TRADITIONAL FOREST USE AND INSTITUTIONAL CHANGE: CASE STUDY OF LOITA COMMUNITY FOREST, NAROK SOUTH DISTRICT, KENYA

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Abstract

Traditional forest use and governance have been practiced among pastoralist communities for some decades now. Traditional forest governance is practiced in forests, which are owned by homogeneous communities such as Maasai of Kenya. The Maasai community lives adjacent to Loita forest in Narok South district and Mukogodo forest in Laikipia district of Kenya. This paper focuses on the Maasai community living adjacent to the Loita forest whom since time immemorial has relied on the forest for their livelihoods. They use the forest for initiation, as a shrine and livestock grazing. Historically, entry into the forest was subject to permission from the Oloibon (a traditional community leader) but with time, this responsibility has since been transferred to Village Elders. The forest governance structure was therefore based on the traditional leadership. The objective of the study was to analyze how the Loita Maasai community used to control the use of the forest resource and document how the community governance structure has changed over time. The study also looked at how the change from traditional to modern lifestyle has affected the management of the Loita forest.

Household survey and participatory rural appraisal tools were used to collect data from households living within five Kilometers from the edge of the forest. Analysis of the data was done using a SPSS program. Findings from the study were presented using simple statistics that indicated that traditional forest use and institutional changes have a significant effect on the condition of the forest. Findings further showed that despite the tough rules governing the utilization of the forest, institutional change coupled with change in lifestyle from pastoralism to sedentary is likely to have negative effects on the condition of the forest.

1. INTRODUCTION

According to Willy and Mbaya (2000), land in Kenya falls into three tenure regimes: government land (13.3%), freehold/leasehold (12.9%) and customary in Trust land (73.8 %,). Wass (1995) divides forests into Gazetted Forest Reserves comprising of 1.64 million hectares, of which 1.22 million hectares are closed canopy forests. The closed canopy forests comprise of 1.22 million hectares of indigenous forests and 0.16 million hectares of plantation forests. A further 0.18 million hectares of indigenous forests are located outside the gazetted forest areas. Kenya's forests are significant in terms of their contribution to the national economy and their provision of direct and indirect environmental benefits such as catchments protection, energy, as an important source of food (plant and animal), employment, medicine and other non wood forest products (Draft Forest Policy, 2007). Forests are valuable for cultural and religious purposes as they contain sacred sites whereas others contain plant and animal species used in rituals.

The land known as Loita lies between the Nguruman- Magadi escarpment and the Maasai Mara National Game Reserve. It is an area of 1700 square kilometers within Narok County in Southwestern part of Kenya. The Loita land encompasses a variety of ecosystems and rises to an average altitude of 2300 meters above sea level. The area is predominantly semi arid with extensive grasslands to the west. The Loita /Purko Naimina Enkiyio forest is estimated to cover an area of 330 square kilometers. It covers part of the land used by the Maasai community whose ancestral lands straddle the border with Tanzania and is one of the few non- gazetted trustland indigenous forests in Kenya. The forest can be classified as a "dry upland forest". The forest supports a variety of large mammals, and a rich bird life. It has great cultural and spiritual value to the local communities, especially the Loita Maasai (Maundu, 2001).

The forest is the main water-catchment area in the region. It receives between 600 and 1,200 mm of rain per year (the surrounding area receives between 600-700 mm in good years). The forest is the source of several tributaries of the Ewaso Nyiro River. The value of its water catchment protection services alone is estimated at Kshs 105 million ($US 1.3m) per year (Wass, 1995)

The Naimina Enkiyio forest is the main resource of the Loita Maasai. The Narok County Council holds all land in Loita in trust for the local community. In the 1970s, the Maasai community resisted government attempts to demarcate the area and issue individual title deeds (Pimbertt 2000)

1.1 The Loita Maasai

The Loita Maasai remains the most traditional of the Maasai communities. They

are physically and culturally unreachable because their home range is remote, lacks the most basic infrastructure and is often simply inaccessible (Kaunga and Karbolo, 2006). More importantly, the Loita Maasai have their traditional institutions of governance that are still functional. They have organized themselves in age sets as well as in clan systems and form the largest concentration of Laibon (Maasai diviners and seers) of all the Maasai sub tribes. The lineage of the Senteu, the famous seer is found among the Loita Maasai. Thus although a numerical and political minority in Narok compared to their powerful and well placed neighbours, the Purko Maasai, the Loita Maasai have better strategies for advocating and influencing decisions at the district level.

