points
ICDPs	Public lands (protected areas)	Biodiversity conservation in protected areas	Integration of conservation and development Local Participation
CBC	Communal and private lands	Local benefit for the formation of conservation initiative	Empowerment, participation, awareness and education
CC	Public, communal and private lands/resources	Various (combination of conservation and sustainable livelihood)	Environment, efficiency, poverty reduction and institutional development
CBNRM	Public, communal and private lands/resources	Fulfilment of human needs	“Price-proprietorship-subsidiary paradigm” A possibility of denial of conservation

Source: Child, 2004a; Hulme and Murphree, 2001a; Wells et al., 1992; Western et al., 1994

3.1 Following Discussion about ICDPs

Newmark and Hough (2000: 585) explain ICDPs as “attempts to link the conservation of biological diversity within a protected area to social and economic development outside that protected area.” Although protected areas remain as main targets of ICDPs, there is no mention that local benefit is a means to achieve the goal of biodiversity conservation. And Wells and McShane (2004: 513) introduce ICDPs as “a viable collective description” and say that CBC is included in ICDPs. In this article, the definition of ICDPs is quoted from Franks and Blomley (2004), and it is “an approach to the management and conservation of natural resources in areas of significant biodiversity value that aims to reconcile the biodiversity conservation and socio-economic development interests of multiple stakeholders” (*ibid*: 513). The two original features of ICDPs, that is to say main targets of protected areas and priority of conservation over development, are both omitted.

3.2 Following Discussion about CBC

In the case of CBC, as explained above, Barrow and Murphree (2001) defined CBC reversing the relationship between conservation and development. Agrawal and Gibson (1999) explain the belief of CBC is that “If communities are involved in conservation, the benefits they receive will create incentives for them to become good stewards of resources” (*ibid*: 7). This understanding is similar to

the original idea, but in this article the priority of conservation over local benefit is not explained. Berkes (2004: 622) too states that the concept of CBC is emerged with the conceptual shifts in the realm of ecology and various applied ecology; a shift from reductionism to a systems view of the world, a shift to include humans in the ecosystem, and a shift from an expert-based approach to participatory one. It is true that the second and the third shifts are mentioned in the original discussion of CBC (Western and Wright, 1994: 5), but the emergence of CBC is not just explained by these changes. The backgrounds of CBC includes, in addition to the grass-roots approaches, the problem of careless technology and population explosion (Carson's *Silent Spring* and Ehrlichs' *Population Bomb* are referred to), and the movement of human right and ethnic minority (Western and Wright, 1994: 4-6). Berkes does not instruct the fact that CBC initially put conservation over development either.

4. Reconceptualization of Wildlife Conservation

4.1 Three Paradigms of Conservation and Plus One

Blaikie and Jearnrenaud (1997: 61) propose three paradigms of conservation; the *classical approach*, which sees local people as ignorant and obstacles to conservation, the *populist approach* that recommends local participation and empowerment against the classical approach, and the *neo-liberalism approach* is the last one which is based on belief that conservation have failed because of inappropriate right arrangements and insufficient institutional designs, encouraging the best use of free market. The tides from "fortress conservation" to CBNRM with the modification of ICDPs and CBC can be interpreted as the paradigm shift from the first one to the third. But the fact is that there are pros and cons for each approach (Adams and Hulme, 2001: 22; Berkes, 2004: 622; Brown, 2003: 89; Hackel, 1999: 733; Hulme and Murphree, 2001c; Wells et al, 1992: 61; Wells and McShane, 2004: 518; Western, 1994b: 549). Then, some researchers start to construct the discussion with the postulation that there are various different views about wildlife conservation.

The author would like to label the new approach as "consensus-oriented approach" on trial. A stress is laid on what a desirable way of consensus making is, rather than what the ideal conservation is. Brown (2003: 90) mentions the importance of "deliberative inclusionary process." He recommends including various stakeholders who have different standpoints and opinions ("inclusionary"). These participants re-construct their own views, values, and preferences through consideration and discussion with others ("deliberation"). For this approach to be successful, two important issues are mentioned. One is a more pluralist approach that admits the variety of knowledge and values held by stakeholders. The other gist is to remodel institutions that are more flexible and adaptable to cope with the diversity of people (*ibid*: 90-91). Berkes (2004) introduces an idea of "adaptive comanagement"; an evolutionary process based on the method of adaptive management and the concept of comanagement. Its two key processes are first, sharing of management power and responsibility, feedback learning, and secondary, building of mutual trust among the partners (*ibid*: 626). Both recommend the communication process by which the people realize, re-evaluate and even re-conceptualize their views and opinions about conservation.

4.2 An Extra Issue for the Next Conservation Paradigm

The "consensus-oriented approach" calls for various stakeholders coming together. Thereupon, there

seems to be one sensitive issue. Should local people be treated exactly in the same way as outsiders? For the philosophy of “deliberation”, the ideal situation is all participants are equal in every respects that can affect the course and the result of communication so that voting is just guided by their free wills. Actually, it is not easy to realize these conditions, and against the reality, Inoue (2008: 8) presents “commitment principle” as one of “design principles of for collaborative governance of natural resources.” The principle requires giving more decision-making power to those who have closer relationships to natural resources than those who have less. This is a kind of expedients to prevent local people from being oppressed. Yet, in case of wildlife, it is local people who bear the negative impact of wildlife as Human-Wildlife Conflict (HWC).

HWC includes crop raiding, livestock depredations, human injuries/death and other destructive conducts. Although, Woodroffe et al. (2005: 388) say that HWC has clearly driven the global decrease of wildlife, the most of community approaches does not discuss this issue. One highly possible reason is that they usually focus on tourism as a means for producing benefit, and do not cover much popular nature-based subsistence, such as agriculture, livestock keeping, gathering and also hunting. HWC destructs local subsistence, at the worst the life of local people. Western and Wright (1994: 7) say that local people should get benefit because they bear “the cost of conservation”, but it can be corrected as “the cost of wildlife.” Concerning wildlife, not only closeness of relationships but also the real risk of danger must be taken into consideration, and it may justify the people have more power.

5. Contents of the Book

Contents of this book are originally presented on the international workshop held at Nairobi on 7th August 2008. After the general discussion on that day, it became indisputable that “reconceptualization of wildlife conservation” is not easy task. However, the purpose of these proceedings is to bring some hints for reconceptualization. Wildlife conservation targets both human beings and wildlife, so it calls for collaboration between natural scientists and social scientists. On this point, this book is more social scientific. Following chapters are written based on detailed fieldworks. With these case studies, expansion or reconceptualize the concept of “wildlife conservation” is tried.

Chapter 2 deals with community participation. Local people use the same lands and resources which wildlife use, and so human activities can directly influence the course of conservation and *vice versa*. At present, human activities are expanding. Understanding how and why that expansion is going on is important as a base of conservation discussion. **Chapter 3** picks up the problem of livestock depredation and compensation. It is one kind of HWC, and is important because some major protected areas are established around pastoral communities. Compensation is a measure to appease local peoples who loose their herds due to wildlife. But is it enough just giving money as compensation? It is discussed in this chapter. **Chapter 4** is a case study of another HWC, crop raiding by elephants. This is also a major HWC, and the chapter shows field dates. The seriousness of damage can be understood by this chapter. **Chapter 5** is a study of Kenya’s CBC. A community sanctuary is expected to realize local participation by managing a protected area and tourism facilities. However, this is not achieved in this case. The chapter scrutinize why the original goal failed, what result is so far and how it affect local opinion concerning wildlife. **Chapter 6** is a case

study on a captive wildlife facility. Now the facility is the heart of environmental education. Seeing the various reasons why wildlife come there and how people use it, the chapter discusses not only educational matter but also the effect of HWC experience on their consciousness. In **Chapter 7**, a case study from Cameroon demonstrates how the concept of "sustainability" is used arbitrary and suppresses local resource use. In the country, wildlife is utilized for sport hunting, mostly enjoyed by foreigners. Sport hunting, sometimes, is approved as more "sustainable" than ecotourism. This case discloses the true situation is not so laudable. **Chapter 8** is a case study of Ethiopia. There, a local community seems voluntarily organize community militia so as to conserve natural resources. The objective of the chapter is to investigate the reason why people are actively mobilized with consideration for local life. **Chapter 9** is the case study of a community of traditional hunters in Tanzania. The chapter presents the history of their resistance against conservation activities. Local people have hunted wildlife directly, but conservation initiative denies their customary rights. With this case, it is revealed that what is called Community Conservation is in effect "community-friendly fortress conservation."

Chapter 10 is a trial of "reconceptualization of wildlife conservation" after these case studies and general discussion on the workshop. First, the chapter elaborates a framework that can treat subsistence matter better than past ones. Secondary, the idea of "consensus-oriented approach" is modified with an idea from public philosophy. **Special Chapter 1** is a contribution by a commentator of the workshop, David Western. He is a person who conceptualized CBC in *Natural Connections*, published in 1994. After listening those discussions, he explains his intention in the 1990s and also what has changed since then and what remain critical issues. Readers can find various intriguing and significant issues. **Special Chapter 2** is written by the other commentator, Itsuhiro Hazama. He is an anthropology working on northern Uganda and his target is a pastoral communitiy there. He weighs a modern human-nature connection and sensibility toward wild lives.

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Chapter 2

Community Participation Challenges in Resource Conservation in Kenya's Rural Landscapes: Lessons from Amboseli, Kenya

Moses M. Okello

KEYWORDS: Amboseli Ecosystem, Community Conservation, Kenya, Resource Conservation

1. Introduction

There are many resources that need community participation in their conservation in Kenya so as to yield optimum benefits (ecological, social, economic cultural) to the communities as well as conserve them. Such resources include forests, water, wildlife, fisheries, and plants as key resources among others. These resources have been the raw materials that communities have depended on for basic needs for generations. However, the status and distribution of these resources is now limiting and their conservation is increasingly becoming a concern. Local communities must be involved and help to conserve these resources in their landscapes. This is even more critical in arid and semi-arid areas where human survival and livelihoods are closely linked with just a few basic resources. Most of Kenya is rangeland, and is dominated by pastoralism. These areas have the lowest population density but support huge numbers of livestock and wildlife. Some of the most spectacular wildlife protected areas in Kenya are found in these rangelands. How we can keep wildlife conservation relevant to local communities in this area, and allow wild species roaming outside of protected areas is an important issue. One way to go about this is to manage the relationships and interface between wildlife and these communities.

Amboseli area is one of the key remaining wildlife conservation blocks in Kenya. It comprises of the world famous Amboseli National Park and about six Maasai communally owned group ranches (GR) which act as both resident and wildlife dispersal area from Amboseli National Park, Tsavo West and Chyulu national parks. In the Amboseli Ecosystem, just as in most dry rangelands in Kenya, rainfall is a critical limiting factor in biotic productivity. Thus water affects how the Maasai and wildlife utilize land, and also how they are distributed in the landscape. Other critical natural resources in the area are wildlife, land availability, and plant (and pasture) resources. These resources are linked as wildlife, livestock and people need land, water, pasture and each other for their survival or benefit. Even though the local community knows the importance of these resources, the struggle for survival due to depressed livelihoods makes it a challenge to both their wise use and conservation.

Other challenges to effective community participation in the resource conservation in Amboseli landscape include low technical expertise and education among the Maasai so that they benefit more from their natural resources or use them in a sustainable way, clarifying land tenure and resource

ownership policies so that there is no confusion by mixing up private and communal ownership. Also, the growth of population due to high birthrate of the Maasai and polygamous lifestyle together with immigrants from Tanzania and other areas in Kenyan (Okello, 2005) is another challenge. These leads to increased unsustainable demand of these resources. There is also increased wildlife-based tourism in the area, but this is also centered on protected areas, with limited opportunities for participation and investment of the local community due to poor financial endowment and expertise in tourism enterprises. There is also generally poor local institutional framework where the communal benefits and property are dominated and mostly exploited by local elites. This lowers economic empowerment of the majority of the Maasai in Amboseli area, especially because there are few economic alternatives and low economic diversification and investment in the area. This chapter discusses the challenges to resource conservation and participation of local communities in the Amboseli landscape, and consequences of these challenges to resource management and conservation.

It is known that conservation of most free ranging resources requires wide spaces on public and private property, participation and involvement of local communities. There are some conservation initiatives such as protecting endangered species in wildlife sanctuaries of zoological facilities, where community participation is unnecessary. In Kenya, there are close interactions, interdependence and interface between people and natural resources or protected areas where they are legally conserved. Therefore community participation and involvement is important for the viability of these protected areas. This is important especially for wildlife which was a source of food, sport and source of cultural stories in many African societies.

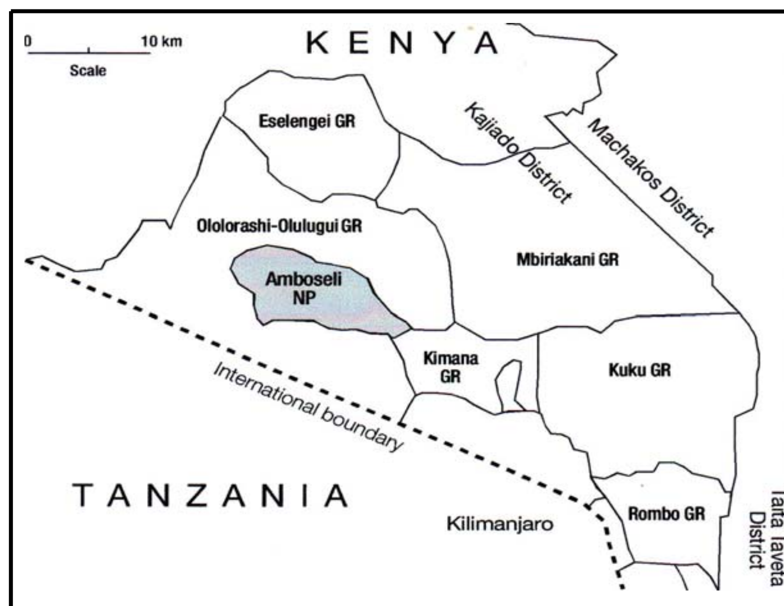
The western model of conservation that separated wildlife into protected areas (such as national parks) was totally alien to the use and interactions African had with such resources. Many rural communities depended on these resources for livelihoods, especially where other options (such as commerce and trade) are limited. For example, the pastoralists (the Maasai, Turkana, Borana etc.) in Kenya are depended on resources such as water, pasture, plants and space for survival and livelihoods. Conservation must be compatible with their natural history and way in which they view and utilize such resources. When such resources, especially wildlife, occur mostly or move outside the network of protected areas in communal or individual lands, then they must be beneficial to such landowners if they are to be protected and conserved. But while many support this view, there are concerns. The first is that it may be difficulty to reconcile conservation and community's needs. It will be difficult to strike a balance between use and conservation unless there is practical education, willingness on all stakeholders and diversification of economic activities to reduce demand on the critical natural resources. Biologists also feel that communities may not have sufficient scientific and ecological knowledge about resources and sustainable use to really play a positive role in the conservation of these resources. It is therefore a critical issue in terms of livelihoods, resource conservation and sustainable use that needs to be addressed and resolved to realize community participation in resource conservation. However, there is emerging evidence of how some communities, for their livelihoods and resource needs, have developed resource use in a sustainable manner. This recognition of indigenous knowledge and practices around the world has helped conserve important ecosystems, wood groves and some endangered species. With these emerging examples, Conservationists are looking afresh at the abilities of local communities to use resources of importance for their own survival wisely. This principle may not be based on rigorous science, but it can provide hope for critical habitats and species if it is followed under scientific collaboration to

enhance resource stewardship and conservation.

Amboseli area is one of the important conservation blocks of wildlife in Kenya. Wildlife uses land which belong to the Maasai, and it is partly approved by Maasai's tolerance for wildlife. However, this tolerance will also be influenced by competition for space and resources between wildlife and the Maasai, and between wildlife and Maasai livestock. Livestock keeping is not only a cultural practice of the Maasai, but also their livelihood. Conservation has to be compatible with this reality and therefore balance pastoralism interests and conservation. Given low levels of education and economic diversification in Maasai lands, and given ecological constraints of low rainfall (and therefore primary productivity), balancing resource use and resource conservation in the context of livelihoods and culture becomes a delicate act that needs careful planning and elaboration. But pastoralist might have been sustainable use of land (and therefore co-existed with wildlife) long ago when Maasai land was still plentiful and there was low population level (and negligible immigrants from elsewhere into Maasai land for cultivation and settlement). But increasing number of livestock heads, frequent and long droughts, expanding human population and changing land use types no longer allow pastoralism to be sustainable. Overgrazing in GRs is evident and getting worse by the day, indicating unsustainable use of the range and likely to lead to ecological decline, deterioration or even collapse.

2. Resource Use Changes and Competition

Competition over land, water and pasture among GRs in Amboseli area (Fig. 1) is more visible in Kimana than in other neighboring GRs. This is possibly because it has a relatively small in size, but has a higher human population, active economy centre around agriculture, the community sanctuary and other ecotourism investments), and relatively longer history of agriculture activities. It has been leading for horticultural production now for over thirty years (Campbell et al., 2000). This agriculture produce is supplied to both Nairobi and Mombasa towns in Kenya. Construction of



* Chyulu and Tsavo West Natonal Park are to the east of Mbirikani and Kuku Group Ranches.

Figure 1. Six Group Ranches (GRs) between Amboseli and Tsavo/Chyulu National Parks

electric fences to protect crops from wildlife damage and introduction of irrigation along rivers and in swamps has stimulated further agricultural productivity (Okello & D'Amour, 2008). Cultivation is also expanding in Kuku and Mbirikani GRs as more Maasai adopt agropastoralism instead of purely pastoral lifestyles (Okello, 2005; Campbell et al., 2000).

Electric fences and increasing human activities/structures make inaccessible important dry season wildlife and livestock grazing areas and water sources. In doing so, they have excluded wildlife use and limited livestock access to water and pasture (Okello & D'Amour, 2008). These electric fences and expanding human activities and structures have contributed to land and resource use competition in the GRs by reducing the available area for livestock and wildlife use, especially in the longer dry season when swamps and riverine areas are critical for large mammal survival (Worden et al., 2003). For example, in recent mapping of human activities and structures in Kimana GR (Okello & D'Amour, 2008), the electric fences and other human structures and activities covered 22.4% and displaced wildlife from a total of 43.3% of the GR. This left only 56.7% of the GR land for wildlife and only 46% for pastoralism. The case is better for Kuku and Mbirikani GRs which have wildlife displaced from about 25% of their lands, even though spatial location of clustered human activities and settlements is blocking critical dispersal routes. The Maasai are becoming almost completely sedentary, except that they maintain some temporary homesteads in special grazing areas (such as towards Chyulu Hills and near Mount Kilimanjaro) during wet and dry season.

The shift from purely pastoralism to agriculture and agropastoralism is not entirely new (Campbell et al., 2003). In the Maasai GRs around Amboseli, agriculture is taking a more commercial nature rather than subsistence (Okello and D'Amour, 2008). GR members often state that agricultural expansion and human development represent the most visible and significant changes in the landscape character of the rangeland ecosystem (Okello, 2005). While the local Maasai blame it on depressed livelihood, droughts and educational enlightenment (Okello, 2005; Okello and D'Amour, 2008), there could be other reasons mostly related to economics of survival (Desta and Coppock, 2004; Campbell et al., 2000). The impoverishment of the people makes them to seek alternative sources of livelihoods to uplift their standards of living, if not only just to meet their basic needs.

There are currently very low levels of literacy among the Maasai and other pastoral tribes compared to other ethnic groups in Kenya. Education informs the way land is utilized and harnessed for the benefit of local communities. Higher levels of literacy are often associated with a more responsible, environmentally compatible approach to using land. Further, a more commercially responsible and profitable way of running pastoralism can be practiced especially in anticipating (using forecast information) droughts and reducing stock (through selling or buying) as appropriate. Droughts in the ecosystem have become frequent. Late 2005 to early 2006, pastoralists in Kenya lost over 60% of their livestock to droughts and many lost their lives as well as the drought was most severe in arid and semi-arid areas than other parts of Kenya. Seeking alternative means to self-sufficiency in food through agricultural activities and expansion therefore becomes a priority. Pastoralism have become a declining livelihood because of high costs (in disease control and scarcity and expenses of veterinary services), lack of export outlets for beef, declining rangeland for pasture and sedenterization as population increases and land diminishes (Galaty, 1994). Agriculture provides a livelihood that not only provides direct income to households, but also tackles food shortage and crisis to most pastoral tribes in Kenya.

As most Maasai in the area realize how lucrative horticultural cultivation is in terms of income,

many embrace it and reduce dependence on livestock as the main source of income, but keep livestock for cultural and subsistence use through diversification of economic activities. Agriculture was believed to bring direct and significantly more income to households than pastoralism and conservation (Okello, 2005). Therefore its expansion has gone beyond fenced in agricultural schemes in Namelok and around Kimana Market. Everywhere water can be found is rapidly being cleared for new agriculture fields. Riverine areas are being cleared of Acacia and other natural vegetation which are then converted into firewood or charcoal and sold in market centers (Kiringe and Okello, 2005). The Kimana and Ilchalai swamps which provided water and dry season grazing for both wildlife and livestock have largely been converted into irrigation agriculture. Amboseli wildlife migration to Mt. Kilimanjaro declined in the Kitendeni wildlife corridor from 21 km^2 in 1952 to only 5 km^2 in 2001 mainly due to similar causes such as changes in livelihood strategies, encroachment of agriculture, and breakdown of traditional management systems (Noe, 2003) that is seen throughout Maasai GRs around Amboseli.

Most of the agriculture in Amboseli area is heavily depended on irrigation. Ecosystems functions in swamps and riverine areas that are dependent on water are collapsing (Worden et al., 2003). It is now common to see previously flowing and permanent rivers turned into seasonal (wet season) that are dry throughout the year due to the diversion of water into agricultural fields' upstream. The little water that manages to trickle down the river causeways is heavily polluted by fertilizers and pesticides used in horticultural fields (Githaiga, 2003). Further, the soils of a rangeland get easily exhausted and must rely on fertilizer supplements, and turn too alkaline to support continuous crop productivity. This has led to agricultural fields being abandoned after a short time, leading to widespread degradation that may take long to restore.

These demands for land and changing land uses began in the 1970s but have increased rapidly over the last twenty years (Campbell et al., 2000). This has led to increased farmer-herder as well as farmer-wildlife conflicts due to crop raiding and water diversion upstream as also reported by Campbell et al. (2000). Increase in human structures and activities such as Maasai settlements are also likely to negatively impact pastoralism and wildlife as also observed by Lamprey and Reid (1998). There are now also conflicts between pastoralists seeking water for their livestock with farmers who are not allowing water downstream (Fratkin and Wu, 1997). These conflicts are likely to intensify in the future as irrigation-dependent agriculture expands and commercially driven diverse ethnic communities with different land use history and interests (Fedders and Salvadori, 1979). This has already been reported in the ecosystem (Campbell et al., 2000). Critical previously permanent swamps fed by these rivers (such as Osoit Pus near Chyulu) have shrunk or become seasonal. The water crisis has been worsened by the government water pipelines (two of them over historical time, the the largest and latest being in the 1970s) that carried most water from Nolturesh River to towns near Nairobi (Campbell et al., 2000), and this act prevents anyone taking responsibility of managing the water sources in the ecosystem.

Competition for land and resources is also causing escalation of Human-Wildlife Conflicts (HWC). Local people feel that the government does not take their plight seriously by not giving monetary benefits from parks in addition to compensation for the costs of conservation (KWS, 1994; Sindiga, 1995; Okello, 2005). As a result, retaliatory killings of wildlife occur in 82% of Kenya's protected areas (Okello and Kiringe, 2004) in protest of losses to wildlife. Further, money generated from parks and community sanctuaries from tourism revenue mostly go to local elites (Thompson and Homewood, 2002), foreign tour investors or the government (Sindiga, 1995). Very little money

ever reaches local people despite the fact that they are the ones who are sharing land and resources with wildlife. It is therefore increasingly clear that conservation will only be valuable to most local communities if tangible economic and other benefits returns are realized (Barrow et al., 1993; McNeely, 1993; Norton-Griffiths and Southey, 1995; Norton-Griffiths, 1996; Emerton, 2000; Ferraro and Kiss, 2002) and if they are involved in resource management (Beresford and Phillips, 2000; Wishitemi and Okello, 2003). Community sanctuaries as away of involving communities is a good initial step, but challenges in implementation, local accountability and transparency, together with appropriate professional marketing and product standards are a big challenge (Hackel, 1999; Adams and Hulme, 2001), especially if conservation has to be integrated in rural development (Alpert, 1996).

Ready access to other basic natural resources by communities for survival is also getting difficult with time. The Maasai community is heavily dependent on plant resources for traditional medicinal care, for shelter, for fuel, for fencing among other uses (Kiringe and Okello, 2005). This dependence is increasing as other land uses clear natural vegetation, particularly for agricultural use. They have to walk further and longer to access various plant resources for basic use. Clean drinking and domestic use water is becoming scarce too as agriculture diverts the available rivers and springs for horticultural production (Ogolla and Mugabe, 1996). Water was noted as a declining resource for general use in the GR. This becomes more serious because the area is a rangeland receiving little alternative rain water. Water flow in rivers is also becoming less due to hydrological and deforestation activities in the catchments area of Mt. Kilimanjaro.

3. Group Ranch Subdivision and Opportunities

Reasons of the popularity of GR sub-division have been sufficiently elaborated elsewhere (Galaty, 1992; Campbell et al., 2000; Ntiati, 2001; Okello, 2005). What is noteworthy is that this process is envisaged locally as going to give greater independence of managing land and utilizing it in more profitable ways. Kimana GR is now basically fully sub-divided (the wildlife sanctuary remains as communal property with benefits shared by all members, and there are other small parcels for public development and utilities which have been set aside following survey for private individual ownership). GR members were given land in areas of agricultural potential and a minimum of sixty acres in open rangeland for pastoralism. The desire to practice agriculture or lease land and get money directly from those interested in cultivation has been a strong force behind this change (Campbell et al., 2000). There are also historical injustices in terms of annexing of Maasai and other pastoral lands by the government to establish protected areas and to settle landless people from other communities (Juma and Ojwang, 1996; Fratkin, 1997). The fear of a new spade of land losses is a very strong motive towards subdivision as Maasai communities feel communal ownership is not strong enough a land tenure system to secure their land (Galaty, 1992).

The subdivision has been a concern of many conservationists interested in wildlife in the ecosystem (Galaty, 1992; Campbell et al., 2000; Ntiati, 2001; Okello and Kiringe, 2004; Okello, 2005). Some of these authors have warned of impacts in terms of fragmenting the ecosystem, encouraging incompatible land uses to conservation, its impacts on pastoralism by reducing pasture and communal access especially in the dry season and disruption of wildlife dispersal as farms gets fenced and or sold were expected, and likely human–human conflicts. This has happened in some

areas where GR subdivision has taken place. GR subdivision and dissolution is also supported by the government, giving a further impetus to this process. It needs to be remembered that wildlife has used GRs as resident and dispersal space for many years.

At present, managing sub-division and land use changes to take advantage of emerging opportunities for wildlife conservation may be a better strategy. Most concerns about fragmented dispersal areas can be solved if critical dispersal areas are clearly identified, established and negotiations with individual landowners (of subdivided land) for compensation or even direct payment to secure them (Ferraro and Kiss, 2002). This may be more effective than dealing with unpopular communal ownership leadership and hence provide an opportunity for a new phase of community involvement in wildlife conservation in the ecosystem.

4. Potential of Ecotourism and Community Conservation

Establishment of community-owned and privately owned wildlife sanctuaries to tap into the lucrative tourism industry with strategic investment partners is taking off in the ecosystem as a way of not only expanding wildlife range, but bringing wildlife-based tourism benefits directly to the people and as another way of enlisting landowners to support wildlife dispersal (Western, 1982). Almost every GR in the ecosystem (except Rombo) has one or more ecotourism ventures, wildlife sanctuaries or concession areas (Okello et al., 2003). However, a new and encouraging initiative, individual land owners and organized land owners groups in Amboseli area are in the process of merging their land to form private wildlife sanctuaries or establish tourism facilities (such as camp site or lodge) in partnership with an ecotourism investor. Nevertheless, wildlife-based tourism is a complex business that needs expertise, marketing and resources. Resource use, access to and benefits have also been controlled by local elites and foreign investors (Sibanda and Omwega, 1996; Thompson and Homewood, 2002) who take most of the benefits for themselves at the expense of the majority of the local community.

The subdivision will not prevent wildlife from using GR areas as dispersal areas, except if fences and persecution of wildlife through HWC will increase. There are now cases where land owners in subdivided GRs are combing their land to form private wildlife sanctuaries. This will contradict the notion that the subdivision automatically ends the use by wildlife of GR lands that have been divided into individual ownership. Wildlife sanctuaries by individual (or group of organized) land owners are likely to succeed than those owned jointly in communal ownership as a way of helping communities benefit from wildlife. CBC and tourism however, may or may not be the solution for empowering local communities depending on attractions, tourism market and expertise in tourism enterprise. Even if ecotourism and community conservation initiatives succeed, there are challenges related to sustainability, management and equitable sharing of the benefits among stakeholders. This is exacerbated by poor community cohesion, low level of education, low community capital investment, and weak local institutions (Adams and Hulme, 2001; Okello et al. 2003). With the Amboseli ecosystem already endowed with many attractions (wildlife, scenic, culture), the potential for wildlife-based community tourism, establishment of tourism facilities such as campsites and individual/communal lodges are high and can bring substantial benefits to land owners and the community if they are properly established, managed and marketed.

5. Conclusion

Maasai GRs in Amboseli provide critical dispersal area for over 70% dispersing large mammals from Amboseli National Park in the wet season (Western, 1975). As such, local opinions on wildlife are important in keeping this area open for wildlife use despite changing land uses and resource competition and challenges of conservation outside protected areas (Western, 1989; Gadd, 2005). The Maasai may be supportive of wildlife conservation and wildlife ranging freely, but this may simply be acknowledging generally that wildlife conservation is important to Kenya (Okello, 2005). But it may not mean that it has been beneficial to them (KWS, 1994; Sindiga, 1995); or that the government and stakeholders regard them highly as important in wildlife conservation in the ecosystem (Western, 1982). This issue of ownership, benefits and empowerment for the local communities to benefit from biodiversity needs to be addressed as an issue of environmental justice.

Local communities in poor rural landscapes will always seek to use and access resources for their livelihoods. Prohibiting this will cause resentment and conflicts, which will be a danger to the very resources that need to be conserved. Costs of resource conservation to the community must be matched or exceeded by socio-economic, ecological and spiritual benefits so that they can be partners in conservation. For example, until it can clearly be demonstrated that economic benefits exceed costs of living besides and with wildlife (McNeely, 1993; Norton-Griffiths, 1996), local communities will continue to treat wildlife as government property rather then their resources. At the end of the day, it’s not exact what people consider important, but their daily livelihoods. This makes a powerful reality link between local communities, resource conservation, economic empowerment and rural development. Scientists and planners must appreciate this reality. The current greatest challenge in the Amboseli ecosystem is to control problems caused by wildlife and make them socio-economically profitable to individual livelihoods as a land use, and also to maintain and expand opportunities for wildlife conservation in the ecosystem to avoid increasing demand for complete separation between people and their livelihood from wildlife.

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Chapter 3 Livestock Depredation and the Changing Face of Human-Wildlife Conflict

Mordecai O. Ogada

KEYWORDS: Carnivores, Livestock, Communities, Compensation

1. What Has Changed over the Years to Create this New Challenge?

Livestock depredation is a problem that is as old as the domestication of wild ungulates for food by human beings. It manifests itself in similar patterns across the globe, from depredation of sheep by snow-leopards in Nepal, to cattle by lions in Africa, and sheep by wolves in North America. However, it has only recently become a serious challenge to conservation of wild carnivore species across the world. In Kenya, pastoralist communities have kept livestock for many centuries and have lived amongst wild carnivores. It can therefore be assumed that wild carnivores in Kenya have been killing livestock for centuries and pastoralists have been killing carnivores in retaliation for the same period of time. Studies by Frank (1998) Western et. al.(1994), Chardonnet (2002) and Bauer and Van der Merwe (2004) on African carnivores indicate declines of up to 60% percent in the last 50 years. Wildlife populations in Kenya are reported to have declined by 50% from 1978-1998 (Norton-Griffiths, 1999), presenting a serious challenge to conservation. The apparent magnitude of the problem is illustrated when we examine the case of the African lion (Panthera leo), one of the most charismatic carnivore species, whose population is currently estimated at 30,000 individuals.

Looking closely at the case of East Africa, a few events coincided with this period of decline in the predator populations; firstly, the advent of tourism. In Kenya, the “Safari” type tourism similar to what we have today began in the late 1940s after the second world war, as ex-soldiers settled in the colonies, fueling the aesthetic interest in Africa and its wildlife. Wildlife started to be appreciated for aesthetic and monetary value. Prior to this, interest in African wildlife was limited to trophy hunting fuelled by the demand for ivory in the East and the value of game trophies in the west as status symbols. Interest in live animals was mainly from zoos, which were the precursors of leading conservation organizations e.g. The Frankfurt Zoological Society, Zoological Society of London, and the Wildlife Conservation Society (WCS). Secondly, there was the establishment and gazettement of national parks, from which people were excluded. By definition, tourism is an activity based on experiences outside what one is normally accustomed to. It is therefore targeted towards outsiders. Thirdly, in East Africa serious scientific research on wildlife populations began in the 1970s pioneered by George Schaller, Anthony Sinclair, Hans Kruuk and others focusing mainly on the Serengeti ecosystem. The widely quoted trends in wildlife populations from over 50 years ago are therefore based largely on extrapolations of exiting data and anecdotal evidence.

The changes that are apparent, documented and recorded are in the human dimensions, these are

human population, activities, impacts and attitudes towards wildlife and conservation. For instance, it becomes important to address the issue of Human-Wildlife Conflict (HWC) when there is a section of the human society perceived to be benefiting directly from wildlife (the tourist industry) while another section is only suffering the costs of living with wildlife. Perception is a significant portion of HWC, and an unfortunate fact is that the fastest way for the communities living with wildlife to get attention from anybody is to kill some charismatic wildlife.

2. Livestock Depredation in Kenya

2.1 Various Perspectives and Compensation Scheme

This change and problem newly emerged pose a great challenge to conservation efforts because of the above perception. However, closer examination of the issues around this problem reveals the different angles. Studies on the effects of livestock husbandry methods on depredation rates reveals that relatively simple adjustments in these can significantly reduce livestock losses (Ogada, 2001). Overall studies on livestock production systems also show that the negative impacts of other factors like disease and theft can equal, and often exceed those of wild carnivores (Frank, 1997; Mizutani, 1997). When human reactions are examined, we notice that the other factors are somehow considered by pastoralists to be "acceptable" losses, or those for which nobody else should be blamed. The loss of a single animal to a wild carnivore however, elicits demands for compensation, or retaliatory killing of carnivores. The impact of these killings was greatest in the Kitengela area bordering the Nairobi National Park 4 years ago.

In Kenya, there have been attempts to address this conflict through monetary compensation after the ban on hunting in 1977. The allocated resources were not enough to compensate all wildlife damage due to corruption and the sheer volume of claims and the program ground to a halt in the mid 1990s (officially, the program has been neither changed nor stopped). Since the end of monetary compensation, Kenya Wildlife Service (KWS) has made steps to establish community welfare projects in areas adjacent to national parks. Since the communities were no longer being compensated by the government for wildlife damage, this policy was intended to give communities direct benefits from conservation, and has been a success in that respect. However, the discontinuation of compensation without a formal policy/ law stipulation has left a dangerous lacuna through which these gains could be reversed. Private compensation schemes are being set up in different parts of the country, presenting a serious challenge to carnivore conservation in the other (non-compensated) parts of the country. There is ample evidence in literature that compensation is neither an effective nor sustainable conservation tool, raising questions as to why "conservationists" and qualified scientists are involving themselves in this practice (Madden and Nyhus, 2003). It is extremely difficult to investigate the veracity and circumstances surrounding claims. Data from the schemes themselves do not show any significant reduction in lion mortality as a result of the monetary compensation being handed out.

2.2 Biased Effect of Compensation: With a Case of Pastoral People

The trend is picking up, and Olgulului-Ololarashi Group Ranch, a 240,000-acre area to the west and south of Amboseli National Park started one in June 2008. They are paying 14,500 shillings for every cow or donkey killed by lions, and 2,500 shillings for every sheep or goat. What is the driving force

behind this compensation trend?

The harsh truth is that the long-sought commercial profit motive has finally spilt out of the tourist sector into all other aspects of conservation. A compensation scheme, by definition, is a pool of unplanned and unaccounted financial resources. Nobody is immune to the attractions of such funds, whether they are to be used to fund research community projects, or other noble objectives. The financial motive is also evident in the scheme designs. The Olgulului scheme only compensates depredation caused by lions, despite the fact that there are losses caused by hyenas, leopards and cheetah as well. The reason given for this is that leopards and cheetah aren't much of a problem, and people know how to "deal with" hyenas. Lions tend to kill the highest numbers of livestock, being responsible for 74% and 60% of losses reported in Laikipia and Isiolo districts respectively, where there are compensation schemes there (Ogada, 2001, 2008). The more important reason is that they (the pastoralists) consider lions the most attractive and exciting animal to tourists, and the most important to KWS. They are therefore most likely to get paid not to kill lions, rather than any of the other species. Further probing reveals that the "dealing with" hyenas is most likely poisoning, an unfortunate side effect of the compensation scheme, which needs to be addressed as well.

Conservation and field research in Kenya and Africa is expensive and largely supported by private funding. In many instances the donor strains to see the direct impact of his/her funding on the welfare of animals on the ground. Compensation schemes present no such problem, and are consequently unmatched in "feel-good" factor amongst donors. They can therefore attract very significant amounts of money from donors with relative ease. A number of these schemes are operated by up market tourist facilities, with their clientele being the prime source of contributions, and the schemes themselves becoming selling points for their business.

The people involved in these schemes are aware of the dubious legal status, so there is wide use of the term "consolation" ostensibly be cause the amount being paid out is "not equivalent to the loss." Knowledge of these schemes spreads rapidly, and payouts in Amboseli are already causing some discontent as far as Samburu and Laikipia in the North. We are hereby creating a culture of dependency, rather than involving communities fully in the benefits, knowledge, and responsibilities of conservation. In this context, it would be better to do nothing at all than hand out some benefits that cannot be sustained in the long term. After all, HWC preceded all the actions we are now taking in order to mitigate it.

3. Exploitation of Natural Resources

3.1 Problem of Over-Exploitation

Many African countries (Kenya included) still rely heavily on their (generally abundant) natural resources for earning foreign exchange. These include fisheries, forests, minerals, and wildlife. The unique aspect of the African situation is the percentage of the local people who also utilize these natural resources directly for their livelihoods. This situation has resulted in a complex matrix that includes cultural, socio-economic and political aspects to it. Logically, the exploitation of natural resources does not include any production, so it cannot be effectively managed based on the simplistic model of supply and demand. However, many of these African countries have sought to increase their income by trying to increase the "supply" of these natural resources. In reality they have only been raising the exploitative effort being exerted on natural resources. This has occurred in

the form of increased licensing/concessions for tourism facilities, hunting blocks, fishing, and logging. Earnings in the short term have increased, but crucially we have surpassed sustainable levels of exploitation in all these sectors. The natural, human, and physical environment has suffered from this over-exploitation while the apparent increase in profits and taxes has effectively masked the impending disaster. Historically, African people exploited their environment sustainably simply because the resources would only be used to meet local needs. When improved transport infrastructure meant that wood, meat, wildlife trophies, and fish started being exported, and the ecosystems were supplying human needs far beyond their capacity.

3.2 Changes in Surrounding Condition of Communities

In much of pre-colonial Africa, social and political structures existed, and these governed the way in which the environment was exploited and resources were utilized (Fig.1). Colonial governments introduced the need to exploit resources (including human resources) for wider economic gain and this was enhanced by the introduction of new technologies like mechanization, effective fishing nets, firearms, power saws, etc. Post-colonial governments retained those structures, similarly neglecting the cultural and environmental impacts of the various economic activities, and concentrated on improving the technologies used in the environmental exploitation. The results of this bias are the conflicts currently occurring between people and wildlife, industry and environment, human needs and natural resource limitations.

Even in a “non-consumptive” use like tourism, this impact of unsustainable use holds true, if at a more complex level. It is more difficult to address, because tourism by definition cannot be a service supplied to local people. We have increased development of infrastructure within wildlife habitats, and increased profits, which for many years were just appropriated by the individual businesses. From the early 1990s the trend to involve communities in conservation and tourism picked up in Kenya, but it rapidly degenerated into a conservation “buzzword” and tourism “fashion trend.” Communities were being appeased with shares of conservation profits while being used as props to angle for even higher profits. Conservationists often came to the communities with exotic prescriptions for how they should live with the wildlife they have had around them for millennia. The greatest failing of the conservation practitioners and scientists in Kenya is the failure to share the real knowledge about conservation with local communities. This in turn, is the reason why we have been unable to impress upon them the responsibilities of conservation. This is evident in the way they view conservation as a short route to profit, rather than a principle to live by in the long term.

Another pointer is the way compensation schemes have been presented to, and taken by communities as a “share” in the profits of conversation. It was said that communities were “Politicized into making unreasonable demands on conservation authorities” (Leakey, 2003). What actually happened was that in an effort to fit this new paradigm, conservationists and tour operators were creating a cycle of dependency and entitlement that has since proven impossible to break. The root of this problem is the fact that conservation practitioners and the tourism industry are by and large captive to the whims of their donors and clientele respectively. The actual needs of the communities living with wildlife end up lower on the priority list than they should be. This is why the numerous compensation schemes mentioned above do not appear to mitigate the problem of HWC. In some instances, increased killing of wild predators has been documented after the launch of a compensation scheme.

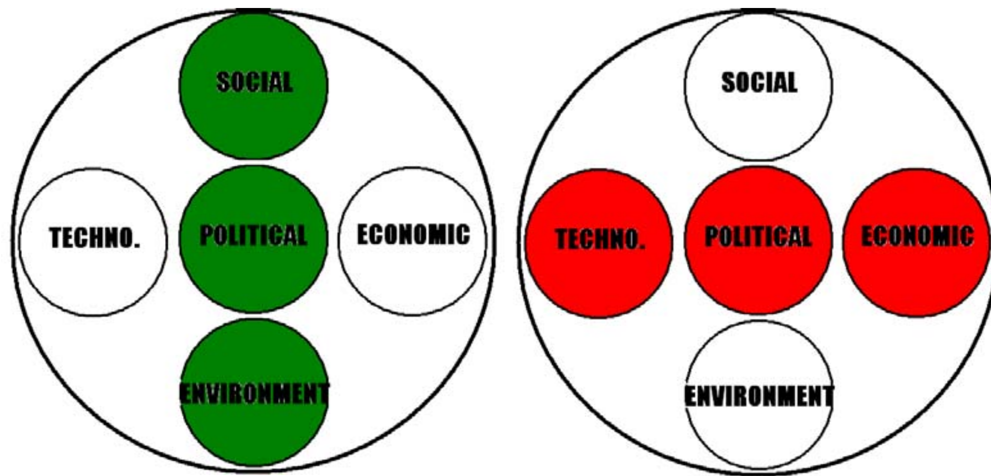

Figure 1. Pre- and Post-Colonial Social "Fabric Circle" in Kenya (Everard, 2008)

4. What would be the Best Solutions to these Problems?

Wildlife conservation is a long-term goal, and has to be pursued using sustainable means. The establishment of community conservation areas and community owned eco-lodges has gone some way towards achieving this aim. These facilities have created employment and new livelihoods for members of these communities, but these have been limited. There needs to be a more thorough exploration of existing livelihoods, and how they can be enhanced to bring maximum returns to these communities.

The experts involved in the carnivore research, conservation and management sectors need to explore conflict resolution systems that include the profitable disposal of livestock from pastoralist communities. Eco-lodges are profitable, but can only employ around 30 staff based on numbers obtained from Ilngwesi, Kalama, and West Gate conservancies in Laikipia and Samburu Districts. Also, tourism is a fickle business, easily impacted by circumstances outside the industry's control, like the political violence in Kenya in early 2008. Other projects like schools are beneficial but only to those who have school age children. Similarly, healthcare facilities are only beneficial to those who are ill. A livestock production and marketing system would touch a much higher proportion of people in a pastoralist community, potentially enabling them to actually pay for some of the benefits we are struggling to give them free of charge. Ideally this would cover the entire process from holding pens, slaughterhouse, to urban meat outlet. Crucially for conservation, reduced livestock herds would lead to lower levels of conflict with wildlife in terms of both depredation, grazing competition, and environmental damage.

There is a stable and expanding market for livestock products in Kenya, but the producers (pastoralists) remain poor due to continuous exploitation by middlemen. In Kenya we have a 5-6 year drought cycle in most semi-arid areas, and conversion of livestock assets into cash during such times could mitigate the impacts of drought on these communities. It is time for us, the experts to take a multi-disciplinary approach to this issue for combining information and knowledge of different fields. Thus far, ecologists have only looked at the ecological factors, conservation authorities at wildlife populations, and NGO's, private sector conservationists have just given handouts. If the expertise and resources from various sectors were joined towards this unified goal, a long-term solution could

be found.

The role of conservation authorities should also be streamlined to meet this new reality. In the case of Kenya Wildlife Service (KWS), strides have been made in specializing the roles of officers, e.g. having community wardens, and liaison offices to cater for particular wildlife species. However this specialization should spread to the actual wildlife management, particularly in the area of problem animal control (PAC). There are always instances where individual animals must be culled to curb conflict, but so far, this has not been done precisely by KWS, who are solely entrusted with this responsibility. Animals are culled using anti-personnel weapons by the same personnel who perform anti-poaching patrols, yet these are very different duties. There are also records ranging over the last 50 years of Game Department and later KWS personnel using poisons in PAC. The negative impacts of putting out poison baits are well-known but the cultural aversion to species like hyenas have seen this method persist over the years. Effective PAC must be precise and targeted, using appropriate equipment like high-caliber hunting rifles and specialized personnel like highly-skilled marksmen. This is the only way to ensure that the animal culled is the particular one that was the source of conflict. There are records

It is equally important for KWS to strengthen its research arms. Scientists working under the auspices of a conservation authority are more able to objectively address conservation issues. The wildlife conservation sector in Kenya is dominated by independent scientists and consultants whose agendas are dictated by sources of funding. When a particular problem attracts good funding, scientists tend not to try and solve it, so as to maintain the stream of funding, publications and continued professional relevance that the problem provides. Institutional based scientists would (in theory) be free from these limitations.(It seems that this and the last paragraph go further than the focus of this chapter. And because of the small space and lack of reference, the discussion seems not to be free from a leap.)

It is crucial that the livestock marketing initiative detailed above addresses the cultural and marketing issues surrounding livestock production. It will take considerable persuasion and cultural understanding to ensure regular sale of animals from pastoralists. The importance of cattle to the Maasai people in Kajiado far exceeds their monetary value. The aesthetic value of particular animals to their owners is such that is equally important to "label" the whole system as being a conservation initiative in the minds of their owners is such that they are irreplaceable by money or more animals. It is therefore unlikely that we can achieve livestock disposal to the level where entire herds are sold. Some will always be kept for their aesthetic value or cultural significance (e.g. those paid as dowry). It is for this reason that hyenas are so despised by the Maasai. They occasionally injure cattle severely without killing them e.g. biting off tails, udders, or ears unlike lions that always kill the animal in the attack before attempting to eat it (Saiyanka Oloitiptip, pers. comm).

Consumer awareness of environmental issues is on the increase worldwide and this label could result in premium prices for the meat products. These different requirements underscore the variety of skills required to achieve this objective. There is a large pool of expertise in various fields available locally that could be tapped for this purpose. This is a challenge that so far conservation experts and authorities in Kenya have shied away from, but it is one we must undertake to ensure the survival of our wildlife populations, particularly the carnivores which are threatened by human-wildlife conflicts.

In order to complete the fabric circle, in other words to cover all the pre- and post colonial angles detailed in Fig.1. Conservation practitioners must acknowledge the negative impacts of tourism (and

by extension, conservation) on the societies exposed to it. It is an established fact that predator populations have declined sharply, yet livestock depredation is apparently increasing. It is also well known that *morans* (worriers) are at the forefront in protecting Maasai society from whatever threats may occur. However, all observers will note that Maasai livestock herds are now mostly tended by children of age 10 years or less, yet this is their most precious resource. Ecologists cannot purport to address HWC without reference to this crucial sociological aspect. A crucial question here is whether the commercialization of Maasai culture has irreversibly altered their social structure by turning the core part of their society into dancers, security guards and waiters at hotels. One project has even recruited *morans* to be lion "guardians" monitoring the movement of lions, yet those same guardians are leaving their livestock in the care of children (who are actually of school age).

Overall, conservation science is as dynamic as the systems it seeks to conserve. It is a perpetual pursuit and the scientists involved need to appreciate this. There is a very strong tendency to create, highlight, and maintain crises to attract more funding, publications, fame, and even more funding. Often, this leads scientists to completely ignore the human dimensions and human problems that are the core challenge to conservation. This in turn, leads to a backlash against the wildlife we seek to conserve. This is bound to happen to predators in areas of Kenya where compensation is not offered. Livestock depredation is just a part of a larger circle of socio-economic and environmental challenges. It is imperative that conservation biologists and practitioners recognize it as such before we try and mitigate it, or we are bound to fail. One of the starkest examples of this failing is *National Geographic* magazine of August 2008 which had a cover story detailing the "murder" of eight gorillas in Eastern Congo, where a far larger number of people are killed every day. That self-interest and inability to focus on the larger picture or fabric circle is perhaps the greatest challenge to conservation science today.

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Chapter 4 Crop Raiding by Elephants in Mahiga "B" Village of Nyeri District, Kenya

Charles Musyoki

KEYWORDS: Elephant Migration, Crop Raiding, Economic Cost

1. Introduction

The destruction of crops by elephants is a major conservation concern in Africa (Parker and Osborn, 2001). Elephants have also been shown to be responsible for a range of other problems such as human deaths and injuries (Kiiru, 1995; Ngure, 1995), destruction of fences and water pipes (Wambuguh, 1998), curtailment of human movement (Hoare, 2000) and reduced school attendance by children in order to guard crops (Kiiru, 1995; Sitati et al,. 2003). Human-elephant conflict is now thought to be one of the greatest threats to the conservation of elephants in Africa (Hoare, 2000; Parker and Osborn, 2001; Barnes et al, 2005). In general, human-elephant conflict studies have shown that conflicts between people and elephants are a major concern for both elephant conservation and social, and economic development of the rural communities that are affected.