The local Loita Maasai community uses the forest for many cultural ceremonies, including

- *Emowuo Olkiteng*: the beginning of a new age group. This is when boys begin their rite of passage as young adults marked by initiation rites. This particular ceremony is conducted at a place known as Oloitokitok near Olng'arua, which is a permanent spring source;
- *Enkitainoto Olorrip Olasar lolporror*: the chosen spiritual leader of the new age group, *Olorrip Olasar*, accompanied by one *Olpiron* elder, spends the whole night awake standing motionless under a sacred tree deep within theforest known only to *Olpiron* elders
- *Emayian oo Nkituak (Olmal):* periodically the Maasai women are blessed and cleansed to enhance their fertility under sacred trees in the forest. *Oltukai* (*Phoenix reclinata*) and *Sinante* (*Podocarpus falcatus*) twigs are used to signify sanctification; and
- *Ilpuli*: morans indulge in secluded meat feasts deep within the forest to convalesce and restore their strength, commune with their Deity, develop group dynamics and brotherliness.

Other than the great spiritual significance of the forest to the Loita community, the forest also acts as a source for herbal and traditional medicines, dry season grazing, honey (collected by the local *Iltorrobo*), fruits, etc.
Sources: Rerente, O. (1993); Mol, F. (1977); Maundu et al, (2001); LNECTC (1994); and Kassagam, J & Goosens, H (1998).

2. Methodology

2.1 Study area

The Loita Forest also known as the Naimina-Enkiyio, “forest of the lost child” in Maasai is one of the remnants indigenous forests left in Kenya and stretches majestically over a range of hills that rise up from the bottom of the Rift Valley (reaching 2300 m above sea level). The forest is found in the Narok County, an isolated area of Maasai-land in Southwest Kenya. It lies along the Kenya/ Tanzania border, between the famous Maasai Mara National Game Reserve and the Great Rift Valley. It therefore forms part of the larger Maasai Mara/ Serengeti/ Ngorongoro ecosystem. The forest contains open grazing areas and a large swamp with springs and rivers (fig 1).

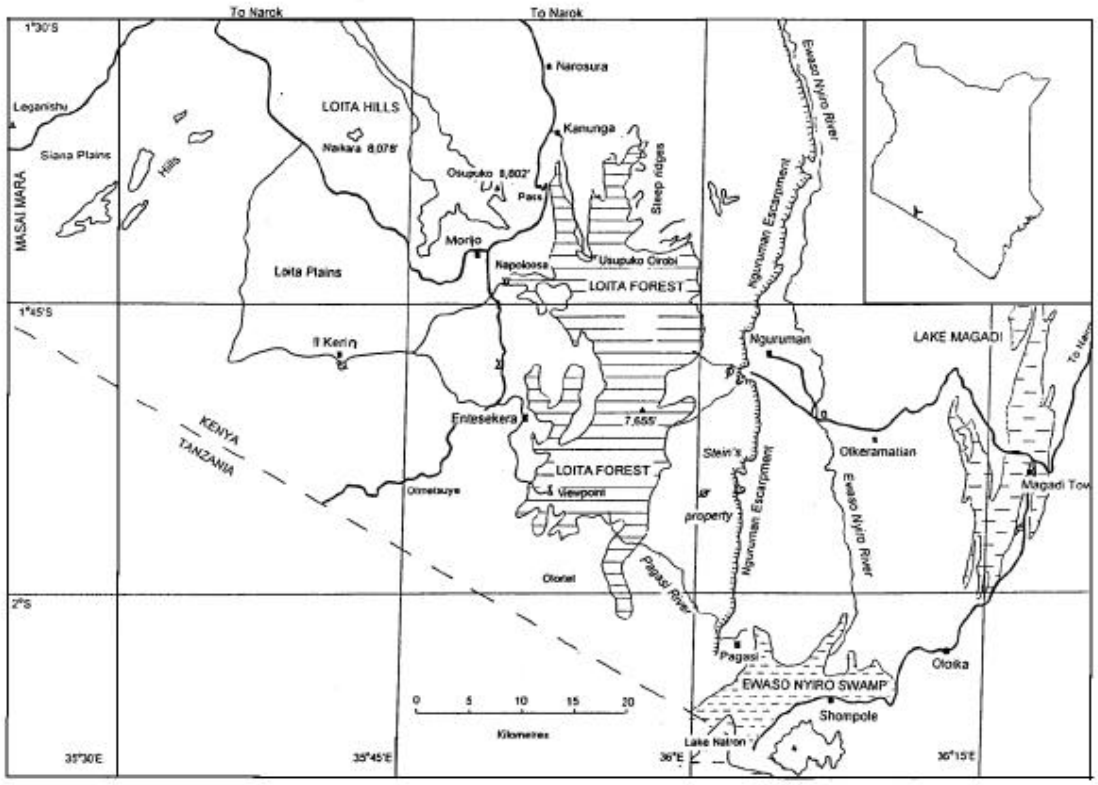

Fig 1: Location of Loita forest (adapted from Shelly & Lempaka, 1999).