2. Study Area

Mahiga "B" village is situated in Labura sub-location in Kieni West Division of Nyeri District in central Kenya. It covers an area of approximately 4 km^2. In 2005, the village had a human population of 342 with 63 households giving a human population density of 85.5 persons per km^2. Mahiga "B" village borders Solio ranch to the north, Sangare village to the east, Lower Labura and Mweiga General villages to the west, and Mahiga "A" village to the south. Mahiga "B" village is classified as a lower highland ranching zone, and this classification indicates that the area is good for ranching but the rains are normally not heavy enough and is too short for cultivation (Ralph and Helmut, 1983). Solio and Sangare ranches are privately owned livestock rearing ranches that also harbour residents and transient wild animals including elephants.

People began settling in Mahiga "B" village in 1980. The residents of the village are predominantly farmers who cultivate maize, kidney beans, Irish potatoes and wheat as their main crops. Being a semi-arid area that receives just over 500 mm of rain per year, the success of a cropping season depends on the amount and duration of rainfall. In addition to crop farming, the residents of Mahiga "B" also kept cattle, goats, sheep and chicken. Sheep were more numerous followed by cattle and then by goats. The cattle were mainly for milk production.

3. Method

3.1 Damage to Crops by Elephants

Records of measurements of elephant attacks on maize, beans, Irish potatoes and wheat in the village from 2004 to 2005 were obtained from the local agriculture extension office. The office also provided the market values of damaged crops (MARD, 2003). From these the economic cost of damaged crops was calculated.

3.2 Distance of Farms from Ranch and Frequency of Raiding

The distances of farms from Solio ranch were measured from a map showing the location of the parcels of land in the village relative to Solio ranch. A record of elephant raids in the village during 2004 and 2005 were maintained. Records of the date and time of elephant visits to farms, household affected, and the nature of damages were kept. From these data frequencies of visit by elephants to farms were computed.

4. Results

4.1 Temporal patterns of crop raiding by elephants

Elephants visited the farms in all but the months of March and May. There were three peaks of elephant visitation to the village; one in January/ February, another one in June/July/August and the other in October. All visits were during the night and elephants always attacked crops (Table 1). The result indicated that elephants intensified visits to the village during the dry seasons when their preferred crops came to maturity.

Table 1. Temporal Patterns of Crop Raiding

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Number of farms visited by elephants	5	10	0	5	0	6	8	24	5	6	2	1
Number of elephant visits	1	3	0	2	0	3	4	5	1	3	1	1

Source: Author

4.2 Elephant migration

There are two previous studies on the elephant movement around Sangare ranch. Muoria (1995) documented migratory elephants spent time in Sangare ranch from June to mid-September in 1992 and from January to February in 1993, and elephants moved between Sangare ranch and Solio ranch. Graham (2000) reported that from January of 1998 to December of 1999, elephants were present in Solio ranch in January, February, June, July and August of 1998 and in June 1999.

Crop raiding by elephants in Mahiga "B" village occurred in January and February and again in June, July and August of 2004 and 2005. These months corresponded to the periods when migratory elephants were recorded in both Sangare and Solio ranches (Muoria, 1995; Graham, 2000).

4.3 Economic Losses

Maize incurred the highest economic loss in both years followed by wheat, beans and Irish potatoes (Table 2). The total economic loss increased by 78 % from 2004 to 2005. This indicated that economic losses due to elephant raiding varied from year to year. The increase can be explained by the increased number of farms which were invaded by elephants, from 20 in 2004 to 32 in 2005. While the loss of maize, beans and wheat increased by 228.0%, 52.0%, and 22.8% respectively, that of Irish potatoes decreased by 86.7%. It may have been due to the change in acreages for each crop since the total cultivated area did not change over this period.

Table 2. Economic Costs of Crop Raiding by Elephant (Ksh.)

Crop type	2004			2005	Total
	Jan/Feb	Jul	Total	Jun to Aug	
Maize	88,599.0	70,107.0	158,706.0	520,337.0	**679,043.0**
Beans	22,440.0	61,440.0	83,880.0	127,449.0	**211,329.0**
Wheat	109,762.5	8,000.0	117,762.5	144,644.8	**262,407.3**
Irish potatoes	41,745.0	49,845.0	91,590.0	12,138.0	**103,728.0**
Total	**262,546.5**	**189,392.0**	**451,938.5**	**804,568.8**	**1,256,507.3**

Source: Author

4.4 Spatial patterns of crop raiding in Mahiga "B" village

When data for both 2004 and 2005 were collated, households lying within 400 m of the boundary of Solio ranch incurred 74.4% of the economic cost (Ksh. 1,256,507.3, equivalent to around US$ 16,979.8) of the damage.

4.5 Variability of economic losses to individual households

In 2004, 20 households (31.7%, N=63) got elephant attacks on crops. In 2005 the figure rose to 32 (50.8%, N=63). In the two years, a total of 35 households were invaded by elephants, and the economic losses to individual households for the two years ranged from Ksh. 2,706 to 295,411 (US$ 36.6 to 3,992.0). Two households incurred 45.3% of the total economic loss over the two-year period. Over the same period, 13 households incurred 79.8% of the total damage to crops. This indicated that whereas a large number of households incurred economic losses, it varied considerably at household level and that some households were particularly vulnerable.

5. Conclusion and Recommendation

During 2005, elephants visited farms in all but the months of March and May. Visits by elephants intensified in the two dry seasons (January to February and June to August). In a similar study in 13 villages around Way Kambas National Park in Indonesia (Nyhus et al, 2000) elephants visited farms throughout the year. Nyhus et al (2000) attributed this to the fact that planting and harvesting of crops were carried on within the wet and dry seasons creating a patchwork of different crops at different stages of growth. At Mahiga "B" village, elephants increased their visits when crops were physiologically mature, that is from January to February and from June to August. It is at this growth stage that the crops were most palatable and vulnerable to elephant attacks.

Maize was the crop that incurred the greatest economic loss due to damage by elephants. Studies in other areas have shown that the crops most preferred by farmers are the most affected by wildlife.

On farms around Maasai Mara National Reserve in Kenya, wildlife damage to maize accounted for over half of all crop damage (Omondi, 1994). Around Kakum and Bia Conservation Areas in Ghana, maize was the most attractive crop for elephants (Barnes et al., 2005; Sam et al., 2005). Naughton-Treves (1998) reported that around Kibale National Park, in Uganda, all the frequent crop foragers consumed maize.

Proximity of farms to Solio ranch was a strong predictor of crop raiding by elephants. Over 70% economic cost of damages caused by elephants occurred within 400 m of the boundary of Solio ranch. The overall costs of crops damaged by elephants significantly decreased as the distance from Solio ranch increased.

Elephant raids to farms corresponded to periods when migratory elephants were previously reported to be present in both Solio and Sangare ranches. Crop raiding by elephants in the village was related to elephant migration. The periods of elephant invasions to farms also coincided with times when maize, wheat, beans and Irish potatoes had attained physiological maturity. Maize, the staple food, incurred the highest economic loss in both years. The result indicated that economic losses due to elephant attacks varied from year to year and in this case it increased.

There was enormous variation in the economic losses borne by individual households. Some shouldered severe economic costs while others incurred less. Not every household in the village had crops attacked by elephants. The cost of damage to crops by elephants during both 2004 and 2005 was borne by 35 households, which accounted for 55.6% of the total households in the village.

Problem animal control activities should be intensified in the village during the months of January to February and during June to August because these are the months when cultivated crops mature and elephants intensify their visits to farms.

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Chapter 5 Change in Local Subsistence with Wildlife Benefit: From the Case of the Kimana Sanctuary in Southern Kenya

Toshio Meguro

KEYWORDS: Community-based Conservation, Benefit, Change of Subsistence

1. Introduction

1.1 Background: Community Sanctuaries and Community Benefit

Since the 1990s, there is a lot of attempt to formalize a new conservation paradigm, or community approaches (Chapter 1). There are conflicting opinions among them, but concerning wildlife benefits, the views are almost the same; benefit is vital for local people to join the conservation efforts. In Kenya, community-based conservation (CBC) was adopted and initiated substantially with the establishment of the Kenya Wildlife Service (KWS) in 1990. The KWS works to achieve community participation because more than three quarters of the wildlife habitats are outside protected areas (KWS, 1997). Community sanctuaries, one of the CBC, are protected areas with tourism facilities built on communal lands. The goal of a community sanctuary is to contribute to wildlife conservation by the provision of protected areas and to rural development through encouragement of tourism. Compared to other CBC projects, like benefit sharing of park fee and community game scouts, the sanctuary achieves practical local participation through community management of the protected areas and the tourism business.

The Kimana Sanctuary was one of the first community sanctuaries established in Kenya. This sanctuary opened in 1996 under local community management and received considerable international attention. The sanctuary not only received the international tourism award, but has also been recognized as a representative CBC within Kenya (Barrow et al., 2000; KWS, 1997; Rutten, 2004). After the opening of the sanctuary, the community management entity failed to acquire substantial benefits and the program was terminated after four years. Since 2000, the sanctuary has been leased to a tourism company. This change in management from the community to the company resulted in an increase in community benefits through the company's investment. However, with this increase in benefit, local support for wildlife conservation is limited (Rutten, 2004: 18), and one reason community members may not cooperate in conversation efforts has to do with Human-Wildlife Conflict.

The first objective of this chapter is to examine the history of the sanctuary and determine its achievements with regards to conservation and development. The amount of benefits and their usage for rural development are explained, as well as the way in which development affected local opinion toward wildlife conservation. The second objective is to analyse the logic of CBC, with special attention to the benefits. CBC has different meanings among scholars (Chapter 1), but this study follows the definition by the director of the KWS at the time of its opening. The KWS (1996: 37)

explains that CBC attempts "to empower the person on the ground to benefit from wildlife and therefore take the initiative in conserving it." This article addresses the following questions: Does the benefit really make people support conservation? How do the local people evaluate the benefit and how do the people determine their attitude toward conservation?

Fieldwork was carried out intermittently from 2005 to 2007, totally around 6 months. Information about the history and the current management of the sanctuary was collected from local readers and those who had worked for it, and a former KWS staff who also worked on the establishment of the sanctuary. The current company manager and senior warden were interviewed about the current management condition of the sanctuary. Local opinion toward wildlife was evaluated by interviewing the heads of families that have at least one registered member in the Kimana Group Ranch.

2. Local Relationships between People and Wildlife

2.1 Study Area

The Kimana Sanctuary is situated within the Kimana Group Ranch (GR) (25,120 ha) in the Loitokitok District (formerly part of the Kajiado District) of the Rift Valley Province in southern Kenya. It is bordered on the west by Amboseli National Park, which is one of the most famous parks in Kenya because of its elephant population and view of Mt. Kilimanjaro. Annual rainfall in the area is around 346.5 mm, with occasional droughts (Altmann et al., 2002). There are some rivers and springs due to the water veins from Mt. Kilimanjaro, and the sanctuary contains the Kimana Swamp where wildlife often goes for water. Historically, wildlife moved around a vast area from Amboseli to the southern forest at the foot of Mt. Kilimanjaro or to the eastern coastal forest, including Shimba Hills and Arabuko-Sokoke (Knickerbocker and Waithaka, 2005). Wildlife movement over such a large area has become more and more difficult as agricultural areas have expanded and the human population has increased. Farming began in the 1930s near the border in the area, and after the 1970s, local Maasai people also began farming (Campbell, 1993). The national parks are not entirely closed, so the wildlife can enter and move around the area.

2.2 Local People and Wildlife

In the colonial era, the district was a part of the Maasai Reserve. Most of the current residents are traditional Maasai pastoralists. Other major groups include the Kikuyu, Kamba, and Chaga. A majority of the population arrived to the area in search of fields along the river or business in one of the towns. The GR system was established in 1968 and introduced to the area in the 1970s. Each GR has its own registered members who have a legal right to the communal land belonging to the entire GR. The Kimana GR has 843 members, and its governing committee is comprised of 25 members.

Cattle are important to the Maasai for subsistence but also for cultural and social reasons. Societies are comprised of age-groups, each with its own function. Prior to the 1960s, the Maasai around Kimana migrated with their livestock and houses in the dry season looking for pastures. However, the expansion of farming and school education changed their pastoralism after the 1970s. Now, the dry season migration is usually practiced by young circumcised boys who leave the small livestock and sometimes some cattle behind at their permanent homes where the elders and women

remain to take care of the children. The warriors go to neighbouring GRs for 2 to 3 months out of the year.

Among the Maasai, hunting used to be practiced by the warriors and its main purpose was to kill harmful wildlife. Hunting only has a cultural significance with lions, as the warriors demonstrate their strength and manhood with killing them. Only lion hunting can be celebrated by particular dances and songs, whereas there is no similar ceremony for other animals. Warriors had their own hunting groups in which individuals cooperated with one another. When animals killed their livestock, it was a time of urgency and the warriors immediately arrange a hunt to avoid further damage, sometimes ignoring the usual hunting groups. For the Maasai, only lions were seen as meaningful in proving manhood. Other animal types are only hunted for protection or revenge. Government banned hunting in 1977, but the Maasai continued hunting to protect their property until the 1990s, when the KWS strengthened its crackdown on poaching. As regards the relationship between the Maasai and wildlife, the Maasai avoid wildlife when their livestock are grazing in order to avoid livestock damage and infectious diseases. Although it can be said that the Maasai have a tradition of coexistence with wildlife, they are not always comfortable with wildlife. The coexistence is a result of physical efforts by the Maasai to maintain a distance between themselves and the wildlife and through hunting intended to protect them against the damage of the wildlife, a pattern that results in tension between humans and wildlife.

3. Progress and Results of the Kimana Sanctuary

3.1 History of the Sanctuary

Kenya became a British protectorate in 1895 and the Game Department was established in 1907. After that, modern western wildlife conservation ideas were introduced, which were basically "fortress conservation" policies that neglected the opinions and lives of the local people and denied them their rights (Adams and Hulme, 2001). Because Amboseli has a water point (Amboseli Swamp), it was historically used by local pastoralists and wildlife. First, Amboseli was designated as a national reserve in the 1940s so that the local people could use its land and resources. In 1974, the status of Amboseli was changed to a national park, and local use inside the park was prohibited. This resulted in the loss of an important water point, a change that generated fierce local opposition and resulted in the killing of numerous animals as a demonstration of anger (Western, 1994). Government responded by providing infrastructure development to local communities as a form of compensation. However, it was not until in 1990 that substantial community programmes were established.

The KWS first brought the idea of a community sanctuary to the Kimana GR in 1992. It took three years for the KWS to be accepted by the local people, but they agreed to construction of the sanctuary in 1995 and the sanctuary was officially opened the next year. Through the sanctuary, the KWS focused on habitat conservation outside of the park and community development through tourism with local cooperation and participation (KWS, 1996). The sanctuary was supported by various international organizations, such as USAID, the World Bank, the EU etc. In 1996, the Kimana Community Wildlife Sanctuary was opened with 2,750 ha under community management. The manager was a local person with a bachelor's degree, who was trained by KWS officials before the sanctuary opened. In the opening year, the sanctuary received an international award from the

British Guild of Travel Writers and KWS advertised this award in its publications (KWS, 1996, 1997). However, the number of visitors gradually decreased and it was decided to lease the sanctuary to a tourism company in 1999. In 2000, the African Safari Club (ASC) entered an agreement to manage the sanctuary for the next 10 years. The ASC developed the sanctuary's infrastructure, and tourism and its benefits increased. With this agreement, the community withdrew from the management of the sanctuary.

3.2 Benefits from Community versus Company Management

There is a large difference between in benefits derived from management by the community and by the ASC. Knegt (1998, cited in Rutten, 2004: 15) stated that the sanctuary earned a clear Ksh. one million in its first year. However, the KWS (1996) reported that the number of guests during the first year was more than 800, and the maximum calculated benefit using this number was around US $8,000 (around Ksh. 450,000 at that time). The entry fee for foreigners was US $10, and for Kenyans was Ksh. 100; other than the entrance fee, there was no other income. These numbers do not take into consideration the management expenditures (staff salaries and cost of maintenance). Under ASC management, the company pays the community a land fee and visitor fee according to the agreement achieved when ASC took over. The sanctuary received 23,339 guests from December 2004 to October 2005. The land fee was Ksh. 24,500, and each visitor paid Ksh. 250. Therefore, the total revenue for the community during this period was about Ksh. 8.7 million (Meguro, in prep.). In addition to this, there was an additional benefit. When the community was managing the sanctuary, the only job opportunities for local people were as game scouts, and they were about 15. However, the ASC constructed lodges and employed 147 people, 107 being Maasai. Additionally, a cultural village (*Maasai Boma*) was built near the sanctuary, and around 10 households lived there and made a profit by selling souvenirs or performing traditional dances for the tourists. Neighbours often joined the businesses or performances (Meguro, in prep.).

The community management failed in part because of the small benefit it brought to the community. Furthermore, the community management was attempted when the tourism industry in Kenya was suffering a series of security problems related to the riots in response to the general election in 1997 and the bombing of US embassy in 1998. However, the small benefit was not only a result of bad timing. When the sanctuary was opened under community management, there were no accommodations and the only source of income was the gate fee. Kimana is too far to be a day-trip destination from Nairobi or Mombasa for tourists, and therefore, accommodations are necessary. Consequently, the sanctuary was usually not the primary tourist destination.

If the sanctuary wants receive more visitors, advertisement or marketing is crucial in addition to the improvement of the tourism facilities. This was the second problem for the community management group. While the ASC had a home page with beautiful pictures accessible in several European languages, the community mostly advertised domestically and sometimes through the KWS. However, in the end, the benefits under the management of the tourism company exceeded those produced under the community management group.

3.3 Sanctuary Benefit Usage and Course of Land Subdivision

Current leaders agree and said that it was only after the ASC started to manage the sanctuary that the benefit reached the community and development began. Money received from the ASC was used for educational and medical subsidies and land subdivision. Land subdivision is much more important than the other subsidies for both rural development and conservation. Traditionally, land was communally owned and people used the land and its resources in a free and equal manner. In the 1930s, farming was introduced by agricultural peoples and agriculture was embraced by some. In the 1970s, agriculture expanded and more Maasai people began to farm after several severe droughts had resulted in the loss of their herds. The Maasai became accustomed to agriculture, and the land remained communal and was managed as before. In order to use a parcel of land for farming, the people had to obtain permission from the local leaders.

As farming expanded, conflicts and problems increased with regards to land boundaries and livestock, which led to the demand for land subdivision. There were increasing requests for land subdivision, but the process only began after the ASC took over management of the sanctuary and began dispersing money to the community. This financial backing was necessary because the total subdivision procedure cost more than Ksh. 20 million, including land surveys, the construction of roads, and the acquisition of legally titled deeds from government. With the subdivision, each GR member received a farming parcel and dry land.

3.4 Community Development through Land Subdivision

The land subdivision had a more significant influence on development than did the subsidies, because the change of land ownership affected people's subsistence. Up until now, land enclosure had occurred mostly in farmlands, and people were able bring their livestock to neighbouring communities where the land was still communal and there were no regulations restricting usage by outsiders. In this sense, subdivision seems to have no effect on people's traditional subsistence, but in fact, a shift from pastoralism to farming was initiated prior to this and continues to progress. With irrigation, farming is possible throughout the year, although a lot of work is necessary. There is a growing shortage in labour now that more children go to school. School children can take care of livestock on the weekends and during school vacations. Those who believe that agriculture provides a reliable subsistence invest more labour in farming than pastoralism. The subdivision functioned to increase the change in subsistence by guaranteeing private proprietorship.

The change in subsistence patterns has been approved by the local people and continues to progress. Even without the subdivision, it is almost certain that many people would have continued with agriculture. However, others started farming only after they had received title deeds and had made private investments on their land, such as pumps or irrigation. These actions only became possible after the subdivision. Overall, they think that the circumstances brought by the subdivision foster community development.

4. The Effect of the Sanctuary on Wildlife Conservation

4.1 Disagreement in Local Opinion about Intended Conservation

Although the people approved the land subdivision, it was problematic for wildlife conservation, especially from the standpoint of habitat conservation. The increase in land devoted to farming means a decrease in wildlife habitat and a reduction in wildlife corridors, resulting in a greater risk of wildlife damage to crops. The people understand that tourists come to the sanctuary for the wildlife and that the sanctuary provided the money for the land subdivision. At the same time, they are opposed to wildlife conservation on their lands, although this is precisely the KWS intended with the establishment of the sanctuary. Of 63 residents interviewed, only 8% (five people) agreed with the idea of wildlife roaming on their lands, while 68% (forty-three) disagreed and another 24% (fifteen) set conditions for wildlife access, such as limiting the number of animals allowed, allowing only animals that are not dangerous or allowing them only if they roam without causing damage (Meguro, in prep.). In the Amboseli ecosystem, elephants (*Loxodonta africana*) are the biggest conservation targets and the greatest tourism resource. However, elephants cannot abide by these conditions. According to Moss (2001), the elephant population increased by about 2.17% per year, from 480 in 1978 to 1087 in 1999, but most people think this is too many, as elephants cause serious agricultural damage. The people support the increase in the size of the elephant population, provided it happens inside of the sanctuary. For them, a desirable conservation situation is to stop the wildlife damage to their properties while continuing to receive the benefits of conservation through tourism. Consequently, what they want is to only have wildlife inside of the protected areas, which is exactly the opposite of the opinion of the KWS officials and other donors.

4.2 Change in Wildlife Relationship as a Root Cause of Opposition

Traditionally, the Maasai prevented wildlife damage through hunting and avoidance when grazing. These practices were embedded in their lives and society; yet, both of these activities became impossible for them. Hunting is prohibited by government and by the anti-poaching patrol of the KWS. As a counter-measure, electric fences were built around the fields in the community in the 1990s. The fences were destroyed while the sanctuary was under community management, so the community is partly to be blame, although the maintenance of electric fences is difficult and expensive (Woodroffe et al. 2005). In the end, the people do not have any effective counter measures against the wildlife. Avoidance was another strategy traditionally employed by the people. Pastoralism is still possible by moving to another location or waiting until the wildlife leave. However, in the case of farming, avoidance is impossible. The KWS and the sanctuary have game scouts, but the scouts do not work outside of the sanctuary and KWS officials will only come if there is apparent danger.

4.3 Tourism Benefit and Hostility to Wildlife

As explained above, the benefit from the ASC is indirectly distributed to the people, but it is difficult for the people to understand this. Damage from wildlife is visible, but the benefits from tourism are more intangible. However, some people in the community receive personal and more direct benefits from tourism, namely those employed by the sanctuary and those associated with businesses and performances in the cultural village. In the sanctuary, most of the local Maasai are employed as game scouts or security guards. A scout who employs people to work in his fields says that he prefers having employees to doing agriculture on behalf of himself. However, he acknowledges that the

current wildlife situation is not good. In his opinion, the sanctuary must remain, but the wildlife should be segregated from the people with electric fences. On the other hand, the tourist village is where the people sell souvenirs (beads accessories, sticks, spears, etc.) and perform traditional dances for visitors to the sanctuary. They charge Ksh. 200 as an entry fee, and there are more than 300 tourists per month (345 in June and 312 in July 2007, from the record of the village committee) (Meguro, in prep.). The women working there say that selling accessories is better than agriculture. Yet, even those who think tourism is better than farming or pastoralism recognize that the damage from wildlife is a very serious concern for other members of the community.

5. Lessons from the Kimana Sanctuary

5.1 Results of the Sanctuary as CBC

The KWS (1996: 37) explains that CBC involves ". . . attempting to empower the person on the ground to benefit from wildlife and therefore take the initiative in conserving it." Therefore, there are steps to CBC that include empowerment, benefit, and local initiative. Among these steps, only benefit has been achieved in the case of the Kimana Sanctuary. The case cannot be judged as completely successful because local initiative has not been demonstrated and benefit was not produced through local participation, as expected.

With regards to empowerment, the community manager was supported and trained by the KWS. However, this was unsuccessful because the management could not produce enough benefit to convince the community of its importance. When compared to a large company like the ASC, it is clear that the inadequate facilities and advertisement were central reasons for the failure of community management. What remains uncertain is whether the KWS and the donors intended to establish a sanctuary without accommodations because a small-scale business would have been easier for an inexperienced community to. Regardless, the benefits from the small business could not satisfy the people's wishes, suggesting that the donors did not understand the local opinion.

With the change in management, the community received a lot more benefit, but that benefit was a result neither of empowerment nor of local participation. In fact, there is little sense of local ownership or initiative towards wildlife conservation. There is no need for the community to make any effort in order to receive the benefit, and they only have to wait for the company to pay. This study suggests that benefit alone cannot provide enough motivation for people to participate in conservation.

5.2 The Meaning of Conservation and Subsistence

Benefit without local participation in this case has contributed to the absence of a conservation initiative in the community. However, the local people do not completely disagree with the presence of wildlife and have their own opinions about ideal conservation. This is, they have opinions on how and where the wildlife should live. The problem here is that their views are completely opposite those of the KWS, and without any arbitration, the programme proceeded under the KWS plan. The differences between the two groups are a reflection of their top priorities. The KWS conceptualizes conservation as an activity at the ecosystem level, and for them, the assurance of the existence of wildlife is vital and conservation means removing the negative effects of human activities on wildlife habitats. In contrast, for the local people the most important thing is not the existence of wildlife but

their own subsistence, of which farming is one form.