2.3 Data collection

Focus group discussions, Key informant interviews and household surveys were the main methods used for collecting data. During household surveys, a standardized set of questions were used to inquire how the families (manyattas) used the forest resources around them. The focus group discussions were used to find out in details the traditional ways the manyattas used to exploit the forest. This tool was also used to carry out trend analysis so as to get changes in forest management, forest use and threats which the people thought would be brought about by these changes. Key informant interviews were done through discussions with individuals who had adequate knowledge about the forest. In depth analysis of major events that had occured in the forest and the community were also done.

3. Results and Discussions

3.1 Tree Species used in Ceremonies

The community uses the forest for different purposes**.** The main uses of Loita forest to the community is a source of water catchment, dry season grazing area, for extraction of building materials like poles, for cultural and spiritual uses including cultural ceremonies like rites of passage, choosing spiritual leaders, and fertility blessings for the women. It is also used for medicine extraction, edible fruits and seeds, honey, poles and tourism. (Kårehed, J. & Odhult, E. 1997)

Ceremonies are an important part of Maasai life and take place for significant life cycle events such as naming and circumcision, as well as being used to fight disease, to combat infertility, for blessings and to settle disputes. The ceremonies can be short or long, sometimes lasting several weeks. In this category are plants associated with all forms of traditional ceremonies and rituals.. The *oloiboni*, the spiritual leader uses a variety of plants to make charms for cursing, bewitching or treating people. Table 1 shows the main ceremonial plants used by the Loita Maasais.

Table 1: Trees and their ceremonial uses

Tree Species	Major Ceremonial Use
Olea europaea ssp. *africana*	All ceremonies as it is believed to bring good luck
Ficus thonningii and *Ficus cordata*	Blessing of women
Olea capensis	Initiating the *olorip-olasar*
Cordia monoica	Settlement of disputes
Lantana trifolia	Rituals involving livestock

3.2 Plants used for food

3.2.1 Edible inner bark

Some plants, particularly *Acacia* spp., are chewed for their sweet taste, their water content, as an exercise for the jaws and to pass time. The bark is removed and the inner light-coloured thin layer is chewed.

3.2.2 Infusion

The stem and root bark of a number of species is used to prepare a brown tea-like infusion. Sugar and milk may be added. From some plants, such as *Zanthoxylum usambarense*, the fruits and the leaves are used. In the majority of cases, these infusions serve the dual purpose of a drink and medicine, which may either be curative or preventive. Most of them are nice smelling.

3.2.3 Gums and Resins for chewing

In this category are species that exude substances which are sucked. Many are almost tasteless but are sucked just to exercise the mouth and to pass time. Resins are mainly obtained from *Commiphora* spp. and gums from *Acacia* spp. The latex from *Acokanthera* spp. (otherwise known as the source of arrow poison) and *Carissa edulis* can be made into chewing gum for children.

3.2.4 Fermentation of beer

The roots of various *Aloe* species (*osuguroi*), fig 2 are dug up, cleaned, and used during fermentation of beer. This is in contrast with many Bantu communities who use the fruits of the sausage tree, *Kigelia africana* (Bignoniaceae), for fermentation. Once prepared, the roots are spongy and have characteristics similar to those of the sausage tree fruit. After every preparation, the roots are dried and kept for the next one. Preparation of beer is done in large containers made from the fruit of the gourd (*Lagenaria siceraria*) with its contents removed. The beer is served in smaller gourds, from which several people may drink.