Conservation was accepted among the local people only if it was in accordance with farming. As traditional pastoralists, they were able to live together with the wildlife, but that life involved a combination of hunting and pastoralism. Now hunting is prohibited and farming, which is more vulnerable to wildlife, has become the centre of local subsistence. This means that the change in subsistence for the local people makes the same wildlife more dangerous and intolerable. Consequently, the people perceive and experience more risk of damage than before, and the ideal form of conservation for the locals seems to be separation of the people from the dangerous animals.

5.3 Benefit as a Trigger for the Next Change

Apart from the evaluation of CBC, one additional critical feature of the benefit of the sanctuary is noteworthy. The problem came from bestowing benefit on the community without attention to local subsistence. The benefit is usually used to improve local life, and this sometimes includes environmental changes in subsistence. In this situation, how the benefit is used is as important as how much benefit is produced, because if the benefit is large there is on opportunity for the people to engage in larger development activities that may be irreversible. The Kimana community was able to achieve the land subdivisions from the sanctuary's benefits, and it was this change that accelerated the social change that had negative effects on conservation before there was an opportunity to discuss ideal wildlife conservation measures. CBC overlooks its function as a means for immediate change or attempts at community development.

Western and Wright (1994: 10) insist that local rights should be acknowledged along with responsibilities and capabilities. This must also be applied to the discussion about benefit. That is, benefit is not just an incentive but a trigger for further development actions. The crucial importance of local participation is supported by numerous conservation-related workers. The next challenge is to realize local participation that includes the process of discussing the meaning of "conservation" based on each situation. Local subsistence is central to this process because it creates the foundation of people's life and affects their relationship with wildlife, which ultimately dictates the direction of locally acceptable development.

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Chapter 6 Role of Captive Wildlife Facilities in Wildlife Conservation and Conservation Education: The Case Study of Nairobi Animal Orphanage and Safari Walk

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KEYWORDS: Nairobi Animal Orphanage, Captive Wildlife Facility, Human-Wildlife Conflicts, Conservation Education

1. Introduction

As human population increase, conflict between wildlife and human become a major challenge in Africa. It is important to consider interaction wildlife and human activities. Human activities keep on developing day by day. Human activities most of the time cause negative impacts for wildlife and natural resources. The number of population both fauna and flora decrease and deforestation is serious problem as loss of habitat for wildlife. Some species are going to extinction. Once destroyed, balance of an ecosystem is almost impossible to recover. However, since a long time ago humans and wildlife used to live together (coexist) in same ecosystem. People was consisted a part of an ecosystem. Many areas in Africa, people keep on living with wildlife and their lives depend on natural resources. Consequently, it is important to consider what is coexistence and significant relationship between human activities and wildlife.

Kenya is known to be a “Sanctuary” for wildlife. Since 1977, Kenya banned wildlife hunting completely, and its scope includes trophy hunting, subsistence hunting and culling. From this background, Kenya has been in a unique position about wildlife issues. I focus on the role of captive wildlife facilities in Kenya. However, the issue of Human-Wildlife Conflicts (HWC) becomes a serious problem and people realize the importance of conservation education. Through the case study of Nairobi Animal Orphanage (NAO), I discuss a part of current status of wildlife conservation in Kenya.

History of wildlife conservation in Kenya is that in 1909 the first ordinance about wildlife was set down. This ordinance was led by an international meeting on wildlife conservation in London in 1900. In 1945 the colonial government established Kenya National Park Organization and Game Department and in 1963 NAO opened. Both of them were proposed by Mr. Mervyn Cowie who is a white Kenyan. At the beginning, the idea of wildlife conservation in Kenya was imported from Western countries and it has become fixed deeply into in Kenyan nationality.

The captive wildlife facilities are valuable for both human and wildlife in Kenya. As HWC becomes a serious problem, people realize the importance of conservation education. Through the case study of NAO, it was possible to discuss a part of current status of wildlife conservation in Kenya. I studied Wildlife Management in Tanzania for two years. From this experience, it needs to think about various relationships among wildlife, communities and government. Since September

2006, I started volunteer work in NAO as an assistant animal pen attendant up to now (2008). I have taken care of animals which were protected from wild. In same period, I conducted questionnaires and interview with visitors and staffs.

2. Nairobi Animal Orphanage

Nairobi Animal Orphanage (NAO) was established in 1963. It is run by Kenya Wildlife Service (KWS) and this facility is located close to Nairobi National Park. And the park itself is located at the capital city of Kenya. Many animals have been brought to this animal orphanage from all over Kenya, both inside and outside national parks and even sometimes from the outside of the country. An idea of NAO was proposed by Mr. Mervyn Cowie who is a British Kenyan and conservationist. He left Kenya about 10 years, and after he came back from Europe he felt the number of wildlife rapidly decreased (K.M.Daniel, 1992). He established Kenya National Park Organization and NAO. Objectives of establishing the orphanage at that time were for protecting wildlife rather than educational purposes. However these objectives have kept on changing because of the change of conservation status in Kenya and all over the world. These changes can be analyzed by checking the background of wildlife which are brought to NAO, attitude of visitors toward wildlife, and conservation education strategy by KWS.

There is a variety of backgrounds why they came NAO. Over 40 different animals have been kept. NAO has three main roles which it is supposed to play.

1) Important facility for young (orphan) animals abandoned or injured by humans.
2) Conserve and take care of threatened animal species.
3) Conservation education.

Since this facility established in Nairobi, many wildlife have been brought. Most of them are abandoned in the wild for many reasons. It is an important facility for abandoned and injured wildlife. Also, some animals are rare species in the wild such as cheetahs, caracal and so on. This facility accommodates this kind of animals, and then some species make success to reproduce. NowadaysHWC is a serious issuein Kenya. 2,268 problem cases were reported to KWS in 2006. The number of problem is increasing year by year. The animal orphanage is recognized as a tool of conservation education. The role of NAO has kept on changing but it has played an important role in wildlife conservation in Kenya.

3. Wildlife in Nairobi Animal Orphanage

NAO has received many kinds of animals and over 130 individuals have been kept since 1963. This number is only in the record and they were kept there more than a year. They have different reasons and backgrounds for coming to the orphanage. By examining it, it is possible to understand the status of wildlife conservation and people's attitude against wildlife. It led us to valuable and interesting results. The reason and background have kept on changing because their environment and habitat, and also wildlife policies in Kenya have changed. NAO shows us past and current status of wildlife issue in Kenya and sometimes it can provide us the insight into other African countries.

About 12% of animals in NAO were born in the orphanage. Another important role of NAO is to

conserve animals so as to reproduce themselves. NAO takes care of the animals and they stay in good condition. Thus, it is an important facility for husbandry of captured wildlife. At present, NAO does not have adequate space and facilities. The wildlife is brought here more and more.

3.1 Human-Wildlife Conflicts

On 15th of September 2006, a leopard baby came from Masai Mara National Reserve. He was found by tourists at a tourist campsite. They contacted a ranger in the reserve and the rangers proceeded to send a leopard baby to NAO. After a few weeks, it was found that the mother of leopard ha been killed by local community because she killed their livestock. Masai Mara National Reserve holds a large number of wildlife with Maasai communities also using inside (Homewood and Rodgers, 1991). HWC is one of the typical reasons why animals come to NAO. About 32% of animals which came to the orphanage are concerned with human. In 2007, some baby animals were abandoned by their mother because of translocation. As one of mitigation measures against HWC, KWS conducted translocation of animals. It is a kind of wildlife management. KWS translocated herbivore, such as impala, zebra, Thomson's gazelle, buffalo . Most of them were captured around Naivasha and Nakuru, and then moved to Meru National Park. When they were captured, some young animals missed their mothers or groups. Finally they are found as orphans. In 2007, six of such orphans were brought to NAO but four of them died within a week. Herbivores are more difficult to take care of than carnivores, because they stay in a big group with their mothers all the time. Once they are abandoned, it was very stressful for them. They stop to drink milk. It is difficult to sleep enough.

3.2 Domestic and International Illegal Trade

In 2007, five cheetah cubs came to NAO. They were less than a month old. They found in a black market by KWS. Cheetahs are recognized as a vulnerable specie. It is difficult to find them in the wild especially with their babies. Three of them died in a week after they came to NAO. Some people like to keep cheetahs, as well as lions, as a pet for themselves. It is illegal and poaching is still there. When baby wildlife came to orphanage, it needs to be given milk, warm and special care. As a result of such full treatment, it becomes impossible for them to be reintroduced in the wild. NAO does not have this kind of function, skill and manpower.

Reptiles are targets of international illegal trade. In 2006, over 100 leopard tortoise came from central Africa. Poachers tried to export them from Mombasa to Asian countries. At the port, police found them in carton boxes to NAO. Pancake tortoises and chameleons came there too. Some kinds of chameleon are indigenous species in Kenya and their population is very low. It is very serious problem. Over 20 chameleons came to NAO in 2007 and 2008. All of them died there. These cases were reported as wildlife crime on TV, radio and newspaper. However we cannot just accuse the people who poached wildlife, not those who want to buy or keep them. Why do peoples capture pancake tortoises then export to Asian county? Because Asians buy them for pets. In Japan, we buy them at pet shop about US$ 300. I think Kenyan do not have this custom to keep tortoise in their house. Also sometimes lion and cheetah cubs were kept as pet by especially foreign resident in Kenya. That is the reason why cheetah cubs sold in market. There is demand so that there is supply.

3.3 Protecting Wildlife by Mistake

NAO is famous in Kenya. When people find abandoned, injured and sick wildlife, they will report to

KWS or sometimes they bring these animals by themselves. NAO have a function of hospital. As you know, wildlife especially carnivores have to go hunt for their food. When their babies were very small, mother left them in the den, hole or cave. People find them alone in field. Then, some people consider by mistake that they are orphans. Perhaps, they are orphans, but maybe not. In 2006, we received White-tailed Mongooses, and many cases happen to ostrich babies. It is good for NAO to be known by many people. However it is also necessary to educate people how to conserve wildlife in right way, not in misunderstand.

3.4 Value of Wildlife in Some Species

Many different species were brought to NAO. About 29% of animals which came to the orphanage are threatened species written on IUCN Red List. Lions and cheetahs are included in this category. Some rat and shrew species are recognized as endangered and vulnerable in Kenya. However many people do not aware of it. Good example is "big five." Many tourists want to see "big five", namely elephant, buffalo, lion, leopard and rhino. Not many people care about rat and shrew. I have never seen a receiving record for rat and shrew in NAO. Lions and cheetahs are popular in orphanage. When people find orphan or injured lions, they report to KWS. But if people find injured rat, perhaps people left it.

Recent years, tourism industry becomes a main income source in Kenya. Discrimination of wildlife species becomes clearer. Some wildlife which can get more tourist than others, so as to be considered more important to be conserved than other species. It is possible to see this tendency in NAO as well. In past, visitors were allowed to pat cheetahs. When a leopard cub came to the orphanage, so many people want contribution and buy nice blankets, milk and everything for the cub. Lions, cheetahs and leopards have well-designed enclosures than others.

In the other aspect, if species are considered to have more value than others, it means there is greater risk for poaching. Many lion cubs were abandoned. Some cheetahs were found in market. It is illegal trade. Elephants and rhinos are always aimed by poachers. Especially black rhinos are always protected by KWS rangers

4. Conservation Education in Nairobi Animal Orphanage

Wildlife have been brought to NAO since 1963. They have different backgrounds to come this facility. Whatever, we can consider any cases are related to human-wildlife relationship. Conflicts between humans and wildlife, and illegal poaching bring serious negative effects to wildlife. With increase of population, people started to over-cultivate and deforested. Because of loss of habitat, a large number of wildlife was chased away, died and also came close to place where human activities are. These things cause a lot of problem and challenge. To conserve wildlife and natural resources, conservation education is very important. NAO is an important tool for conservation education in Kenya. KWS recognize that it is important to educate leaders such as school-teachers, leader of communities. So that it is easy to spread conservation education. In school there is a subject dealing with conservation education in social study, and students learn about wildlife conservation. It has not yet enough, even though student can learn about wildlife conservation. Then many school plans to visit NAO when they have a study trip to Nairobi. They visit Parliament, the rail way station, the National Museum, Bomas of Kenya (cultural place) and NAO. Many of them have never seen lion,

cheetah and leopard in the wild beforehand. When they go back to their homes then they talk about the orphanage. One day I visited a village near Meru, villagers know about NAO. But they do not know about KWS. Some people know the name of KWS but they do not know what KWS is. They told me that their children visited NAO, and that is the reason why they know it. This village started cultivation about 40 years ago. Young people have never seen wildlife in the area any more. A long time ago, there were elephants moving form Mt. Meru to Aberdare National Park. Also they could see leopards and so many antelopes around. The villagers said through the TV and radio, they may know that they cannot kill wildlife, cannot enter and cut trees in national parks.

Difference between an animal orphanage and a zoo is that the orphanage is consists of orphans which are abandoned or injured in the wild. The other hand, a zoo collects animals for exhibition to visitors or recreation and educational purposes. It means a zoo is for people not for animals and an animal orphanage is for both animals and people. From this reason, visitor of the orphanage should think about why these animals are in this facilities and what makes them to come here. To invite and receive school student in NAO, we have to give them some important messages about wildlife. To think about why these animals are here, it is already a part of wildlife conservation. Important thing is to make people aware about wildlife and natural resources. Then people realize we live together in this country.

4.1 How Animal Orphanage Works on Conservation Education

For the purpose of conservation education, a large number of Kenyan citizens have been visited this facility for educational and recreational purpose. The number of visitor in 2006 is over 200,000. About 97% of visitors were Kenyan citizen and about 31% of them are Kenya student coming for school trip. They came from all over the Kenya. For many of them, it was the first time to see lions, cheetahs, leopards, rhinos and so on. The students enjoyed NAO and at the same time learned about wildlife which live in their own country. They learn the name of animals and their habitat. In NAO, KWS exhibit sculls of wildlife and they can be touched. KWS had a workshop for school teachers to instruct how to teach wildlife conservation in NAO. It is very important and valuable. When I was working in NAO I always think about school-teachers. Most of them do not know about conservation. They come with their student and enjoy animals. Some teaches throw stone to lions to wake up. This kind of teachers cannot teach their students what the wildlife conservation is. If teacher threw stones to wildlife, of course students follow their teachers. From this reason, at first it needs to educate teachers. It is not easy and big challenge as well.

In NAO, KWS put many information boards and announcement. Information boards show information and quiz about wildlife and its natural habitat for visitors. Visitors enjoy and learn at the same time. I conducted interview in the orphanage. Many Kenyan visitors prefer cat families such as lion, leopard and cheetah. The reasons why they like the cat families are because cat families look like strong, beautiful and big. The people's attitude toward wildlife is similar to us as a person not staying with wildlife. Also they do not like hyenas and warthogs because of their ugliness and bad smell. It is one interesting aspect. Many visitors visit NAO several times.

4.2 Animal Preference

I conducted questioner research in NAO. Questions included like below. Which wildlife do you like best? Do you have any animals that you don't like? 30% of visitors answered most favourite animal

is lion. They like male lions because of their mane. Following are leopard and cheetah. In orphanage there is no elephant and giraffe (in 2007) but many people asked me about elephant and giraffe. Visitors wanted to see or wanted to show their children large animals like them. In Kenya, elephant is the most dangerous animals in the aspect of HWC. They are threat to humans. Lion and leopard are problem animals as well. They are predator to livestock. However, people who do not have these problems with wildlife, they like the big wildlife. People live in cities do not have any experience to live with wildlife. For these people, wildlife is just like beautiful animal like for foreign tourists especially European and American. Most of them know the word of wildlife conservation. Even people realize wildlife have some value for their life. In Kenya, tourism industry and wildlife industry bring a large number of tourists to the country and they get foreign currency from them. It is possible to tell, tourism industry and wildlife build this country these days. One important feature is that the Kenyan government use wildlife in an indirect way. It means they do not kill wildlife. Since 1977 the government banned hunting so that Kenyans could not get benefit from trophies. Without that type of benefit, however, this country still gets benefit from wildlife.

A Kenyan visitor told me that people who came from countries which allow hunting wildlife is uncivilized. Moreover, wildlife don't have national boundary they migrate depend on season. Even Kenyan people prohibit killing wildlife, neighbouring countries kill them then the number of wildlife decrease in Kenya as well.

4.3 Gap of Attitude between City and Rural People

Many visitors came from Nairobi or other principal cities in Kenya. If people do not have any conflict with wildlife, they like animals as foreign tourists. However, people have serious problems with wildlife, people fear wildlife and are intolerant. Please image, if your family is killed by wildlife, what do you think? Do you hate wildlife? I asked these questions in Masai Mara and Amboseli. They want to revenge them. But at the same time, they respects wildlife. From a long time ago they stay with wildlife. So they do not think wildlife as an enemy, they think they are just there. Important thing is HWC were there since a long time ago. Now problem is the number of conflicts, which are rapidly increasing. We have to think about mitigation of these problems. The role of conservation education is not teaching how to tolerate wildlife conflicts. It is important to know how to stay with wildlife and to recognize the importance of wildlife in this country. The person who was born and live in Nairobi said that the people who kill wildlife are uncivilized. It is not true. Conservation education is difficult and delicate issue. KWS works on it by opening workshop and inviting school-teachers and leaders to teach them what conservation education is. If teachers misunderstand about conservation, their students will misunderstand as well. It must be avoided.

I discussed about the importance of conservation. It is important, but we should think about communities who live with wildlife. If your family is killed by wildlife, what you will do. You hate, feel scary and perhaps you want to revenge them. We cannot tell them just you cannot kill wildlife. We should think about mitigation of this problem between human and wildlife. Moreover we think about equal benefit sharing with communities. In Kenya, wildlife supports the national economy. From this aspect, wildlife is a national important resource. I consider conservation education include equal benefit sharing. Communities should know their right. Improving life of communities, it is a part of mitigation. For example early in the morning, ladies go and put water in their container long way from their house. On the way go to watering place, they might meet elephants and get accident. If they don't need to go very far from their house, they can avoid accident with elephants.

5. Conclusion

NAO plays an important role for wildlife conservation and conservation education. As human population increase, HWC become a major challenge in Africa. It is important to consider interaction between wildlife and humans. Human activities keep on developing day by day. Human activities can have a negative impact to wildlife and natural resources. Both fauna and flora decrease their population and also deforestation is a serious problem now. However, since a long time ago, humans and wildlife used to live together in the same ecosystem. I consider humans were consisted a part of an ecosystem. For example, the Masai Mara-Serengeti-Ngorongoro ecosystem is valuable, unique and holding high biodiversity. It is important to think about balance and interaction of carnivore, herbivore and human beings. It means an ecosystem also include Maasai communities. Many areas in Africa, people keep on living with wildlife. Consequently it is important to consider what are various relationships between humans and wildlife. Because of HWC and poaching, the population of wildlife is rapidly decreasing. The difficulty of conservation is that some animals are threats to humans such as elephants and lions. Elephants are the most threatening animals to humans. Many people lost their family members. Lions bring the most serious problems for livestock keepers. 28% of livestock predation cases were caused by lions. However, elephants and lions are categorized in threatened species. For community, it is difficult to conserve the animals which make problems to them. Conservation education and proper wildlife management are important tools for conservation. Through the case study of NAO it is possible to know why wildlife had to come this facility. From that point, I consider about wildlife conservation and conservation education in Kenya. Many people visit this facility with many different reasons, however people have interest in wildlife in Kenya. Coming NAO is a good beginning for studying wildlife conservation. This facility has a lot of animals, it is possible to see them very closely and they have so many stories. I was surprised to find that many people in Kenya know about NAO and they know the word of wildlife conservation. Moreover it is possible to know people respect wildlife as well. This comes from deep of their mind. They stay with wildlife since a long time ago. In fact they know wildlife more than me, a foreigner. I consider that once they start thinking about wildlife conservation, they will have useful mitigation knowledge and ideas of staying with them. However communities and people need to have time and chance to think about wildlife and sit with all stakeholders. NAO is one of the good tool and trigger for it. NAO is recognized as one of the most important facilities for both conservation and wildlife Management.

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Chapter 7 Significance of Sport Hunting in Conservation Policy and Impact on the Livelihood of the Local People: A Case Study of Bénoué National Park, Cameroon

Akito Yasuda

KEYWORDS: Sport Hunting, Bénoué National Park, Cameroon, Community-based Conservation

1. Outline

The purpose of this chapter is to highlight the historical power structure which lies behind using wildlife as a global resource, with regard to hunting for pleasure, namely, sport hunting, also known as game hunting, safari hunting or trophy hunting, in Africa.

Sport hunting in Africa was initiated by colonists from Europe and they have hunted African wildlife as a symbol of their supremacy and wealth. In the 1970s and the 1980s, it seems that sport hunting lost their vigor or concealed themselves because of the following three reasons: the popularity of the ethical anti-hunting objection, a rise of principle of Community-Based Conservation (CBC) which stemmed from the criticism toward the colonial policy for sport hunting, and the boom in Ecotourism. Sport hunting, however, was not completely terminated and it is active even in recent times. Moreover, sport hunting is now regarded as “sustainable” controlled hunting providing a vast amount of benefits and this idea has attracted attention as an important pillar of the CBC policy.

However, from examining the case study in Bénoué National Park, Cameroon, we can see that sport hunting has had a multitiered impact on the area. Sport hunting in that area is the centerpiece of the tourism that provides financial support for the management of the national park. Furthermore, the income generated and the employment of a local labor force has resulted in a reciprocal relationship between the industry, the government, and the local people. On the other hand, local hunting has been regulated and the local people have been deprived the right to use the natural resources similar to the colonial policy.

In my opinion, the idea of “sustainability” has been misconstrued in colonial and political statements to condemn local hunting and legitimate sport hunting with the historical power structure.

2. Introduction

Krutch (1956), the naturalists who authored *The Great Chain of Life*, criticized sport hunting as an unadulterated crime and regarded sport hunters as vandals (persons who destroy public objects). PETA (People for the Ethical Treatment of Animals), an international animal protection society, also criticizes sport hunting on the basis of the cruel and torturous behavior towards wildlife and considers it unnecessary for subsistence. Nevertheless, sport hunting is promoted worldwide as a popular tourist attraction. Moreover, some governments and conservationists regard sport hunting as an "effective tool for the CBC policy." They contend that sport hunting has economic potentials and "sustainability" and insist the statement, "protection for killing" or "killing for protection."

I aim to discuss in this article, the implicit problems related to this statement by highlighting the history of sport hunting and the conservation policy in Africa and analyzing the impact from them to the livelihood of local people in Northern Cameroon.

3. History of Privileges and Discriminations in Hunting

Man hunts wildlife for two reasons: to satisfy his mental desire and show off the power as well as to obtain animal products (such as meat, skin and born etc.). Therefore, in western societies, in particular, hunting has recognized as a privileged activity for nobles and royalty.

This type of hunting was introduced in Africa by the explorers of the mid-nineteen century and the bourgeois who frequently set out on hunting trips or "Safari" mainly to Kenya, Tanzania and other East African countries. However, such excessive hunting with modern weapons led to a drastic reduction in African wildlife and contributed to the extinction of certain species such as Quagga and Blaubok. Initially, the Western hunters believed that most of wildlife took refuge where horses or other domestic animals couldn't survive, that is, they moved into areas that were inacceptable by people (Kirby, 1896: 9). However, they realized the seriousness of the situation when they were unable to hunt enough animals even in hinterland.

Despite their excessive hunting trips, these Western hunters claimed that wildlife was decreasing because the local people were hunting animals in an uncontrolled and savage manner. In contrast, they argued that their sport hunting is distinctly different and based on the sporting spirit and certain rules, as shown below.

> *But beyond all question, it is not the British gunner who shoots nowadays who is the culprit in this respect (extinction of wildlife). As a rule, the average Briton shoots carefully and in husband-like manner, and is desirous mainly to secure a few good trophies and enough meat for his camp during a short period. The man who is exterminating the game of Africa is the African himself, who, armed with a cheap gun, is dealing destruction daily and hourly, for ever creeping about the bush, and, with endless patience, manoeuvring until he can gain a certain shot" (Bryden, 1905: 17).*

Therefore, Western hunters differentiated sport hunting from the hunting that local people engaged in.

4. Decline and Revival of Sport Hunting

Colonial governments have set game reserves and hunting restriction in order to conserve wildlife for

sport hunting. This is the first conservation policy in Africa and is called Protectionism. In addition, this policy has enforced displacement, hunting regulation and fine on the local people.

In the 1960s and 1970s, elephants and rhinoceroses were devastated by mass commercial poaching and the heavy-handed colonial policy toward the local people was criticized. As a result, in the 1980s the CBC policy formulated instead of the Protectionism policy. CBC has aimed at involving the local people as main leaders in the conservation activities with sharing tourism revenues and providing employment opportunities that were generated from the conservation and tourism. Ecotourism shared the spotlight with tourism and provided the local people an incentive to participate in conservation related activities; eventually, a boom in ecotourism was observed.

Ethical criticism against sport hunting increased with the de-anthropocentrism informed of "animal liberation" or "animal rights movement", which fundamentally regarded sport hunting as an act that selfishly destroys wildlife and ignores animal rights. Consequently, it seems that sport hunting lost its vigor for three reasons: popularity of the ethical anti-hunting objection; increasing awareness of CBC which stemmed from the criticism toward the colonial policy for sport hunting; and the boom in ecotourism.