Fig 2: *Aloe volkensii* (*olsuguroi*) plant

3.2.5 Edible fruits

Although consumed as snacks, fruits constitute a major part of the food ingested by children and women looking after cattle as well as morans in the wilderness. The five most preferred fruits are *Carissa edulis* (*olamuriaki*); *Vangueria apiculata* (*olgum*); *Pappea capensis* (*oltimigomi*, *orkisikong'o*); *Syzygium cordatum* (*olairagai*); and, *Flacourtia indica* (*oldongururwo*). Other commonly used fruits include *Rhus natalensis* (*olmisigiyioi*); *Scutia myrtina* (*osanangurut*); *Cordia monoica* (*oseki*); and, *Grewia similis* (*olnyalugwai*)

3.3 Plants used as firewood

A great number of species (table 2), can be used as firewood. However, tradition requires a woman to use wild olive, *Olea africana* ssp. *europaea* (*oloirien*). A woman who uses olive for firewood endears herself to the husband and gains respect from him and the society. *Olea* is preferred for its characteristics: the wood burns brightly, thus providing lighting for the usually dark Maasai houses; it imparts a characteristic good scent to the house, masking or obliterating the smell of dung which is used for plastering the houses; unlike many other firewood species, *Olea* burns with relatively little smoke, a necessary quality for such houses which are completely enclosed and therefore poorly ventilated; *Olea* burns readily even when fresh as though it contains oil.

Table 2: Ranking firewood species (1- highest; 8- lowest)

Species (Local names.)	Most used	Preference	Availability (Ilkerin project, Loita forest)	Availability (Entasekera, Loita forest)
Oloirien	1	1	7	1
Oleleshua	2	2	3	3
Oloisuki	3	3	4	5
Oliala	4	4	5	7
Olgilai	5	5	8	4
Oldardar	6	6	6	8
Olerai	7	7	1	6
Olmisigiyioi	8	8	2	2

3.4 Medicinal plants

The importance of medicinal plants among the Maasai can be seen in the name, *olchani*, which is used both as a general name for all plants as well as for medicine. The common diseases in Loita are ‘malaria’ fever, brucellosis, gastro-intestinal problems and infections of the urinary tract. This is confirmed by the large number of species used in each of these categories (table 3). Some species are used for treatment of more than one disease;

Table 3: Plants with several medicinal uses

Maasai Name	Botanical Name	No. of diseases cured
Osonkoi	Warburgia Salutaris	9
Oloisuki	Zanthoxylum Usambarense	8
Oloirien	Olea europaea ssp.african	5
Olesayiet	Withania somnifera	5
Olmakutukut	Clerodendrum myricoides	4
Olkinyei	Euclea divinorum	4
Olmagirigirinyani	Lantana trifolia	4
Olkiloriti	Acacia nilotica	3
Olekidongo	Achyranthes aspera	3
Olamuriaki	Carissa edulis	3
Olkurukuriet	Gardenia Volkensii	3
Olaimurumyai	Maytenus heterophylla	3
Oloile	Sarcostemma viminale	3

3.5 Tree Species used in Dye production

The use of dye is restricted to only a few applications, the majority being children dying their lips or toys. *Acacia nilotica* (*olkiloriti*) is however used to dye leather. Other items that are dyed include knife sheaths and handles, quivers and shields.

3.6 Tree species used in production of Arrow poison

Arrow poison is made from *Acokanthera schimperi*. All parts of the plant can be used. Stems, roots, or even leaves, are put in a large container, filled with water and boiled for up to 10 hours in a secluded area. Additional water is added in case the water evaporates before this time period is attained. Once all the water has evaporated, a thick sticky black substance is left in the container. The plant parts are discarded. This substance is then cut into pieces, put into containers or wrapped and stored away from people. Arrow poison is applied on arrow tips. The arrows are used for hunting and for self defense. Once introduced into the blood system the poison can kill in 20 minutes. The hunter gatherers who lived in Loita Forest were known for their expertise in poison-making and hunting, using poisoned arrows.

3.7 Management of Loita forest

The management of Loita forest can be analyzed from two perspectives, the formal state management and the customary management. The formal state management refers to the management of the forest according to the laws of the government (de jure); while the customary management refers to management using indigenous institutions (de facto) of the Loita Maasai. The Loita Maasai have always believed that they own and have rights to the forest and have

managed it responsibly since time immemorial. Karanja et al (2002) asserts that this has been done through their traditions, culture and unwritten customary laws.

The Loita community with the help of the Oloibon has traditionally managed the forest. The Oloibon is the spiritual leader among the Maasai. The formal decision making regarding forest management is done through the custodianship of the Oloibon and has been delegated to the environment committee. This committee is represented in all villages. Development activities in Loita landscape must pass through the Oloibon for approval. Each village provides 2 representatives. The committee is composed of elders and youths (morans) who are sent on errands.