However, sport hunting has never vanished; it continues being a recreational activity for Western wealthy class, such as doctors, lawyers or businessmen who can afford to pay US$ 46,000 for a two-week hunting trip. Some explain the hunting isn't only for relaxing during their vacation, but also to reconnect with nature. Ortega (1942) described, "Men are escapees from nature… Men can go back to nature temporarily with the sport called hunting." Radder (2005) conducted an inquiry survey on hunters who had visited the Eastern Cape (one of the major hunting areas in South Africa) to find the reasons for hunting. The results revealed that 70% hunted for spiritual reasons and of them 30% did so "to be in nature." Cartmill (1993) provided the other reasons in this context: social occasion, representation of masculinity, and population control.

Sport hunting in Africa has burgeoned these days. The number of countries authorizing sport hunting increased from 20 in 1991 to 25 in 2003 (Roulet, 2004). Moreover, the number of visiting hunters increased from 8,000 in 1990 to 12,000 in 2003 (Roulet, 2004). Lindsey et al. (2007) estimated that sport hunting generated gross revenues of at least US$ 201 million a year in Sub-Saharan Africa. They believed that these revenues contributed to conservation related actions such as anti-poaching and community development. Compared to ecotourism, sport hunting is observed to have certain advantages. Sport hunters pay higher fees per client than eco-tourists and such revenues can be generated from a lower volume of people (Lewis and Alpert, 1997). Consequently, the former has a lower environmental impact than the latter. Moreover, for African countries, sport hunting is a more practicable tourism because, sport hunters do not pay heed to poor infrastructure or an unstable political situation (Barnett and Patterson, 2005; Roulet, 2004). Post 9/11 or even in the middle of a civil war, hunters visited some African countries in order to collect trophies and get a taste of "adventure" like Livingston or Hemingway.

In addition, some conservationists advocate that sport hunting has "sustainability" as controlled hunting. Bond et al. (2004) asserted that when well managed, sport hunting involved low off-takes and was sustainable. Further, Lindsey et al. (2007: 461) insisted that "trophy hunting can be sustainable" and that "well monitored trophy hunting is inherently self-regulating, because modest off-take is required to ensure high trophy quality and thus marketability of the area in future seasons."

Thus, they stated that sport hunting had the following characteristics: burgeoning as the tourism

business, contribution to conservation activity and community development, advantage over ecotourism, and "sustainability." Therefore, some governments and conservationists have been reevaluated sport hunting as an economic pillar for the CBC projects with the statement of "protection for killing" or "killing for protection."

5. Impact of Sport Hunting on the Livelihood of the Local People: A Case Study of Bénoué National Park

Sport hunting, however, has great impacts the livelihood of the local people. To prove this, I will introduce a case study of Bénoué National Park in Cameroon.

Bénoué National Park is located in the North province of Cameroon and is occupied by Sudan savanna. Elephants, lions, and Darby's eland, the biggest antelope in Africa, live there. The annual rainfall is about 1,000 to 1,400mm and there are rain (May to October) and dry (November to April) seasons. In pre-colonial period, this area was used as the hunting field for the king of "Rey-Bouba Kingdom." In 1922, Cameroon was occupied by colonial France; in 1932, the Bénoué Wildlife Reserve was established by the colonial government. After independence, Cameroon government upgraded the wildlife reserve to a national park and hunting zones were simultaneously established around the national park in 1968.

The North province has 3 national parks and 31 hunting zone. Barring safari, all human activities are prohibited. Although these hunting zones are fields for sport hunting and also local people (agricultural people and nomads) reside there. For hunting animals in the zones, the hunting license and paying taxes are required. Each hunting zone is leased by the government to Western hunting operators. Those who lease these zones obtain the right to use natural resources and invite hunters from Europe and the USA. The tax revenues generated from sport hunting is much more than-it from visual tourism in national parks.

Now, I will discuss the impact of sport hunting on the livelihood of the local people by using the example of village "A", which is located in a hunting zoneadjacent to Bénoué National Park. Since the 1960s , hunting zones were established around the village "A." Foreign hunting operators have rented these hunting zones since 1980's. This marked the beginning of the two major impacts on the livelihood of the people in this village. They have lived on farming (corn, sorghum, cotton, and groundnut), hunting, fishing, and gathering. Owing to sport hunting, the villagers obtain employment opportunity and a share of the revenue generated from tourism. 22 men were employed by operators as trackers, who trace animals and offer advice to hunters, as skinner, who makes trophies, or as road workers. Some of these people earn most of their annual income.

However, at the same time, due to sport hunting, they have been regulated their livelihoods.

Also, the hunting operator who leases a hunting zone obtains the right to use natural resources and also regulates the livelihood of the local people who live in the hunting zone. Fishing, grazing, and hunting, in particular, have been banned. At the same time, for hunting in the hunting zone, hunting license and paying taxes are required. They can't afford the cost for the license and taxes, therefore the hunting activities without them by the local people have been considered as poaching. Regular monitoring of poaching is carried out by ministry officers and employees of hunting operator called "anti-poaching team" and there are strict regulations with arrests and fines against poachers. The hunting operators and the public officers condemn poaching by the local people as

“unsustainable”, and the people now have no countermeasure.

6. Conclusion: The Historical Problem of Sport Hunting

Sport hunting, the purpose of which is to satisfy an individual’s mental desire and display his power, was introduced by colonists from Europe for whom hunting was a symbol of their supremacy and wealth. Despite ethical criticism and the boom in ecotourism, sport hunting has survived and recently been actively engaged in. Some governments and conservationists has reevaluated sport hunting as an economic pillar for the CBC project and controlled “sustainable” hunting with the statement of “protecting for killing” “killing for protecting.”

On the other hand, studies show that sport hunting has two major impacts on the livelihood of the local people: limited employment opportunity and profit sharing, and regulation of their livelihood, especially hunting. The Western hunting operators monopolize the rights to use the natural resources and the heavy-handed policy, which is reminiscent of the colonial period, regulates the livelihood of the local people. In addition, hunting by the local people is condemned as “unsustainable.” The local people have no means to protest or plead; thus, they act as hypocrites in order to obtain profits.

As observed above, “sustainability” in sport hunting can be regarded as an arbitrary construction of the environmental principle for legitimization of tourism. In the colonial period, the Western hunters regarded their hunting as noble and forehanded sport hunting, in contrast, delineated from “uncontrolled and savage hunting by the local people.” This kind of differentiation continues to exist between “sustainable sport hunting” and “unsustainable hunting of the local people”. This indicated that there has been a continual differentiation since the colonial period. Moreover, despite the criticism against protectionism and the increasing awareness of CBC, the Western operators monopolize the rights to use the natural resources and the colonial policy has remained strong. To sum up, the idea of “sustainability” has been misconstrued in (neo-) colonial and political statements and the economical viewpoint (sport hunting generates revenue) in order to condemn local hunting and legitimatize sport hunting using historical power structure.

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Chapter 8 Community-based "Anti-Poaching" Effort: A Case Study of the Mago National Park, Ethiopia

Nobuko Nishizaki

KEYWORDS: Community-based Conservation, Livelihoods, Subsistence Hunting, Ethiopia

1. Introduction

This paper provides an example of one of the rare voluntary "anti-poaching" efforts undertaken by a local community in Ethiopia. Through the paper, I will clarify the reason behind the effort. Doing so may serve to indicate why the various participatory approaches towards wildlife conservation initiated in the country have failed to result in meaningful participation in practice.

Wildlife conservation in Africa has been a critical issue for conservation agencies since African countries gained independence from foreign rule. An analysis of the involvement of local communities in the conservation program was carried out by numerous specialists in the fields of both conservation and development. These experts criticized the conventional protectionism approaches which usually excluded rural residents from the schemes related to "legal" utilization of natural resources. This trend had accelerated when the idea of sustainable development became the common international slogan. Community-based conservation was a concept that was introduced in the 1980s (Western and Wright, 1994) (see chapter 1).

However, the wildlife conservation policies and the national biodiversity strategies of African countries have continuously placed a higher priority on the biological ecosystem. Although community members are identified as among the key players in conserving the ecosystem, their roles are limited to set targets with regard to the issues of environmental education, profit beneficiaries or special laborers. Most of the local people are not regarded as the decision makers where natural resources are concerned—especially when they affect the ecosystem by using the natural resources in an 'unsustainable' manner.

Till the present date, most African communities have utilized natural resources directly. Though livelihoods in Africa have been studied and reported in detail through the fields of ecological anthropology, rural studies and commons-research, most of the results of the studies carried out in these fields have not been included in the conventional wildlife conservation approaches. Most of the local praxis that directly impacts the ecosystem tends to be regarded as "resistance" to wildlife conservation by the conservationists. Even when the real needs of the locals are articulated, they are mostly ignored or controlled by the conservationists narrowly prioritizing the biological ecosystem.

Ethiopia's wildlife conservation area—which is sub-divided into a national park, a sanctuary, a controlled hunting area and game reserve—occupies 2.7% of the country's land (Hillman 1993). Human activities are not allowed in these conservation areas without prior permission being obtained. There are three features in the Ethiopian wildlife conservation approach that emphasize its uniqueness as compared to other Eastern African countries: its historical background, low tourism

rate and tenure system.

Ethiopia experienced only five years of colonialism (1936–1941), and most of its conservation areas were established during the socialist regime (1974–1991). The socialist regime did not provide the local people with the means to maintain access to the conservation areas and manage the natural resources in them. When the regime was toppled in 1991, the above fact was a contributing factor to the destruction of conservation facilities—mostly at the hands of the local people—as well as to the under-developed infrastructure for photographic tourism. Subsequently, the central government began devolving most of the functions of the conservation scheme to the regional governments.

Although the new land tenure policy of the Ethiopian government does not permit private/communal land ownership, each regional government has planned a more community participatory approach towards managing natural resources. However, these decentralization practices have been less successful than anticipated. The local communities of many areas continue to make illegal use of the prevalent wildlife. In theory, villagers can express their opinion on conservation issues through the district office or through the village scouts who are employed to guard the park. In reality, however, most of them are not willing to express their thoughts and feelings. This results in poor communication between the local communities and the conservation authority, and could lead to more violent conflicts between them.

2. Study Site

The Mago National Park is located in southwestern Ethiopia—about 750 km from Addis Ababa. The park was set up in 1978. The main vegetation of the park is acacia wooded grassland and the riverine forest along the Omo River. Mammals such as buffaloes, African elephants, waterbucks and a variety of small antelopes form the wildlife of the park. Six ethnic groups—the Ari, Banna, Hamar, Kara, Muguji and Mursi ethnic groups—have relied on the natural resources in the national park for their food, firewood and fodder for their livestock. Following the devolution of all the functions of the conservation scheme, the agricultural office in the Southern Nations Nationalities People's Region has been vested with the authority of regulating wildlife utilization in local communities and managing relations with external donors.

The main problem in the park is the drastic decline of the wildlife population (Graham et al., 1996). A large number of automatic guns were brought into the area after the change of regime in 1991. Currently, severe conflicts have broken out between the park staff and subsistence hunters who use automatic rifles. Before the establishment of the park, Ethiopian highlanders—assisted by local people—had engaged in commercial hunting. These highlanders had gradually disappeared after the establishment of the park (Nishizaki, 2005). Thereafter, most of the hunting conducted in and around the park by the villagers living nearby was solely for the purpose of their subsistence. The park authority could not monitor the park effectively due to understaffing and the shortage of detailed information about the poachers and existing wildlife. However, the park staff has since then altered the wildlife conservation policy to include a more community participatory approach.

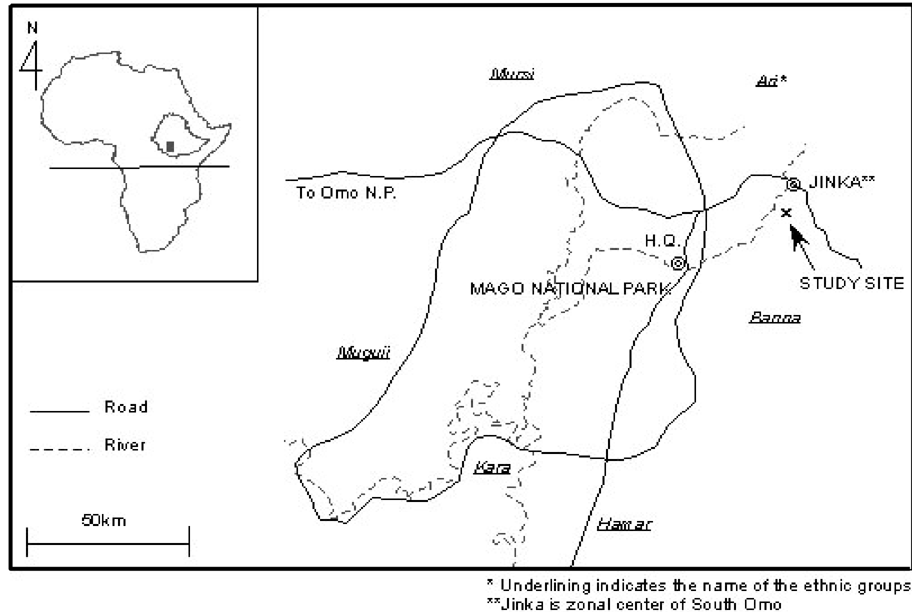

Figure 1. Location of Study Area

The field research for this study was conducted in a village located on the eastern side of the park (Fig.1). This village comprises 204 households and is inhabited by the Ari and Banna ethnic groups. These people farm crops and graze livestock in the village, and collect honey from hives located inside the park. Most of them identify themselves as “Ari”, but are vastly influenced culturally by the Banna people who border the Ari territory. From both the geographical and political points of view, the village is located in a very peripheral area. The village was not greatly impacted by the market economy until recently. The villagers have availed of few development projects. Basic facilities—such as electricity, schools or medical aid—are not available to the villagers. After the change of regime in 1991, the conservation policy suddenly started to be implemented strictly, with the aid of methods of monitoring and sanctions. I conducted a field survey in the village for six months in 2002 and five months in 2003.

3. Formation of Park Militia

The inhabitants of the abovementioned village proposed a community-based approach towards conservation at a meeting held between them and the regional conservation authority in 1994. The meeting was held following a proposal by the park staff and the regional conservation authority to ban the collection of honey by the villagers. The collection of honey for subsistence had been permitted since the time when the park was set up. At the meeting, one of the villagers—an old man—said that the villagers would die if the collection was prohibited. Following a few discussions on the topic, the representatives of several villages proposed that a park militia system be organized to stop the hunting of wildlife in the park. The idea suggested was of adopting the local militia system which the socialist regime had organized. However, the villagers proposed that they would voluntarily undertake the task independently, without being coerced or paid by any external authority. The conservation authority readily accepted the idea of the monitoring of the park through park militia.

At the time, ten village men were selected as members of the park militia. Their main activities were to supervise the honey collectors in order to prevent illegal activities, to patrol the park along

with scouts and to arrange meetings on conservation issues in the village. In my study, I examine the background to the formation of park militia focusing on two points of view. First, I describe the importance of honey. This description might clarify the reason for the villagers' insistence at the meeting on continuing to collect honey in the park. Second, I analyze the manner in which the system of park militia is effective in reducing the poaching of the park's wildlife by the villagers and in changing the relationships between the community members and the park staff.

4. Importance of Honey

Beekeeping is exclusively the domain of men in Africa. In the course of my study, I came across just one exceptional example of a father assisting his daughter in carrying the collected honey from the park to the village on her back. The beekeepers placed the beehives (*koti*) in the dense forest between the village and the bank of the Omo River in the park. In addition to entering the park during the harvesting seasons, beekeepers were allowed to enter the park to care for their beehives several times a year if they submitted a letter of permission authorized by the chairman of the village (*kabale*) to the office in the park. However, the park staff had always suspected that the villagers were hunting wildlife on their way to the beehives. Therefore, they proposed that beekeeping in the park be banned.

The primary importance of honey for the villagers is its nutritive value. The villagers consume a considerable quantity of honey because it is high in calories and easily digestible. Secondly, honey is important for its commercial value. It contributes to 15% of the villagers' annual cash income. The villagers sell honey to their customers directly or through the market. *Tej*, the famous national drink, is a sweet wine made from honey. It is brewed and served in town bars. The possibility of honey selling at a relatively high price regardless of the season is high.

Thirdly, honey is important as a gift item. 51% of the honey harvest is utilized for gifting. Honey is considered an important component of bride wealth. A lot of honey wine is consumed at weddings and funerals. It is also common to welcome guests by offering them honey. This economic and cultural importance of honey probably persuaded the villagers to demand beekeeping rights in the park and to organize the park militia system.

5. Newly Formed Park Milita: Its Members, Activities and Effects on Wildlife Conservation in Future

5.1 Members and the Method of Hunting

The members of the park militia were selected from among those who had detailed knowledge and information about both the wildlife and local people. Only five out of the ten men who were selected by elders in 1994 were actually working in 2002. The park militia used to be accused by the park staff of hunting surreptitiously.

Several men prefer to conduct hunting together. Once a pair of men goes hunting together, a *miso* relationship (dyadic relationship) is created between them, and thereafter, they call each other *miso*. A *miso* relationship is a close friendship between two hunters, but does not extend to the next generation. Apart from hunting together, the pair exchange possessions frequently and visit the market together at times.

Theoretically, a hunter can create a *miso* relationship with anybody on being so requested. Fig. 2 shows the number of *miso* relationships that a certain man has created to date. There is no significant correlation between age and the number of *miso* relationships. The members of the militia have more *miso* relationships than other hunters. Moreover, three of them are village elders as well as members of the park militia. They are regarded as outstandingly skilled hunters and they are often requested by the inexperienced hunters to accompany them on their hunting expeditions. Thus, they are more likely to have a higher number of *miso* relationships than the other hunters.

The village elders are highly respected by the other villagers due to their political and ritual powers. Ari society is organized into a chiefdom, which is headed by ritual kings known as *baabi*. The village elders' group does not correspond to the system of chiefdom. The village elders are called *donza* in the Banna language. Masuda (1998) suggested that a village male needs to fulfill some pre-requisites regarding age, marital state and number of legitimate children to become a member of the village elders' group. According to the villagers, masculinity—which is reflected in the man's hunting ability—might also be a key requirement for becoming a village elder (*donza*). Although the park militia is a newly formed system, it is based on one of the existing social relationships between the village elders and the other hunters. Therefore, young members of the militia are not barred from becoming *donza* in the future.

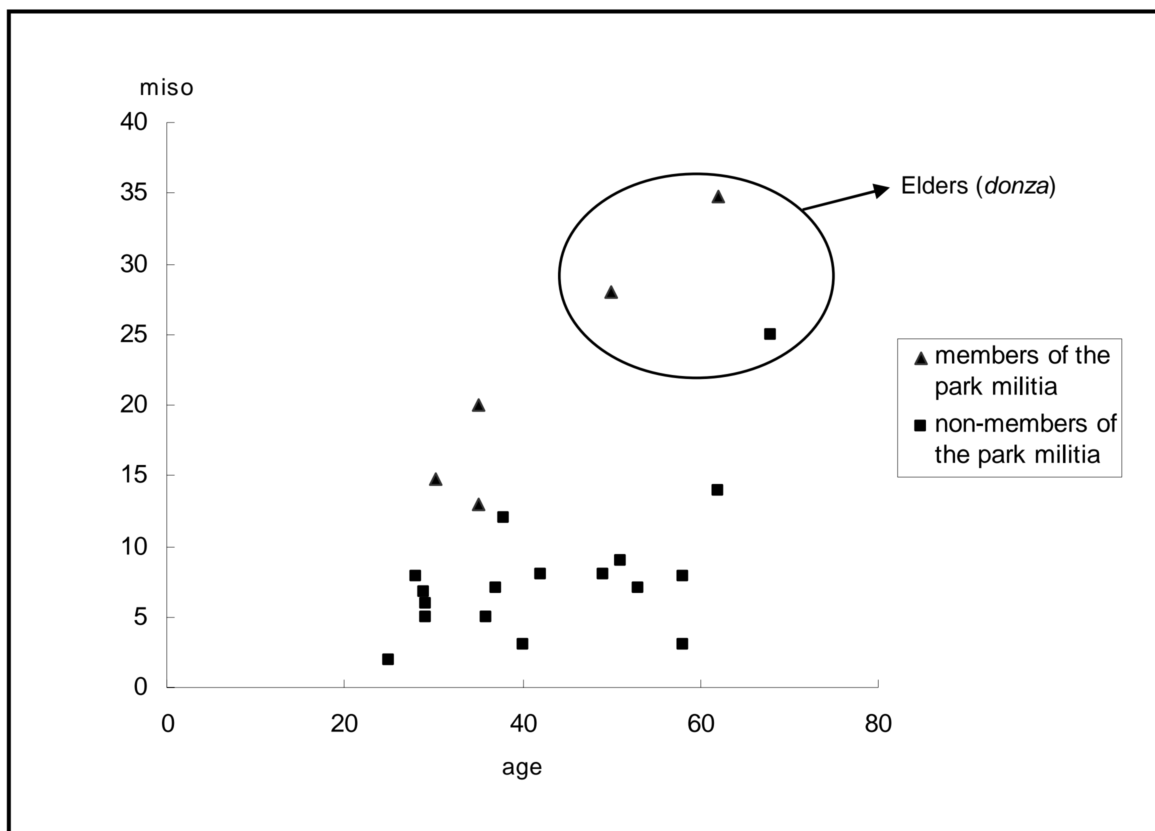

Figure 2. Number of *Miso* Relationship

5.2 Activities

The park militia patrols the park free of cost. When a member of the park militia is patrolling the park along with the scouts, he sometimes purposely ignores the hunters. He tries to understand the reason for the hunters' entering the park. One day, a man who was hunting a buffalo was successful in

escaping the patrol and took refuge in the village. Some park staff came to the village in pursuit of him. However, nobody who knew the identity of the hunter reported him to the park staff. Before the investigation, the elder members of the militia—who were also among the village elders—had already called for a meeting with the other elders, the young members of the militia and the "criminal." Thereafter, they gave the hunter a hearing, and simply persuaded him to give up hunting. Namely, they decided the matter independently.

They reasoned with the hunters on two grounds. One of them was the fact that the wildlife population in the park was on the decrease. This fact had resulted in a strict imposition of the wildlife policy on the local community. The other reason was the maintenance of political autonomy.

The villagers assume that the park authority has gradually reduced their rights, especially in the event of external officials—such as policemen and park staff—visiting the village. They have visited often since the 1990s, which was when the regulation of the park started to be strictly implemented.

5.3 Effects on Wildlife Conservation

It is unclear how effective the park militia system has been in achieving the goal of wildlife conservation. The available scientific data are not enough to show the existing wildlife population trends and the reduced rate of poaching in the form of actual figures. Therefore, I will focus on the qualitative change in relationships that the system has brought about between the villagers and the park staff.

Some of the villagers' respond to the militia's demand that they abstain from hunting in the following words: 'I hunt to satisfy my hunger'. The others state that they cannot hunt wildlife as long as the members of the militia continue to work. The latter comment might be reflective of their fear of being caught by the park militia and punished by the village elders. An offender of local rules suffers severe punishment by the village elders. However, in the previously stated case, the elders simply warned the "poacher" without imposing a strict sanction.

Villagers have stopped holding the traditional dancing party (*waresa*) which used to be held regularly in the past in the honour of successful hunters. Moreover, hunters now leave the village at midnight for hunting without informing even their family members, although hunting continues to be an acceptable activity within the community.

In 2002, the elder members of the park militia invited one of the park staff to a meeting held in the village. Barring the time an investigation was conducted to arrest poachers, he had never visited the village. After the meeting, he told me that this was the first time he had talked to the villagers directly, and that the villagers had started to greet him when they came across him in the town.

While it is a fact that the members of the park militia ignore some poaching activity sometimes, they are nevertheless considered to be a useful force for the cause of wildlife conservation. Ironically, their rich experience as former poachers is proving to be quite helpful towards the anti-poaching activity.

6. Conclusion

In this paper, I describe one of the rare voluntary "anti-poaching" efforts by local people in Ethiopia.

The experiment started when the policy of wildlife conservation began to be enforced strictly. The villagers persuaded the park authority to allow the continuation of the collection of honey from the park. Although the park militia system was newly organized, it was able to grant their request since it had one of the traditional social relationships existing between the village elders and the hunters as its background. The relationship was created through the hunting activity.

The most successful result of the experiment on wildlife conservation was the mitigation of conflicts between the villagers and the park staff by the members of the park militia. Moreover, there were two noteworthy changes in the villagers' attitude. First, the village elders started to recognize the decrease in the wildlife population and its seriousness. Secondly, they started trying to change their strategy from "poaching" to the "anti-poaching", which is the exact opposite.

Despite the central government's attempt to devolve conservation issues to the local governments and its policies towards increasing the participation of the locals in the decision-making process, local communities have continued to be negatively impacted. They have been prohibited from accessing "their" natural resources and limited to merely expressing their opinions on the conservation policy. Regional government officers and park staff continue to make most important decisions with regard to wildlife-related policies and revenues. After the increase in poaching activities, the conservation authority and international donors have provided substantial funds towards the cause of increasing the participation of the community in the decision-making process.

An example of the above would be the fact that the Southern National Parks Rehabilitation Project was financed by the European Development Fund. The program aimed at rehabilitating three national parks in southern Ethiopia, developing the tourism potential of Ethiopia's wildlife and conserving natural resources. One of the project actions included 'acquainting local communities with the project' (MGM Environmental Solutions Limited, 1999). Moreover, the objective of elephant conservation, which was financed by the U.S. Embassy's Regional Environment Office, has been implemented in the Mago National Park program. Surveillance and enforcement equipment for game scouts and training for newly hired game scouts have been provided as a step towards implementing the above. There has also been a plan to provide alternative livestock watering facilities to some communities (U.S. Embassy, 2001). These attempts have not necessarily met the real needs of the locals. Villagers are accustomed to being excluded from negotiations regarding the use of the resources which they utilized for a long period of time. It is not surprising, therefore, that they are reluctant to accept the incentives offered by these "new" programs.

Many wildlife conservationists in Africa hold the simplistic view that merely allowing villagers to become scouts and share a part of the economic benefits accruing from the wildlife will prove revolutionary. However, this case study indicates that conservationists should make an attempt to understand the actual needs of the local people and recognize that local initiatives— even if they have a negative impact on wildlife population temporarily—are vital turning points for a very "community-based" conservation policy. It is especially important to ensure that the security of their livelihoods becomes the motivating factor for the villagers to embrace the 'anti-poaching' effort and to understand that this effort has the potential to continue as long as the consumptive utilization of natural resources involving subsistence hunting is tenable.

In Africa, wildlife tourism holds the potential to aid the cause of community-based conservation. However, the manner in which commercial benefits accruing from tourism could offset individuals' costs of living with wildlife is not clear. In addition, there are remarkably few conservation areas which generate benefits adequate for the community-based conservation projects. Thus, it is preferable to consider tourism as one of the tools for community-based conservation. In the areas

where the potential for wildlife-related tourism potential is low, the wildlife conservation policy must include the local people in more meaningful ways.

One of the approaches towards wildlife conservation involves the construction of more direct linkages between people and wildlife by providing ownership with regard to resources. The ownership of wildlife and/or the right to derive income from consumptive utilization in Ethiopia are rights that are legally owned and governed by the state today. Communally owned land is not legally recognized. Moreover, hunting rights are reserved for foreigners in the controlled hunting areas. The extent to which these inadequate legislations to enhance community involvement can be devolved and sustainable traditional user rights over natural resources can be provided will prove to be key issues in realizing community-based conservation or co-management between the state and the community. In order to make the community-based effort more sustainable, the wildlife management will need a supporting system and more local-level institutions.

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Chapter 9 Community Resistance towards Wildlife Conservation in Serengeti National Park Tanzania: From "Weapons of the Weak" to the Land Rights Movement

Yukino Iwai

KEYWORDS: Community Conservation, Fortress Conservation, Community-Friendly Fortress Conservation, Hunting, Land Rights Movement

1. Introduction

Two decades have passed since the concept of Community Conservation (CC) was introduced at the end of the 1980s. CC has appeared as a reflection of an earlier conservation strategy, 'fortress conservation', which aspired to separate humans from nature using strict law enforcement such as hunting prohibition and community eviction from protected areas. CC theoretically includes the concept of community participation, democratization and decentralization of wildlife conservation (Kiss, 1990; IIED, 1994; Western and Write, 1994). In practice, however, the main approach adopted by most projects is the generation of economic benefits from wildlife tourism to local communities which focus on economic gain rather than the shift of property rights of natural resources from government to community. Furthermore, it becomes clear that community-based tourism can earn limited benefits which are far lower than the opportunity costs that the communities bear (Emerton, 2001; Walpole and Thouless, 2004).

As a result of this limited impact of CC, some researchers advocate the regression to fortress conservation, and emphasize the need for strict law enforcement (Hackle, 1999; Hilborn et. al., 2006). Hilborn et. al. (2006) pointed out from a case study of Serengeti National Park that poaching declined after patrol efficiency increased which was before the benefits for communities from CC increased. Therefore, he concluded that the anti-poaching efforts are effective for the protection of wildlife.

A further criticism of CC comes from political ecologists. Neumann (2001) draws attention to the extension of state power over community natural resources under the guise of a community-friendly approach such as development of ecotourism. Generally, ecotourism promotes the shift of subsistence activities from agriculture or pasturage to tourism which does not conflict with wildlife conservation. Such a CC approach, Neumann points out, implies the same fundamental force as fortress conservation—that humans should not utilize their land and resources directly and that they should be separated from nature.

If the essential implication of CC is as Neumann indicates above, ironically we have to say that CC is reworded as "community-friendly fortress conservation" (CFFC) which effectively expands and extends state mechanisms of control and surveillance into rural societies while failing to reduce poverty. Moreover, coercion and violence in conservation enforcement are not replaced by community participation, but continue as ever-present threats that influence the behaviour and

decision-making of local community members.

However, local villagers have been trying to resist any type of state control over their own resources since the colonial era. People are not always passive or obedient. They can express their thoughts and determine what to do. The researches about Tanzanian peasants show their creativity. For example, Hyden (1980) called peasant resistance towards the ujamaa, the Tanzanian independent government policy during the 1970s, “uncaptured peasantry” who evade government control of their livelihood.

This study examines the influence of fortress conservation towards local communities. In Serengeti, it can be observed, as in much of sub-Saharan Africa, that the conservation movement was introduced violently with forceful eviction and a ban on hunting. I explore how local people have been either resisting or accepting wildlife conservation, and what they have changed to co-exist with and cope with conservation. Finally, the influence of fortress conservation and the role of CC in local livelihoods will be reconsidered.

2. Study Area: Ikoma People and Serengeti National Park

This study covers an area adjacent to the western part of the Serengeti National Park (SNP) which is 15,000 km^2, and is one of the largest national parks in Africa. There are two game reserves, Ikorongo and Grumeti (Fig. 1).

The people living in the area are Ikoma. Before SNP was established on 1959, the western part of the park was used for settlement, cultivation, grazing and hunting. The Ikoma place great value on hunting as a means of confirming their ethnic identity. Hunting provides them not only meat for subsistence, but the means to foster social, economic and cultural aspects of the community. Ikoma consider hunting as the most essential activity of their life, and they call themselves “hunters” (*wawindaji*) rather than agriculturalists (*wakulima*) or pastoralists (*wafugaji*) even though most households (88%) cultivate their fields and more than half the households (61%) keep livestock (Iwai, 1999).

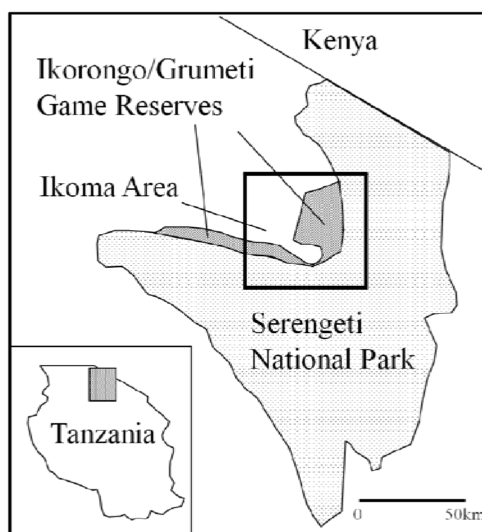

Figure 1. Study Area

Furthermore, hunting is referred to as a “men’s job” among Ikoma. Ikoma men begin to use bows and arrows during their childhood as a part of play. Ikoma boys have shooting competitions to test their skills when they are out on the plains or in the bush grazing cattle. Hunting is integrated into Ikoma cultural ceremonies. Ikoma youth are given bows and arrows at the end of their circumcision ceremony between 10 to 20 years of age. They are taught by their elders that they should have extensive practice and skill in shooting animals so that they can become capable hunters in order to support their family and community. As a result, a good hunter gets acclaim in the Ikoma community.

However, hunting has been prohibited since 1921 and the Ikoma community have also lost their customary land measuring more than 2000 km^2, in

order for the SNP and adjacent game reserves to be established. Today, there is a national park and two game reserves around the Ikoma area, in which all other human activities except tourism are prohibited.

3. Resistance to Hunting Prohibition

In this section, I explore how Ikoma resisted or adapted to this conservation enforcement and state control of resources. From the political structural framework, the colonial and independent government has overwhelming power and it is difficult for Ikoma villagers to change state level decisions. However, they have never been subdued and have always tried to find a way to keep utilizing their resources.

Ikoma were deprived of their hunting rights from the very onset under the Game Preservation Ordinance, 1921. The ordinance aimed to protect game species for white hunters while hunting activities by the locals was termed as "slaughter" and "inhumane" by conservationists at the time, although there are records which mention larger numbers of wildlife killed by white hunters rather than local Africans (Neumann, 1998).

Ikoma resisted the hunting prohibition by becoming poachers. Until the 1980s, they ignored the hunting regulations in order to sustain their livelihood, and continued their traditional bow and arrow hunting. However, in the late 1980s, park budgets expanded and vehicles and staff for anti-poaching patrols increased greatly because fears that elephants and rhinos were in danger of being hunted to extinction were raised in western countries and the park authorities and the government received a lot of donations. Consequently, Ikoma had to change their hunting style in order to avoid being arrested.

The villagers discovered new hunting methods to keep utilizing wildlife (Iwai, 2001, Fig. 2). First, they adopted modern materials for their hunting tools, such as steel wires and torches. These tools enabled them to hunt at night. They replaced bows and arrows with wire snares as their main hunting practice to trap middle-sized grazers such as wildebeests and zebras. Through this method, they simply set snares in the early morning and collect their prey in the evening, while hiding themselves during the daytime when park scouts are patrolling actively.

Hunting methods	1950s	60s	70s	80s	90s	2000s
1. Wire snare						
2. Bow & arrows						
3. Hanging trap						
4. *Orotora* rope						
5. Bow & arrows in group						
6. Pitfall						

* Dotted square shows the method was active.

Figure 2. Transition of Hunting Methods

Second, the villagers minimize the size of their hunting groups to just 2–3 members in each group. Earlier, hunting with bows and arrows and *orotora* rope hunting required that they go into the

bush in a group numbering 20–30 people to ensure a successful hunt. *Orotora* is a rope which is 20m in length and tied into small loops every 30 cm in order to catch small antelopes such as Thomson's gazelle. These group hunting methods needed mutual co-operation. Beaters have to force animals out of hiding and into the place where archers are waiting or *orotora* is set with hitters. People built social ties and traditional environmental knowledge was transferred from elders to children through these practices. However, they have lost these socially important activities as the anti-poaching patrols have become stricter.

Finally, hunters began to employ boys as porters to carry the dried meat back from the bush to the village, which traditionally used to be the woman's role in the hunter's family. Most women above the age of 50 remember their experience in the bush as meat porters as a precious experience, because they used to be welcomed by the men hunters and treated as guests with offerings of a lot of meat. A middle-aged mother told me that due to the abundance of meat, she used to only eat meat, and never had grain food, ugali, there. It provided one of the few occasions for women to go into the bush and familiarize themselves with the natural environment. Nevertheless, hunters have started hiring village boys as porters, instead of involving the women from their own families who are unable to run away quickly enough when they meet the park patrols. Thereby, women have lost the opportunity to get deeply involved in tradition and boys have started to get involved in hunting as wage labour. These three changes were the strategies employed to hide out and escape quickly from park scouts. Through these changes, Ikoma lost some of the social aspects of hunting, but they did at least continue to utilize the resources that they had had for a long time.

As you see, their resistance to restriction on hunting was "passive" which did not directly challenge authority. James Scott (1985), in *Weapons of the Weak*, describes this kind of resistance as taking forms such as "passive non-compliance, subtle sabotage, evasion and deception." This type of resistance is useless to overthrow the dominant political power which wields violent control over peasants, but is appraised by people in weak positions as a means to display their protest against this power. Ikoma could not change the regulation itself and the top-down power structure between them and the government, but they clearly showed their disapprobation to conservation. This passive, non-formal, non-organizational strategy was characteristic of Ikoma resistance until the 1990s.

4. Resistance to Land Right

The social movement for threatened land rights arose in village A, one of the Ikoma villages, in 2004 was quite different from the resistance to hunting rights explained above as individual and opportunistic. In this movement, villagers united and tried to challenge higher authority with legal actions in order to protect their land. In this section, I examine what factors caused such a transformation of their resistance.

4.1 Outline of the Land Rights Movement in Ikoma

The Ikoma people were deprived of their land in stage. When SNP set up in 1951, they were evicted by police force with putting fire on their houses without any compensation and they lost one third of land they used to use. In 1994, Ikorongo/Grumeti Game Reserves were upgraded from game control areas which are lower grade of protected areas and in which resource utilization by local people are not prohibited. Hereby the village A lost 80% of the land which they used in the 1940s. Initially their

reaction to eviction was passive as it was shown toward hunting regulations. They did not have political negotiation with the conservation authority; meanwhile, the Maasai won some compensation agreements from the authority including settlement right in Ngorongoro Conservation Area.

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However, in 2004, Ikoma showed "aggressive" resistance in order to protect their land (Iwai 2008). The process was as follows. Since 1999, an American investor had constructed a five-star luxury hotel in the neighbouring area of the SNP, the game reserves and village A. The investor wanted to obtain all the village land in order to establish a private conservation area around his hotel, then tried to negotiate with villagers about their relocation to another area by offering a million Tanzanian shillings (equivalent to US$ 1,000) for every household in January, 2004. Although this amount of money was attractive enough to most villagers who had little cash income, the villagers did not show a positive reaction. Thus, the investor started to conciliate the village political leaders, such as the village chairman and the village natural resource committee members and, furthermore, tried to win the favour of the higher authorities, such as the district officers, park management authority TANAPA staff and central government bureaucrats, as they intended to break down the villagers' opposition from both the inside and outside.

It was the village youth who first showed strong opposition towards the investor. At the meeting to which the village elders were invited by the investor in April 2004, one of the youth rebuked the elders who were going to receive a "sitting allowance" as a kind of bribe. He blamed the elders for almost selling village land for such a small compensation. Since then, many villagers have begun to express strong objection to the relocation. In May, a riot broke out and a group of more than 30 machete wielding villagers, scared the investor's negotiators off the village land.

Finally, the villagers started a legal process to register their village land in February 2005 so as to protect their land rights from the investor. According to the Land Act 1999, customary village land can be registered with the ministry, then the village council can obtain the title deed and authority to control their land. Without this title deed, central government has the power to lease village land to others without the villagers knowing. So this registration process prevents the investor from buying up village land from the central government. The registration was completed in 2006, and now the land is under full control of the village.

4.2 Four Factors Brought the Movement on

This kind of collective action is unusual and remarkable among Ikoma. It shows quite different character from their resistance as weapons of the weak. The villagers united and claimed their rights

based on regulations which they used to neglect or break. This can be considered as a modern social movement. How does such a change of resistance strategy emerge?

The reason which people mention first is the cultural importance of the land being the cradle of Ikoma which they have inhabited for generations. Ikoma believe that village A is the home of all Ikoma people and even Ikoma living in other villages have originated from here. Furthermore, people consider that the God of Ikoma, known as Machaba which is a pair of elephant tusks, never leaves village A, and that there are many sacred places in the protected areas and Ikoma cannot exist as an ethnic group without the saving grace of those ancestors. This sense of attachment to the land is essential for their ethnic identity and necessary as the foundation of their social movement, but it is not enough to explain why only now they have evoked the social movement of those times, even though they lost their land 50 years ago. Through my research, I am able to point out four factors which brought this movement on.

First of all, there is a common sense of land scarcity among villagers as they say "we are so crowded now." According to my estimation, the population density was 1.8 person/km^2 in the 1940s and is now 16 person/ km^2 which is very high according to the villagers. Moreover, they are now aware that they must be sensitive to land issues through their experience of land deprivation by the government as a conservation area several times in the past.

Second, distrust of the village chairman was growing among the villagers in 2004. The chairman was elected in 1987 as a young, 34-year-old leader. During his 18 years of governance, he negotiated with many conservationists such as government officers, researchers and international NGOs, and succeeded in bringing much needed assistance to the village in order to improve its basic needs, and as a result, he made a reputation for himself. However, he fell out of favour in 2004 because of his flashy behaviour such as using airplanes to attend meetings and building a fine house for his second wife. People considered that the chairman took personal profit instead of providing for the public. This distrust was intensified by his obscure behaviour towards the relocation offer by the investor. As he did not clearly oppose the offer, there was suspicion among villagers that he had been bribed.

Third, distrust of all the village leaders, not only the chairman, was growing too. There are two types of authorities in the village, one is the village council as a part of the state political unit and the other is the traditional elders group which has power over cultural, ethical issues. In 2004, central government held two meetings for both two types of village leaders, which were intended to reinforce a patrol system within the village. Since the leaders did not show a clear objection to this intention at the meeting, the villagers were distrustful, fearing that the leaders' submission might promote the relocation issue. With regard to the leaders, their strategy was weapons of the weak, for which they showed ad hoc approval, but then ignored the rule later. But with regard to the youth, they had already claimed their rights in public, and thus could not accept a passive resistant strategy by the elders.

Finally, the Ikoma people were inspired by the case of Nyamuma village, where although the people had been violently evicted from their area, they won their suit against the government, and therefore, Ikoma felt that they could also do the same. Nyamuma was the village adjacent to the same game reserves which village A was adjacent to. In October 2001, 135 villagers were evicted using police force and setting their houses on fire, since a part of the village land was inside the game reserve which the government found on the survey in 1994. This issue received attention from newspapers and international human rights NGOs as an invasion of human rights by a state, and subsequently the victims brought a case (*The Guardian,* 2004). As they won the case and their right

to be compensated was approved in May 2004, the neighbouring village A was motivated and this encouraged them into taking legal action.

As we saw above, village A is a good example of the case against land requisition under the name of conservation as conducted since the colonial era. Both external and internal factors encouraged the villagers' movement—the long-term unfairness of land and hunting regulations by the government and the distrust of the chairman and village leaders respectively.

5. Toward Reasonable Conservation for Local Life

As seen in the above case study in Serengeti, local people are now able to use aggressive and modern legal measures to protect their rights while they still retain passive means such as weapons of the weak too. Using both styles of resistance, Ikoma are seeking a way of holding on to what they have now at least and of continuing to live in the area that they have inhabited for many generations, although we have to be aware that, by taking legal action, there is the possibility that local villagers may be introduced to the state power structure, as Neumann (2001) suggested.

It is obvious that wildlife conservation has deprived local communities of different resources and rights. Villagers have, therefore, tried to recover the losses caused by conservation as much as possible, with innovating creative methods such as ignoring regulations and taking collective legal action. From the observation of local resistance, it is clear that villagers may regard the economic benefits of the CC approach as one of the tools to compensate their detriment due to conservation, and then it would be impossible for them to renounce their natural resource utilization any more as the CC approach aims to transform subsistence activities from agriculture or hunting to tourism. Hereby, we understand that CC cannot change the local resource utilization until people gain recognition of their historical losses by conservation being retrieved.

From these thoughts, it can be said that local people and conservationists see different purposes in the same CC approach: for local people, CC is one of the tools to recover the losses, and for conservationists, it is a tool to protect wildlife. With these different goals, where is the destination that CC should head for?

I recommend that CC should support villager's subsistence activities first, rather than promote new income sources. In the case of Serengeti, Ikoma people are dependent on agriculture and livestock keeping for their livelihood, and they want to continue those activities which they have been engaged in for generations. Tourism incomes promoted by CC are generally not enough to pay all the costs of rural life and to compensate the opportunity costs which they lost in the past (Emerton and Mfunda, 1999; Emerton, 2001). People should not depend only on tourism, but should also keep different subsistence and income sources such as agriculture and livestock keeping for risk diversification under a vulnerable climatic, political and economic environment. CC must assist traditional subsistence activities first, then it should seek the conservation actions that are not competitive with village subsistence. If CC keeps the initiative of subsistence transformation to tourism, it should be called "community-friendly fortress conservation', not CC.

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Chapter 10 Toward Conservation of Resonation between Subsistence and Wildlife

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KEYWORDS: Resonation between Subsistence and Wildlife, Consensus-Oriented Approach, *Koukyou-Suru* (Do-Pubic)

1. Wildlife Conservation and Local Subsistence

Chapter 1 revealed that various opinions exist concerning the meaning of wildlife conservation. One recommendation of the chapter was to consider the essence of a “consensus-oriented approach”, rather than a universal and eternal definition of “conservation.” Furthermore, an emphasis was placed on the importance of paying careful attention to local subsistence and Human-Wildlife Conflict (HWC). From the foregoing chapters that examined HWC, they were shown to make local people into “victims” and shape their negative attitudes; for instances, Chapters 3 and 4 examined the reality of the damage, and Chapters 5 and 6 considered their effects on local opinions. If wildlife conservation pursues real local participation, incorporating HWC within its scope becomes necessary.

In Chapter 2, the need for local participation was explained in light of resource competition between people and wildlife, but the discussion was based on a pastoral society. Although many important protected areas are situated among or adjacent to pastoral communities in East Africa, pastoralism is just one of the possible subsistence. Even the traditional pastoralism can change as a community goes through phases of development (Chapters 2 and 5). The case of Ethiopia (Chapter 8) shows how a community initiates conservation efforts spontaneously, although a non-wildlife resource inside the protected area, namely honey, motivates this community to form a community militia. In the Ethiopian case, honey occupies a very important position in daily and social lives. The extent to which local communities can use wildlife is tethered by national policies, but utilization is strongly directed by local subsistence and peoples’ wills regarding how to use resources (Chapter 9). Each case study makes its own suggestions or shows local desires, but they are neither mutually applicable nor exchangeable simply because the subsistence mode differs. From the case of Cameroon (Chapter 7), the danger of imposing an abstract concept like “sustainability” without understanding the local situation was demonstrated. Moreover, the challenge of “reconceptualization of wildlife conservation” must take an array of local subsistence situations into consideration.

2. Relationships between Subsistence and Wildlife

2.1 “Community-Friendly Fortress Conservation”

When community participation became the centre of attention in wildlife conservation, most scholars use such words as “development”, “benefit”, “livelihoods” or “needs” (Child, 2004; Hulme and Murphree, 2001a; Wells et al., 1992; Western and Wright, 1994). Subsistence rarely appeared in this word list. Among the terms, “livelihoods” may be the closest to “subsistence”, and an attempt was made to apply a “Sustainable Livelihoods” approach, which is now common in various development-related studies, to CBNRM of wildlife conservation (Fabricius et al., 2004). However, even in these studies, tourism is the focal point. In brief, nature-based subsistence and HWC is ignored (Fabricius et al., 2004; Hulme and Murphree, 2001a).

A concept of “community-friendly fortress conservation” (CFFC) was introduced by Iwai (Chapter 9) to protest the supposition of Community Conservation (CC), The point is that CC praises local benefit and decentralization, but in reality, the initiatives sometimes result in a less direct human-wildlife relationship that is contrary to local opinions and wishes. Table 1 is drawn from an analysis of Chapter 1. It is shown that CC, which was conceptualized after ICDPs (Integrated Conservation and Development Projects) and CBC (Community-based Conservation), is an umbrella concept that covers a wide range. Although CBNRM states that conservation is a means to achieve local needs, CC expresses clearly that conservation can be a means to livelihoods/benefits in some cases, and in others the latter is a means to the former. Recent definitions of ICDPs and CBC are similar to CC, and if the goal of CC is achieved, in theory, no complaint comes from either the local side or the conservationists. However, in the case of Ikoma society (Chapter 9), by banning local hunting on the pretext of conservation, the Ikoma people are denied direct use of wildlife through hunting. They changed their resistance strategies when the conservation body enforced the regulations more strictly, to retain their direct connection to wildlife. In contrast, the Maasai in Amboseli want the very separated relationship through the erection of electric fences (Chapter 5). Both of these local peoples try to utilise wildlife, the former by hunting and the latter through tourism, but the utilisation methods preferred are totally opposed. This discrepancy comes from the difference in the peoples’ modes of subsistence. And it is this contrast that cannot be dealt with in the past discussion. Therefore, the first step for the “reconceptualization of wildlife conservation” is to make a framework that can show the distinct subsistence-wildlife relationships in terms of “separation” or as “linked.”

Table 1. Coverage of Major Community Approaches

<table>
<tr><th colspan="2" rowspan="2"></th><th colspan="3">Arrangement of the top priority</th></tr>
<tr><th>Conservation</th><th>Both sides (no clarification)</th><th>Development/ Livelihood/ Needs</th></tr>
<tr><td rowspan="3">Ownership of land/ resource</td><td>Private</td><td rowspan="2">CBC (original)</td><td rowspan="2">CC
ICDPs
CBC*</td><td rowspan="3">CBC(CC)
CBNRM</td></tr>
<tr><td>Communal/ Collective</td></tr>
<tr><td>Public</td><td>ICDPs
PAO(CC)</td><td>CM(CC)</td></tr>
</table>

*ICDPs and CBC means the later definition than the original ones.

2.2 Three Possible Relationships between Subsistence and Wildlife

Table 2 shows that at least three options exist when conservation and local development (or benefit, sustainable livelihoods, needs etc.) are simultaneously pursued. CFFC (community-friendly fortress conservation) is a "separation" approach. Difference between CFFC and antique "fortress conservation" is that the former stands by community participation and the latter rejects it. Similarity is that both deny direct utilization by local people. As Iwai (Chapter 9) pointed out, when local people want to have a direct relationship with wildlife, this strategy is not effective. The desired relationship for the people is to be directly "linked" to wildlife and their benefits.

The "linked" relationship can be divided into two sub-categories according to the frequency of direct uses or the distinction of meanings. If direct use is "subsistence-based", then wildlife are utilised by local people as a vital element in their subsistence, so that on one hand, benefit reaches them directly and on the other, wildlife conservation becomes a vital ingredient to make their livelihoods sustainable. "Linkage" between local needs and conservation is discussed in some articles (Brown, 2002; Salafsky and Wollenberg, 2000), but they hardly amplify on subsistence and the difference between "separation" and "linked" is missed out. "Subsistence-based" connection can be expressed as "resonation" for subsistence and wildlife are not only linked but also are mutually essential. Most of the traditional wildlife utilisations fall into this category, and tourism jobs can be seen as a modern alternative.

Although, the relationship has a stronger realisation of the linkage between wildlife conservation and benefit compared to "separation", it does not automatically guarantee biodiversity conservation. If the tourism business seeks the largest benefit, it may selectively conserve economically highly profitable species, like game ranching for sport hunting. Even in traditional subsistence-based cases, people sometimes select particular species for utilisation or protection. In addition, wider, deeper and faster social changes, including population growth, are occurring compared to what Western and Wright (1994) brought to the fore more than 10 years ago; thus, hoping that the traditional way can continue is being too optimistic. In terms of tourism, expecting the industry to provide enough job opportunities for all local residents is naïve. There are many difficulties in achieving the "subsistence-based" linkage. Nevertheless, this "resonation" is indisputably better than "separation" because a certainty then exists that people sense the connection between subsistence and wildlife.

"Minor subsistence-based" may sound complementary to "subsistence-based", but important differences exist due to the fact that other significant human-wildlife interactions are not included as

Table 2. Possible Relationships between Conservation and Development

Conservation preceding	Both sides			Development preceding
	Linked		Separation	
	Subsistence-based/ Resonation	Minor subsistence-based		
Regulation or banning of resource uses *(E.g. National Parks, Hunting regulations)*	Subsistence uses with conservation measures *(Hunting for domestic consumption)* Wildlife-based subsistence or businesses *(Tourism jobs, Tourism enterprise)*	Benefit in intangible ways *(Spiritual content, Religion)* Direct use for non-subsistence purposes *(Hunting for cultural values, Play)*	Local benefit without direct uses *(Return of park fee, Compensation)* Zoning with physical separation measures *(Protected areas with electric fences)*	Management of economically valuable species *(Game Ranches for sport hunting)*

* Italics means example of each approach.

"subsistence-based." The social importance of honey exchange in the Ari community (Chapter 8), and acclamation for good hunters in the Ikoma society (Chapter 9) are good examples. Such wildlife

utilisations are never explained just from the viewpoint of subsistence or survival. There are social and cultural values. In this category, components are literally "minor" rather than "major" in light of subsistence, but because of being "minor", they can subsist even if the major form changes. If the Ikoma people hunt wildlife just to obtain enough food, they may give up hunting when they adopt farming. However, if hunting has a cultural value, they will continue to hunt, and this seems to be a fact. Traditional conservation norms also fall into this classification. While being hunters, the Ikoma people believe in *Machaba*, a pair of elephant tusks. The Maasai men hunt lions to prove their manhood but they do not hunt lioness and cubs, because for them such types are too weak or small to be targets of hunting. These cultural regulations are not applied to all wildlife, but such information can be used as entry points to create local conservation initiatives. With the category of "minor subsistence-based", these things are picked up.

2.3 Integrating the Perspective of Human-Wildlife Conflict

The purpose of Table 2 is to integrate subsistence with wildlife conservation. But the table has, at least, one defect: the perspective of HWC is not well reflected. This is because the table tries to conceptualise the relationship between subsistence and the positive results of wildlife. Thus, one must explain how HWC can occur in these two-pronged approaches.

When complete "separation" is undertaken with physical measures, no HWC occurs because no interaction takes place. However, without practical methods for separation, room exists for HWC to occur. When park fees or compensation is given to the community, if wildlife can move freely, they can attack fields, livestock and people. However, a probable positive effect of benefit sharing is to generate more tolerant local attitudes toward wildlife. Under the "linked" conditions, the situation is not very different. Generally speaking, when people are "linked" to wildlife through direct interaction, there is greater risk of HWC. But, if local people utilise only useful and harmless species, and throw out worthless and dangerous types, little possibility exists of HWC. Whether there is HWC or not depends on, besides physical countermeasures and local tolerance to damage, which types of wildlife local people want to conserve.

Hunting has cultural and social importance for both Maasai and Ikoma men. Their major targets are not identical. The Ikoma men hunt herbivores such as wildebeest, zebra and gazelle (Chapter 9), and Maasai's target are dangerous one like lion, rhino and elephant. And, it is the Ikoma people, not the Maasai, who want to continue hunting and retain direct interactions with wildlife. This is just a comparison between two communities, but the implication is that people may tend to do away with contact with risky wildlife, even though such species have some cultural meaning. If this tendency is not exceptional, then the problem is how the different attitudes on each species type, or such selective conservation, can be justified from the viewpoint of biodiversity or ecosystem. On this matter, if one remembers what is said to be the core belief of CBC in the mid of 1990s, it seems that one must return to the same point with increasing contemporary experience: "The coexistence of people and nature, as distinct from protectionism and the segregation of people and nature, is its central precept" (Western and Wright, 1994: 8). Two commentators for the workshop mentioned "connections" between human beings and nature (Special Chapters 1 and 2). This matter cannot be explored moreover, because of the author's incompetence, but after contriving a framework to integrate local lives with conservation, it must be a next issue.

3. Refinement of "Consensus-Oriented Approach" with an

Idea of "Do-Public"

3.1 Importance of "Consensus-Oriented Approach"

One of the most important intentions of this book is to alert those involved in wildlife conservation to the importance of understanding local subsistence and lives. However, understanding is not an end in itself. The importance of outsiders' support for local actors is confirmed in various studies (Adams and Hulme, 2001:22; Wells and McShane, 2004: 516; Western, 1994: 499). One feature of a "consensus-oriented approach", which is conceptualised with examples of "adaptive management" (Berkes, 2004) and "deliberative inclusionary process" (Brown, 2003), is to presume that participation at various scales is necessary for contemporary conservation activities. The other distinction of the approach is a notion that workers must avoid becoming fixated on once-formalised concepts. The idea of adaptive management first appeared as a method for environmental engineering (Hollings, 1978), and thus what must be "adaptive" in this period was the management plan itself. However, as Berkes (2006: 8) noted, when many scholars refer to that word as a principle of conservation policy, the target of "adaptivity" is now enlarged to include people's opinions and attitudes. Regarding this, it is the "consensus-oriented approach" that attempts to draw guidelines so that different opinions and values held by various stakeholders can proceed to a consensus. Brown (2003: 90-91) states that "the three challenges for a real people-centred conservation", in which there is a "deliberative inclusionary process" is subsumed in the following:

(1) Integration of different understandings, meanings and values of biodiversity,
(2) Fair and just inclusion of stakeholders' plural values and interests, and
(3) Flexible and adaptable new institutions.

In addition, Berkes (2004: 626) explains that the two key processes for "adaptive comanagement" are the following

(4) Sharing of management power and responsibility through multiple institutional linkages, and
(5) Feedback learning and building of mutual trust among partners.

These five recommendations are never negligible, but argument is necessary over stages of consensus-making to which each suggestion is applied. For example, *(1) Integration of different understandings, meanings and values of biodiversity*, and *(2) fair and just inclusion of stakeholders' plural values and interests* need to be achieved before conclusions can be drawn. In contrast, *(3) flexible and adaptable new institutions* and *(4) sharing of management power and responsibility through multiple institutional linkages* are something that must be a part of consensus. It is important in the first step to develop a "consensus-oriented approach" to think about how the "process" of consensus-making is to be plotted.

3.2 Introduction of *koukyou-suru* ("Do-Public")

Comparing Berkes (2004) and Brown (2003), the analogy between "adaptive" and "deliberative" is clear. The truth is that "deliberative" is the common word in the domain of politics and sociology,

mostly used in a collocation of "deliberative democracy", and this type of democracy is connected to the discussion of "civil society" or the "public" (Yamaguchi, 2004). In order to refine a "consensus-oriented approach", I would like to introduce a new idea of *koukyou-suru* propounded by Kim Tae-Chan (Kobayashi and Kim, 2004: 52; Kyoto Forum, in press). In Japanese, "public" is usually translated into *koukyou*, and *suru* is a Japanese word that generally means "do" (all of *suru* that appears in this chapter has the same meaning). Thus, *koukyou-suru* is render into English as "Do(ing)-Public." The discussion on "civil society" tends to deal more with macro social issues than public philosophy (Keane, 2003; Yamaguchi, 2004), even though the discussion of "public" is wide-ranging. Kim (Kyoto Forum, in press) states that such "public"-related concepts have been argued so far, as "publicness/publicity" "public space" "public realm" "public sphere" and "public norm", but no attempt was made to conceptualise "public" in a form of verb. *Koukyou-suru*, or "do-public", is an attempt to think about "public" from the perspectives of people's practice, action and movement. It focuses more on interactions or collective actions by plural people than on social institutions or norms. Because of this character, "do-public" is referred to in this chapter instead of other theories on "deliberative democracy" or public philosophy.

Koukyou ("Public") is composed of two Chinese characters, namely *kou* and *kyou*. Etymologically, *kou* means to open an entrance, door or gate to show everything inside for everyone, and *kyou* means to be or do something together with someone. Kim explains this concept in English as to "act on the basis of public-mindedness" or to "act in the spirit of publicness." Noteworthy thing is that "public" (*koukyou*) may sound similar to "communal" but Kim stresses that when people *koukyou-suru* ("do-public") they are never assimilated into one, like in case of Rousseau's "general will." In Nishio et al. (2004: 68), Kim says, "publicness (*koukyou-sei*) is criteria for actions and judgments that make coexistence with alien others possible." The point is that differentials between participants must be approved.

Koukyou-suru ("do-public") has three dimensions: *taiwa-suru* (to "dialogue"), *kyoudou-suru* (to "co-act") and *kaishin-suru* (to "open the new dimension") (Kobayashi and Kim, 2004: 52; Kyoto Forum, in press). In the first dimension, *tai-wa-suru* (to "dialogue"), *tai* means to arrange two things so that they can face straight each other or become a pair, and *wa* means to say or to converse. Kim explains *taiwa*, or "dialoguing", is an open and thorough communication process among stakeholders with "fair-and-square collision, comparison and evolution." Participants can and should express their opinions to others, but for the process to be *tai-wa*, they must be ready to listen to others. The second dimension is *Kyou-dou-suru* (to "co-act"). *Kyou* is the same character as in that of *kou-kyou*, and *dou* basically means to act, work or labour. According to Kim, when people *kyoudou-suru* ("co-act"), they compete each other under a set of rules agreed by the people so as to form "democratic common understanding." Competition is conducted using word, but as showed in its English name, *kyoudou* ("co-acting") is "action" and different from "dialogue", which is practiced without physical "action." The last dimension is *kai-shin-suru* (to "open the new dimension"), and *kai* means to open something closed. *Shin* originally means to cut trees, and today to be new or refresh something. In this dimension, it is said, people come to find totally new perspectives on "public" issues over which they are concerned and "do-public", or arrive at cognition that there is unnoticed and overlooked standpoints. These three are different dimensions of one action *koukyou-suru*, and are not steps that one follow in certain order. Kim sometimes represents *koukyou-suru* to be "*taiwa-suru* + (plus) *kyoudou-suru* + *kaishin-suru*."

In fact, the word "resonation", which appeared in Table 2 and the title of this book, is borrowed

from the discussion in Yamawaki and Kim (2006). “Resonation” is used like a synonym for *koukyou-suru* (“doing-public”). In terms of music, “resonation” means a situation as follows. When two different tones are sounded in a certain hertz (for instance C and G), one can hear another tone (E) ringing in the harmony of the two tones to find a complete chord (C-E-G). The similarities are that both the music and the public need differences (of tone or opinion) for “resonation” to happen. The difference, however, must follow some rules (in hertz or about the rules of an *arena*), and only when these conditions are fulfilled, does a new tone or configuration emerge. This is “resonation.”

3.3 Application of “Do-Public” to Wildlife Conservation

“Dialogue” among Plural Opinions and Meanings

Kim states that “dia-logue” (*tai-wa*) must be distinguished from “mono-logue” (*doku-wa*), in which the latter does not require the presence of others. *(2) Fair and just inclusion of stakeholders’ plural values and interests* is very near to the idea of “dialogue.” “Plurality” in *(2)* implies each person has different opinions. Those varieties may cause “collision” among stakeholders, but “collision” must be followed by “comparison” and “evolution” rather than ignoring others’ opinions. The discussion so far mostly have studied the positive effect of wildlife in light of tourism and overlooked the negative side as HWC. If there are only positive things, “collision” is only a matter of degree: which one is the most beneficial. But wildlife bring negative effects, so careful “comparison” is necessary between advantages and disadvantages. In addition, on “comparing” the two sides, non-monetary values that cannot be measured by market economy must be given contemplation. These challenges call for much more attention on local context of subsistence and lives.

The primary goal of “dialoguing” is to “evolve” one’s opinion by reflecting others’. When it is said that “co-acting” is taken place under a set of rules, such rules are formed through “dialoguing.” In fact, most community projects starts with “dialoguing”, not by “co-acting.” Of crucial importance is these rules are temporary and should be revised later if need be, though for avoiding superfluous confusion, making simple and basic rules that define a manner of “dialoguing” and “co-acting” is necessary. If one applies “dialoguing” (*taiwa-suru*) to wildlife conservation, HWC and non-monetary values need to be positioned as one of the most important issues, as explained above. The other challenge raised by Western (Special Chapter 1) is consideration on various meanings among different kinds of wildlife. While a term “wildlife” literally means every living thing on earth, the truth is that only big and charismatic species have monopolized as targets of “wildlife conservation.” When stakeholders “dialogue”, “plurality” is supposed to be pursued in both sides of human and wildlife, so that there is neither ignored people’s opinion nor neglected wildlife species anymore.

“Co-Act” with Sense and Sensibility

The object of “co-acting” (*kyou-dou-suru*) is to reach a “democratic common understanding.” When conversation is said to be a major method of competition in “co-acting”, it seems that “dialoguing” is encompassed in “co-acting,” but in reality, the focus is moved from a personal realm to an inter-personal phenomenon. In order to “dialogue”, one needs presence of and conversation with others, but its “collision-comparison-evolution” process is made in the interior of a person. Contrary to it, “co-action” is a practice performed between people and under some approved rules that is beyond their influence and operation. Also, when people “co-act”, it accompanies understanding others’ perspectives by using their senses: contrastive to “dialoguing” in which people comprehend

others opinions by their reasons. In other words, "dialoguing" need mind and "(co-)acting" body moreover. *(1) Integration of different understandings, meanings and values of biodiversity* are suggested by "consensus-oriented approach." If one seriously seeks to understand others' perceptions, especially local ones, he/she cannot avoid using his/her physicality and sensibility to experience local reality; as the pioneer of community approaches did (Western, 2002).

This dimension is controlled by the rules, but they can be modified as people "co-act" to understand others' opinions and meanings of human-wildlife relationship. Before "evolving" one's opinion, exchanges of ideas are necessary so that one have to "dialogue" and "co-act" with others. The two dimensions of "doing-public" are strongly connected and can be done simultaneously. Then, *(5) feedback learning and building mutual trust among partners* is a statement supporting traffic between these two processes. "Feedback learning" is a core factor to adaptive management and almost all community approaches consent, but "trust" might be too sentimental for those sustain neo-liberalism. However, since neo-liberalism approach have not yet work out a framework to include non-monetary value, "trust" is one of difficult-for-measure values, it is better to keep this concept as a fundamental motive for people to "do-public."

"Open the New Dimension" with Adaptive Institution

Kim (Kyoto Forum, in press) says in some cases he translates *kaishin-suru* as to "transform" or to "innovate." In terms of linguistics, these two verbs and the phrase of "open the new dimension" differ from "dialogue" and "co-act." "Dialoguing" and "co-acting" are practiced between plural people, like "We dialogue" or "I co-act with him." On the contrary, all the three English equivalents of *kaishin-suru* make sentences where persons are subjects but objects are non-personal things, as "They transform/innovate conservation method" or "We open the new dimension of wildlife conservation." The same relation is true of Japanese, and this fact reveals that to "open the new dimension", *kaishin-suru*, is something like a product of "dialoguing" and "co-acting."

Supposing Kim formalizes "do-public" as successive three steps, to "open the new dimension" is the end of that process, but as explained above, this is not true. A notable feature is different degrees of newness amongst those equivalents of *kaishin-suru*. People can "open the new dimension" only after "dialoguing" and "co-acting", but there is no assurance that "the new dimension" put an successful end to a matter. If it is not the last answer, then people need to continue "do-public" through, in addition to "dialoguing" and "co-acting", "transforming" or "innovating" that "dimension." Besides "opening new dimensions", *kaishin-suru* includes to find important perspectives that were missed out beforehand. "Do-public" is never a philosophy of a newness-lover, and *(5) feedback learning among partners* is in accord with this philosophy. "Feedback" is not only between "dialoguing" and "co-acting", but also between these two dimensions and "opining the new dimension" or "transforming/innovating."

When people start to "do-public", no one can predict what kind of "new dimensions" they will open. Today, uncertainty of ecosystem is one of the most basic common understandings in ecology (Levin, 1999). Berkes (2006) highlights the analogy between uncertainty of an ecosystem and unpredictability of human and social phenomena, but hi has yet to develop this topic further. It is Arendt (1958) who states clearly that human "action" has the nature of "unpredictability" because one's "action" causes others' "re-action" and no one can predict in what way others will "re-act" in advance. Rather, first "reactions" stimulate the next "reactions", and in this way, one "action" creates endless chains of "(re)actions" in the web of human relationships. The purport here is that whilst Arendt admit "unpredictability" of human "action", which originated from "plurality" of human

beings as a “human condition”, she presents measures to stop that endless loop. “Plurality” is the central belief of Arendt’s philosophy, which she thinks must not be denied, and “unpredictability” results from this “plurality.” Arendt positively associates “unpredictability” with “miracle”, but at the same time, says one can put an end to the chain of “actions” by making and keeping a “promise.” Making a “promise” is much easier than getting people to keep it. The problem how to make people keep their words. Force is one factor that can ensure the fulfilment, but *(5) building mutual trust among partners* is more suitable for and harmonious with present-day conservation strategies like local participation and adaptive management. In truth most scholars approves “adaptive” approach as one of the most basic components of future conservation policies, which covers both nature and humans (Barrow and Murphree, 2001: 36; Berkes, 2004: 624; Brown, 2003: 90; Child, 2004: 233; Hulme and Murphree, 2001b: 293; Jones and Murphree, 2004: 84; Wells and McShane, 2004: 516). Detailed list of conservation strategies and actions are drawn only after further “doing-public.”

(3) Flexible and adaptable new institutions, and *(4) sharing of management power and responsibility through multiple institutional linkages* are guidelines for realizing “adaptive” conservation. By seeing these recommendations, it is clear “institutionalisation” is the next important issue. The author laments lacking competence and space to discuss this problem, though various scholars developed theories of an institution (Adger et al., 2006; Berkes, 2006; Hulme and Murphree, 2001a; Ostrom, 2005). It can be said, at least, that after “dialoguing” and “co-acting” people need to be institutionalized in some ways so that they enter a phase of collective and practical actions from a stage of collective consensus-making (Fig. 1).

Appropriateness of “Commitment Principle”

Finally, I would like to pick up the rule of voting in an *arena*. Some researchers start seriously addressing “deliberative” philosophy (Berkes, 2006; Brown, 2003; Stern, 2005). Against this tide, Inoue (2008: 12) insists the importance of the “commitment principle” in collaborative governance of natural resources. The principle provides local resource users with more decision-making powers depending on their closeness to natural resources, and thus it interferes with the basic rule of democracy, in short “one person one vote.” Inoue’s intention is to make local people possible to express their opinion freely without terror of those who have power and influence. This comes from his field experience and awareness that realization of ideal conditions for “deliberation” is very difficult. But, the problem in wildlife conservation is “whether the egalitarian ‘deliberation’ is enough and proper?” If local opinions and views regarding HWC and minor subsistence are fully understood by all parties through “doing-public”, then shall they follow the “one person one vote” principle? Or, does the risk of wildlife damage justify local people in getting stronger power against those who do not have direct interaction? Approval of the principle brings another difficult problem of how to differentiate each one’s power. It seems there is no clear solution and it also be pursued in a way of “doing-public” with detailed field studies.

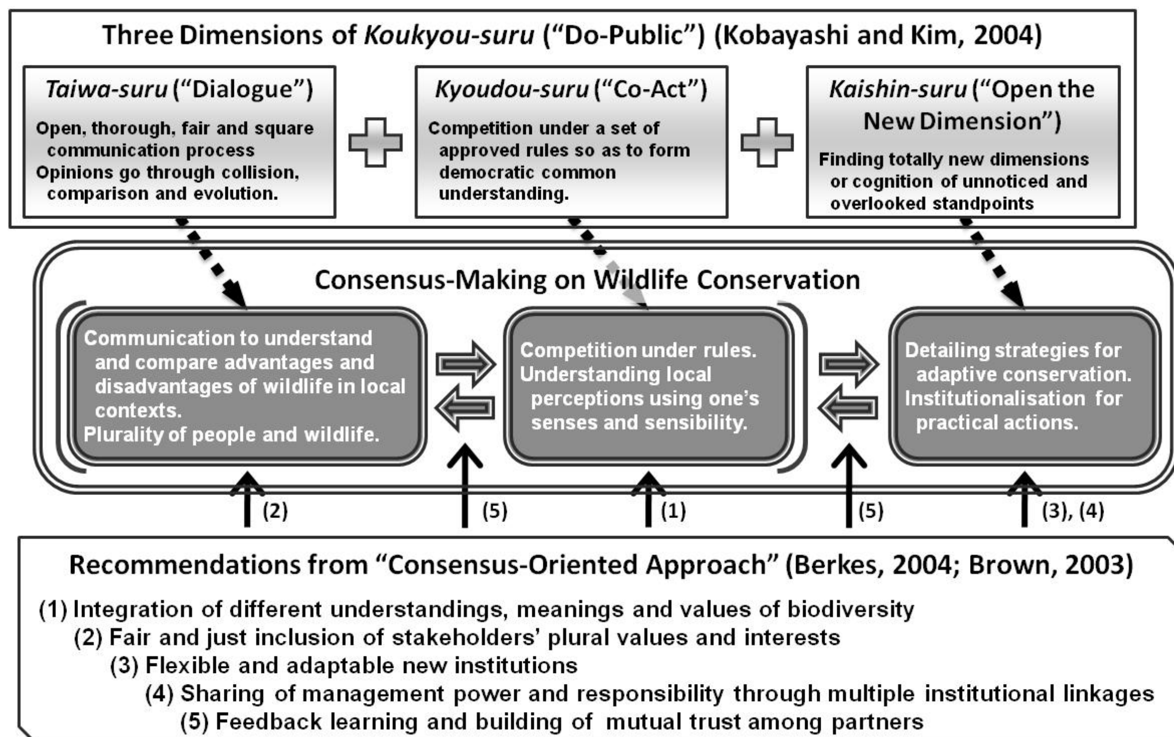

Figure 1. Application of *Kyoudou-suru* ("Do-Public") and "Consensus-Oriented Approach" to Wildlife Conservation

4. Way Forward: Sensibility to All Life

I started writing this chapter with a desire to conceptualise a framework of wildlife conservation that can reflect various subsistence forms. As far as subsistence is concerned, my wish is that Table 2 and Figure 1 contribute some insights to those concerned about wildlife conservation. Beyond question, various important issues remain untouched: problems of ownership, evaluation and integration of non-monetary values, rules of an *arena*, institutionalisation, and also analysis of social changes that communities are facing. Moreover, if wildlife conservation deals with human-wildlife relation, the defect of this volume is that natural scientists are not included without a commentator (Western), despite the title of "reconceptualization of wildlife conservation." However, when one finds both of the commentators discuss "connections" between people and natural environment, and then mention human sensibility to nature, it makes clear one of the most essential challenges in future: how we can integrate ourselves with surrounding all life as biodiversity, not only as scientific knowledge in textbooks but also understanding and realisation though our sense. It calls for much more "doing-public" among scientists, activist, naturalists, local people and so on.

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Special Chapter 1 Rethinking Wildlife: Bridging the Conservation Divide

David Western

There are two good reasons to rethink the meaning of wildlife, one political and economic, the other the confusion over the term wildlife itself. Both have created a deep divide between national and local views of wildlife that undermine its conservation.

Nationally, wildlife is the backbone of East Africa's tourism and hunting industry. Locally, in contrast, wildlife brings more hardship than benefit. We must address this deep political and economic divide between national and local views to have any chance of conserving wildlife in the large free-ranging herds that typify East African today. The alternative is small, isolated heavily managed wildlife populations in fenced-off parks.

The disparities are good reason to address the meanings of wildlife. For Africa's growing urban populous, wildlife means big dangerous animals living in the bush. For many rural farmers and herders, the bush is their home and wild animals their daily neighbors. The disparate views would be less divisive had the colonial and independent governments accommodated customary rights of African communities to use wildlife and protect their families, crops and livestock from attack. Instead, by denying age-old rights, governments have stigmatized wildlife conservation by placing the cost burden on rural communities. For them, wildlife injustice means the loss of food, clothing and medicines that wild animals once brought them. Worse, for many communities, wildlife injustice means losing large tracts of traditional lands to national parks, places governments reserve for "wildlife" and tourists.

The future of wildlife in Africa beyond the small confines of national parks, perhaps in them too, boils down to redressing the wildlife injustices modern nation states have created.

The term itself wildlife must also be revisited. In Africa, wildlife means the big charismatic animals. And yet they are more destructive and dangerous than charismatic to communities living with them. Most communities feel they would be better off without wildlife. They have a point. The big animals disappeared over most of the world thousands of years ago, yet have clearly not held back Europe and America, as many African communities point out in opposing wildlife conservation.

The loss of biodiversity is another matter. Biodiversity governs the very biophysical process of our planet and the ecological services we depend on. The 1992 International Convention on Biological Diversity, ratified by over 135 nations, recognizes that a loss of biodiversity will imperil sustainable development. So in rethinking the meaning of wildlife, should we not substitute it with biodiversity?

We must also rethink the meaning of wildlife to reflect the human-dominated world of the 21st century, rather than our far smaller imprint in the 19th century when the wildlife modern

conservation movement began. The strong centralized controls over wildlife that arose with the advent of modern nation states across Africa have begun to ebb with the spread of civil liberties and democracy. As a result, eastern and southern Africa states have begun devolving some rights over wildlife to private landowners and communities. The question is, has the devolvement been sufficient to overcome the deep divisions over wildlife? More fundamentally, does greater devolution from state to local authority lead to better conservation of wildlife?

A review of wildlife conservation successes across Africa shows progress is mixed--generally poor but with a few bright spots. So does the mixed record reflect the reluctance of governments to devolve rights and responsibilities, or is the policy of locally-based conservation itself faulty with a few exceptions?

A closer scrutiny of case studies around Africa shows that the fate of wildlife over the last two decades is strongly tied to the degree of devolution and to local capacity. Wildlife populations have grown in Namibia, South Africa, Botswana, Zimbabwe (until recent political turmoil), countries where rights are most devolved and local capacity greatest. Numbers have shrunk in Ethiopia, Uganda, Tanzania and Kenya where local rights and capacity are weaker. Even within countries, the fate of wildlife is closely tied to liberalization within sectors. So, for example, Kenya's permits no fee-paying hunting and poaching for meat is high over most of the country. In contrast, Kenya's tourism industry is liberalized and has spurred ecotourism developments on private and community lands under the "Parks Beyond Parks" initiative Kenya Wildlife Service launched in 1997. Today, fully 40% of the Kenya's wildlife is found on local community lands compared to 35% in national parks and reserves.

On balance, the playing field over much of Africa is still heavily stacked in favor of government, business and international conservation agencies and against communities. Case studies from Ethiopia to Kenya and Tanzania and from East to West Africa show that outsiders get more out of wildlife than communities carrying the burden of conservation. Worse still, ruling elites often monopolize wildlife income and care little about the humanitarian cost to their own community.

The imbalance of benefits, power, rights, capacity and skills in natural resource management was at the heart of the Airlie House meeting held in Virginia, USA, in 1993. The meeting brought together local communities, government representatives, donors and conservation agencies from all around the world to review community-based conservation. The meeting, documented in, *Natural Connections: Perspectives in Community-based Conservation* by David Western, Michael Wright and Shirley Strum in 1994, was not the start of community-based conservation. Rather it looked at the success and failures in community-level conservation to that point--and what it would take to improve the outlook.

At Airlie House we gave community-based conservation its name after a good deal of debate. The debate centered on how to capture the shifting focus of conservation action as it moved from a national to local levels around the world. My own view was and remains that community-based conservation is better referred to as locally-based conservation to stress local participation, regardless of social make-up. Community is too often taken to mean a traditional society and fails to capture the variety and mix of contemporary land users.

One aspect of traditional community that has great relevance for locally-based conservation is

the strong feedback links among members. Individual actions within a strongly bonded traditional community carry social and environmental consequences. The feedback links tend to be short and visible, making it easy for communities to reward good individual actions and punish bad ones. The link between action and environmental consequence was captured in the book title, Natural Connections.

Such natural connections weaken as communities bonds slacken with distant trading and globalization. The Airlie House meeting aimed to shift the focus from top-down, centre-driven practices to natural resource and biodiversity conservation by, for and with local communities. The agenda for the conservationists was to conserve natural resources and biodiversity. The agenda for local communities was to regain control over natural resources and improve their lives. The underlying premise of conservationists and communities was that action and consequence could be reconnected in a globalized world and that the coexistence of people and nature, rather than protectionism and segregation, had far greater conservation scope.

The Airlie meeting felt that refining the definition of community-based conservation any finer than it did would be futile and even counter productive. A tighter definition would ignore the diversity, dynamism and adaptability of locally based action essential in a complex changing world.

Conservation academics have defined various brands of local conservation in order to distinguish and study them more rigorously. The brands include community-based conservation (CBC), integrated conservation and development programs (ICDP), community-based natural resource management (CBNRM) and community conservation (CC). There is some merit in the distinctions. But when the definitions stress small differences rather than large similarities, the shift from exclusivity to inclusivity at the heart of locally-based conservation is lost. Though from different points of view and to varying degrees, each approach shares a common goal: to bring rights, responsibilities and skills closer to local communities, in the interests of conserving and managing natural resources and biodiversity.

Unlike Africa, the distinction between locally-based conservation philosophies is rarely debated in Europe and America. The reason is that rural rather than urban societies predominate in Africa, and wildlife is still prolific. Add strong government control over wildlife to the rural mix and a two-way tussle emerges: an acute conflict between people and wildlife on the one hand, and tussle over who has rights to use of wildlife on the other. The strong pressure international conservation bodies exert in Africa raises the question of who has most say over wildlife, regardless of who owns it. The history of modern conservation in Europe and America bears directly on the question.

Europe's centralization of natural resource conservation in the 18th and 19th century directly influenced African conservation policies in the early 20th century. In both cases, governments took control of forestry, fisheries and wildlife conservation. The first challenge to governmental control of wildlife came about in the United States in the late 1800s, when American's resisted government ownership of wildlife. Reacting to the power European aristocracy held over game animals, Americans settled on state rather than central government regulation. All citizens of age would have the right to hunt, subject to regulations to protect wildlife from over hunting. The outcome of the ownership debate was a balance between the larger interests of the citizenry and individual rights. The balance of interests and rights saw wildlife, including the bison, wild turkey and cougar, recover from over-hunting.

The tussle over who owns natural resources is playing out in Africa today, as state power weakens with the spread of civil rights. Oddly, when it comes to wildlife, most African governments resist devolving user-rights to communities even as they grant greater privileges to private landowners. Surely African governments should champion local involvement, given a better legacy of coexistence than elsewhere in the world? In large measure, the reluctance to cede local user rights stems from the income governments and commercial operators generate from wildlife on community lands. Several powerful European and American animal rights groups also resist local user rights by lobbying governments in the international media and donating large grants.

The upshot of the stalled user rights is that continued open-access gives legitimate land users no assurance of reaping the benefits of any conservation investment they make, leaving wildlife vulnerable to poaching and corruption. Civil rights and resource rights must be allied for the investment in wildlife to take hold at a community level.

Missing from many reviews of community-based conservation is mention of the rapid population growth driving land shortage, poverty, inequality and conflict with wildlife. Kenya's population is five times 1940s levels. Livestock holdings among pastoralist have fallen from fifteen per capita to five in southern Kenya. The faltering subsistence economies cast millions of pastoralists into the fringes of the market economy. Wildlife adds to their poverty and hardship because it no longer has any value for them.

The political tussles over ownership and user rights, added to growing land pressures, are fed by yet another threat to wildlife—the subdivision of the open lands for settlement. Rural communities want subdivision of the open commons to privatize and develop their lands, ward off land grabbers and keep out wildlife. Add to these national threats the rising global impact on biodiversity caused by free-trade agreements that ignore the social and environmental costs--and the impact of climate change--and the case for rethinking wildlife and how best to conserve it is clear.

The first step in rethinking wildlife is to forge a common cause for the conservation of natural resources and land health. Wildlife will find wide support if it is seen as part of the common conservation practices of all peoples, rather than a special interest of a privileged few. The root of conservation everywhere lies in preserving water, soils and genomes that sustain farming and herding, and in forestry, fisheries and wildlife practices that maximize and sustain productivity.

In keeping with its common conservation roots, wildlife was once valued as "second cattle" in traditional African societies. As second cattle, wildlife provided meat, hides and medicine and buffered communities from famine and from crop and livestock diseases. Ironically, government annexation of communal wildlife rights, leading to the rise of the tourism and sport hunting industry, has raised the value of wildlife many fold but largely stripped its value to local communities.

Redressing the imbalance by revaluing wildlife locally will allow it to find a place alongside other land uses and resource conservation practices. Correcting the political and market distortions will also open the scope for wildlife conservation far beyond the limitations of national parks. The wider conservation scope will in turn boost the capacity of wildlife industry several fold to the benefit of landowners, commercial operators and governments alike.

Though essential, correcting the distortions in wildlife policies only unlocks the door to community participation. It does not open it. Local communities need the skills to take advantage of more liberal policies. How much wildlife survives in East Africa, inside and outside national parks,

comes down to how fast land users acquire the skills to build successful wildlife enterprises. Governments, NGOs, the commercial sector and donors can do most for conservation by speeding up local capacity and partnering local endeavors.

The second step in rethinking wildlife is to expand conservation goals and policies to embrace all life, not the large and charismatic species alone. By expanding wildlife policies to include the diversity of plant and animal life, it links them to the global agenda of conserving biodiversity. Sustainable development and human well-being depends on conserving the ecological and planetary processes rooted in plant and animal life. Conserving biodiversity for our own well-being therefore connects global conservation to its ancient local roots. It also recreates the tight links between our actions and consequences severed by globalization. And the more we value biological diversity for human well-being, the more we strengthen the case for conserving wildlife too.

So what should we do with the word wildlife, given its political baggage and the need broaden conservation policies to include all forms of life?

I must admit that my first inclination was to dump the word wildlife and replace it with biodiversity. On second thoughts, that would be a bigger loss than gain for Africa--if we can correct the distortions our wildlife policies created.

Wildlife is as distinctive a cultural heritage to Africa as its cathedrals and castles are to Europe and its Grand Canyon and Yosemite are to America. The East African savanna and its teeming herds of wildlife is the birthplace of humankind. Unlike crops and livestock that are more valuable domesticated than wild, our wildlife is more valuable wild than domesticated. Wildlife, by staying wild, will become far more valuable in future. East Africa's savannas have little arable potential. In contrast, as the cradle of humankind, along with its wildlife and pastoralism, the savannas have enormous heritage and touristic value. And, as 3,000 years of joint use of the land show, wildlife and livestock can coexist and redouble the value of the savannas.

Keeping wildlife wild comes down to new liberal policies aimed at local conservation enterprises and joint private-government partnerships. However, to avoid the welter of private interests that carve up the large open spaces wildlife needs, liberalization must be accompanied by governance structures that encourage collaboration through large, land user associations and feedback linkages.

Voluntary land user associations have emerged throughout eastern and southern Africa and around the world in the last two decades. Many, as in Namibia's 53 community-based conservancies, track and monitoring their wildlife herds and natural resources and reach agreements on larger scale, longer term conservation measures. Such strong clear ties and good management ensure that the benefits of collective action outweigh individual interests and curb corruption.

Locally-based conservation does not mean that governments should quit the wildlife business and leave it to farmers and herders. Rather, the role of government must change from the paternalistic, monopolistic and coercive to enabling and supportive. This calls for good policies braced by government action to reinforce local initiatives through oversight, regulation and enforcement.

Governments also have a role to play in encouraging the integrated planning needed to keep lands open and wildlife moving freely. Governments must also protect weak and vulnerable wildlife-rich communities from the greed and corruption of the political elite and exploitative commercial operators. In most respects, the role of government in conservation will inevitably become smaller and supportive as local initiatives take root. In one respect government will becomes integrative and more central. Government must bridge disparate interests to provide a common framework for conserving biodiversity in perpetuity. Kenya has taken a step towards establishing a

Minimum Viable Conservation Area framework, based on a comprehensive mapping of biodiversity, land use and projected climate change. The role of government is also important in promoting and marketing East Africa's unique wildlife and cultural heritage.

Elements of liberalized conservation policies are emerging within Africa, but all too slowly to change decades of antipathy towards wildlife. Government policy is far too restrictive and local voices far too weak for the future of wildlife to be secure. Nothing makes the conservation divide more apparent in eastern Africa than the greater sway international bodies have over wildlife matters than local land users. Democracy is still in short supply when it comes to East Africa's wildlife, and until that changes, it will continue to be seen as foreign and treated as such. Wildlife ownership must be repatriated to the land users who conserve it. So too must the economic value of wildlife. Forty years after independence, African nationals are still minor players in virtually all wildlife industries, from tourism and hunting to conservation. Local communities are all but invisible when it comes to a share of the national income from wildlife.

Wildlife policies must broaden to face up to the challenges of globalization and how to recapture the ability of humans and biodiversity to coexist. Here again, we can learn a thing or two from traditional African communities.

The Maasai of Kenya and Tanzania show that coexistence is possible even with big and dangerous animals, and highlight the give and take it involves. Our most famous national parks, Serengeti, Mara, Amboseli, Manyara, Samburu and many others were carved out of Maasai lands because they were so rich in wildlife. The ability of Maasai to live with wild animals comes down the varied ways in which they see and deal with each species, rather than treating wildlife as a whole. Some animals like the lion are killed or driven off if they raid Maasai herds. Killing stock-raiding lions is virtuous and honored. For its part, the lion has learned to fear the Maasai and live among them by avoidance. The buffalo is dangerous too, but in droughts is treated as a wild cow and eaten by herders to tide them over. The mobility of the Maasai over large open spaces keeps down conflict and the benefits wildlife brings makes living with wildlife tolerable and worthwhile.

In an odd twist, broadening wildlife policy to biodiversity brings home the problems land users have living with wildlife that town dwellers all over the world already readily appreciate. For town dwellers, cockroaches, mosquitoes, rats and snakes are treated as vermin and destroyed by householders because they eat their food or threaten their lives. Sunbirds are seen as harmless and beautify urban gardens. My point is that all peoples distinguish animals and plants on the basis of their likes and dislikes, fears and beliefs. So why expect land users living with far bigger and more dangerous wildlife to behave any differently? Surely they have even more reason than town dwellers to distinguish useful from harmful species and likeable from abhorrent ones?

Wildlife is among Africa's greatest natural assets. We must correct the distortions created by wildlife preservation, broaden conservation policies to cover biodiversity and rediscover coexistence for wildlife to become a local and global asset.

Special Chapter 2 The Genealogy of the Human–Nature Nexus

Itsuhiro Hazama

Each paper in this anthology is based on a presentation delivered at a workshop held at the Japanese Embassy in Nairobi, Kenya on August 7, 2008. Wildlife conservation, including the conservation ecology of mammals, has long been considered to primarily represent a subset of the natural sciences. Biologists focusing on the natural sciences argue that truly effective and scientifically grounded conservation is possible only based upon a body of knowledge and research about the behaviors and societies of animal and plant species. Indeed, biologists have provided examples that ostensibly validate their argument on this critical point. The accumulation of detailed conservation-ecology field research will enable humans to develop plans for land usage that provide appropriate space for animal habitats and prevent unreasonable extermination (Uresk et al., 1982). Although this anthology revolves around wildlife conservation, with a clear focus on the nexus between human community and nature in Africa, we also seek to examine this issue from the perspective of human behavior and desire more than through the framework of research on animal and plant behaviors and societies.

Posters for this workshop expressed its position on wildlife conservation as follows: Wildlife conservation in Africa is one of today's hottest issues. There is increasing alarm about the destruction of nature, and voices are being raised in defense of conservation. However, what do we mean by "wildlife" and "conservation?" Wildlife seems to have so many regional meanings that it cannot simply represent the universal target of conservation. This workshop will reconceptualize wildlife conservation in order to find a definition of conservation that resonates with local inhabitants. The workshop titled "The Reconceptualization of Wildlife Conservation: Toward Reasonable Actions for Local Living" presented the understanding of this issue expressed in the promotional poster. Almost all contributors to this anthology begin their discussions with the recognition that the survival of local inhabitants and villagers living adjacent to wilderness areas seems to be contrary to both wildlife preservation and to the goal of serving as representatives in the service of conserving wildlife. In this chapter, I will briefly discuss the possibility for a human–nature nexus rather than a human–nature disconnection. More specifically, I will address the question of whether the possibility of humans living in transparent intercourse with other plant and animal populations is illusory.

Junzo Kawada (2007), a cultural anthropologist who focuses on positioning the role of humans in nature, follows in the tradition of Levi-Strauss's problem consciousness. In the following ruminations, which resulted from his quest for an interspecies ethic, Kawada classified four fundamental schools of thought about humans in nature:

(1) Natural Historical Non-Anthropocentrism: This is the conscious attitude that human

beings are no more than another type of animal, and that humans began to exist in nature without consciousness or intentions. Humans are a "passive entity" in nature, according to Levi-Strauss' writings; the world began without human beings and will end without human beings [e.g., Greater Vehicle Buddhism].

(2) Naturalistic Anthropocentrism: This view holds that it is natural for human beings to live anthropocentrically, which includes domesticating or killing other animals for human survival, and that we understand this necessity from a common-sense perspective [e.g., commonsensical materialism].

(3) The Genesis Paradigm: The philosophy that posits an almighty God who created human beings in God's image (Imago Dei), whereas other plants and animals exist for human domination [e.g., monotheistic religion].

(4) The Image of the World as the Sea of Lives: This attitude personifies things and animals or identifies nonhumans as human by metaphorical projection; that is, people act for, pray for, and making offerings to animals and things [e.g., animism].

In this volume, we will explore any variation on the human–nature nexus that enables humans to coexist with animals and plants as indispensable partners, and we will examine the four philosophical models individually.

It is has been well established that, among these four models, both reductionism (2), known popularly as materialism, and anthropocentric classic rationalism (3) view all living species as existing for human use. This type of thinking has emerged as an epiphenomenon of modernity, which has alienated humans from nature over the course of time. Therefore, these two models are clearly inadequate for establishing an even ground on which humans and nature can stand together, at least for the present.

Personification (4) might appear to be the only theoretical model that can provide a foundation for a human–nature nexus. However, personification, like anthropomorphism, is merely another rhetorical device for expressing the movement of a "thing" in the language ordinarily reserved for humans, thereby still dividing the world into things and people. For example, suggestions that "pastoralists talk with cattle" and "pigmies listen to the forest's voice" portray these actions in terms of a personification of plants and animals or reflect their origins in rhetorical or histrionic anthropomorphization. Using theoretical devices such as personification and anthropomorphism produces, by definition, rhetoric; it describes, in human language, the movement of a thing within a world that has been divided into two mutually exclusive categories. Thus, this mutually exclusive division necessarily precludes any possibility for humans' living in transparent intercourse with nature.

According to Kawada, natural historical non-anthropocentrism (1) seems to hold the greatest potential in this regard. In his analysis of a tale about vegetarianism written by a "Greater Vehicle Buddhist" poet, Kawada interpreted this story as carrying a meaning quite different from that of the Genesis paradigm. Kawada wrote that "humans must be pleased to be killed by plants and animals," continued with the opinion that this thought is "too religious," and concluded that "anthropocentrism cannot be avoided, because it is human beings who think." Kawada then rejected these models after concluding that there is much to learn from the knowledge of hunter-gatherers. The adoption of cultivation and pastoralism by humans as a means of food production has led to the current global environmental crisis insofar as this development has been driven by humanity's ever-increasing

desires for productivity ("more!"), efficiency ("faster!"), and ease ("easier!"). Irrespective of this background, however, I will identify the original sources of the models in order to find the elusive key to transparent intercourse between humans and nature.

With regard to naturalistic anthropocentrism (2), Karl Marx (1844) developed his theory of communism as the foundation for a movement to recognize that the understanding of a unified relationship between humans and their objective world has been sublated to one that views this relationship exclusively in terms of property. Marx wrote about "community" within the context of recovering "humanity as a natural existence," and developed his theory about ideal relationships between humans and nature. Marx's paper about the contextualization of natural connections as the ideal form of communism can be summarized as follows (Maki 1976):

- Sublation (Aufheben) of private property is the philosophy that human beings sensitively manage the world as theirs; it is a world for human beings, by human beings. However, this idea should not be understood to be a simple, direct, one-sided means of enjoyment. Sublation must not be viewed as meaning either appropriation or possession. Human beings, each one a complete individual human being, make their total essence theirs in a complete way. Any humanistic relationship with the world, such as the acts of seeing, hearing, smelling, tasting, touching, thinking, guessing, intuiting, feeling, wanting, acting, and loving, is, in short, an expression of human individuality in action, the making of acquisition in an objective world.
- Private property has made us so foolish and monochromatic that we have come to suppose that no object comes to be ours until we possess that object.

A review of the overall structure of Marx's writings on communism demonstrates that he scorned any simple understanding of communism as involving mere measurements of equality in private or public property. That is, the rudimentary framework of communism imagines the emancipation of human sense and its particularity. The point of a relationship between nature and human beings is not about human possession and domination. Rather, the point is how, in these human–nature nexuses, we can obtain productive satisfaction and achieve fresh inspiration. Materialism that is based on this sort of relationship between humans and the objective world involves construction of a split self, enabling intercourse with the universe. This explains Kawada's careful use of the term "commonsensical" materialism to connote materialism within the narrow sense of naturalistic anthropocentrism (2).

Three of the four theoretical classifications named above are based on religious belief systems. However, these models cannot include all religious views on desire. Indeed, the question for religion involves the basis for desiring a true belief. Once excessive idealizing is removed, the simplest definition of religion, or the "proto-religious" dimension, involves a continuous desire for connectedness among the self, others, and the universe. Put simply, I am speaking of the desire to reach communal conviviality (con-vivere) with others and the greater universe. Within this definition, no concrete conception of God or images of Buddhist or other supernatural existences are necessary. Although humans construct their desires for transparent intercourse with the universe, the excessive images and conceptions within such constructions evolve as humans become conscious of their original desires and able to verbalize them. Furthermore, human desire at the level of proto-religion represents a yearning for some level of co-vibration among the self, others, and the universe. Humans experience these phenomena as different entities, as reflected in the split embedded within the

original meaning of materialism.

Descartes' famous statement, as translated into English, reads, "I think, therefore I am." This is a fallacious assumption in any debate. The social anthropological importance lies not in the fallacy itself; rather, it lies in the disappearance of skepticism, even by Descartes, a complete skeptic. According to one construction of the world, the phenomenon of "I" represents the most remarkably self-evident entity, eclipsing other entities such as others, the world, and nature. Within any modernized society, the sensibilities of people have manifested in a direction that uses others as materials or means devoid of intrinsic worth.

Fishermen and "citizens" reported their observations about fish, cats, and claws to administrative officers and the agrochemical pesticide-producing company in Japan's Minamata City (Ishimure 1969: Ui 1971). Minamata fishermen raised their voices to say that "in Tsukino-ura creek, fish are swimming upside down, and cats die dancing" several years before the Minamata mercury poisoning outbreak was discovered in 1956. Administrative officers and the agrochemical pesticide-producing company in the region neither heard these human outcries nor saw the changes in the behaviors of fish and cats. Flight from nature deprives humans of a common baseline for sharing feelings; flight from nature results in a loss of that sensibility intended to resonate with fellow creatures. Deliberations about the possibility of a human–nature nexus never fail to encounter those holding only the human–human connection.

On the other hand, specific anthropological and sociological studies gathering detailed data about daily life within human-natural societies dependent on natural settings for their survival have revealed that people in such societies develop an intrinsic sense of connection with numerous others that is indispensable for coexisting in a world of which each individual is just one part. It has been reported, for example, that when people of northern and southern American native societies came into contact with white people, those natives were more surprised to see white colonists trampling plants without hesitation than they were to observe other differences, such as language or skin color (Levi-Strauss 1962; Kroeber 1964). Dwellers in natural societies may be conscious of their interests, such as subscribing to a theory about the long-term conservation of natural resources, but they also possess a sensibility that holds animals and plants to be partners in conviviality. In addition, such societies refuse to see humans as absolutely privileged above nature; instead, villagers living in the bush view natural fecundity as providing for their natural daily necessities.

It is in this very place where the diversity of wildlife has been relatively conserved. For example, in Africa, as David Western indicates in an exceptional essay in this volume, wildlife in the sense of big charismatic animals has disappeared, as it has throughout most of the world, especially as a result of the process of modernization. It may be more important, however, to note the differences among local people living in the bush in regard to their qualitative reasoning than to ask whether such people are irrational or rational.

Although wildlife conservation in Africa is being taken seriously, it is important to notice at the outset that wildlife extermination first began in corners of the world beyond Africa. Against this background, the modern world has come with a high price tag: both a loss of sensibility and a virtually complete flight from nature. This has resulted in slowly or rapidly depriving wildlife of their lives. Above all, the rich practices of people living in the bush around the world should be studied and reintroduced. This will begin the process of reversing the modern transformation of the

human–nature nexus into mere commodification.

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