The current management system in Loita (whereby the community is the forest owner and fully in-charge of management) is not recognised by the draft Forest Policy and Forest Act 2005 and management approaches in the country. In order to confirm to the two documents, the Environmental committee's responsibilities are to ensure that:

- The forest is conserved.
- Water catchment areas are identified and protected
- Community indigenous knowledge on forest is preserved
- All forest issues are approved and executed as planned.
- The committee remains cohesive
- All information is communicated to all members of the community
- The needs of all members are addressed especially women
- Youth who patrol do the work as expected
- Poachers are warned before punishment
- Errant members are de-registered out of groups.

Together with the chief and the Pastoral Community Development Association (PCDA), the environment committee is also responsible for negotiations on the forest and general development in the area with the outside world. The Environment Committee has incorporated the politicians and the provincial administration.

3.7.1 Forest Rules used by the Laibon

Currently the Laibon is increasingly relying on the youth, local councilors and the chiefs in the management of the forest. This is arising from challenges of modern socioeconomic issues and declining capacity of the Laibon. The key rules are:

- People should not destroy the forest through their activities
- Respect taboos against cutting down trees and believe that there is a curse for people who cut trees

- Fining the culprit a fine in form of money, which is used in public development of the society or making the culprit slaughter a cow which is almost about to calf

The committee has no direct relationship with forest service, although it is recognized through a court injunction. The rules are not documented but are passed down from generation to generation. Meetings are held based on the Oloibon institution whose agenda and frequency is determined by the council of elders. They determine the rules and how they will be applied (like where and when grazing should be done, when and where to cut poles, settlement areas etc) and costs sharing among members. The institution has to ward off a lot of political influence within and outside Loita like from the Purko Maasai clans wanted the forest gazetted and made into a nature reserve.

3.7.2 Managing conflicts among Users of the forest

There have been cases where the community has expressed concerns that the forest is under attack by other stakeholders who want to take control of the forest. There are several actors involved in policy decisions and actions surrounding Loita forest. Traditional leaders, NGO staff, appointed government officers and elected leaders have in various constellations grouped themselves in higher-level institutions: Narok County Council (NCC) and the group of Concerned Loita Citizens (CLC) on the one hand, the Loita Council of Elders (LCE) related to the Ilkerin Loita Integral Development Project (ILIDP) on the other. The most influential of these groups is the Loita Council of Elders, established in the past by ILIDP. They currently control how the forest is used. In addition, ILIDP aims to improve education, livestock and agriculture production, and help the local communities adapt to the economic, political and cultural changes in the region Kaunga, J. and Karbolo, M. 2006) ().

The conflict began in the late 1890's, when government officials and the then Councilor of Loita conspired to gazette the Loita forest into a National park to profit from tourism revenues. When the ILIDP learnt of this, they contacted the Loita Council of Elders. Although these two groups recognized the Narok County Council, represented by the Loita Councilor, as having the formal authority to decide on the future of the land based on a 'bureaucratic-development' model of interference, they felt that they had to save their right to use the land. The Loita Council of Elders arranged to meet with the Minister for the Environment, who they convinced that the forest should remain accessible to the Loita Maasai. The next step was to establish a legal entity representing the local people, which was difficult as not all the residents supported the Council of Elders. A trust was set up to finance and advance the cause of the Loita people who wished to retain control over the forest. A legal battle ensued between the elected Narok County Council and the LCE, supported by ILIDP who had organized the LCE and the trust to fund them. The ILIDP though acknowledged to have few legal rights in

the forest but exploiting the ‘indigenous-conservation’ model, gained support through their attention to the traditions and attitudes of the local community. Eventually elections took place, and the power structures in the region were altered. Competing forces in the government sidetracked the main political forces interested in tourist revenue, and when the Loita Ward was divided into 5 for maximum representation, the Loita faction succeeded in agreeing with the LCE to withdraw the case from court. Plans for a comprehensive and representative management plan were made. Currently the forest is under the ILDIP programme and they work together with the Oloibon to make sure that there is no interference in the forest.

4. Conclusion

The Loita community lives in the forest with most settlements located where the glades end and forest start. There are farms of maize and beans close to the settlements. The introduction of farming in Loita requires be studying and monitoring continuously to ensure that farming does not result in forest degradation. Local community members in Loita own and are fully responsible for the management of the forest resources and are accountable to the community. The state is not involved in any way in the management. The management system is facing challenges as the traditional Oloibon institution is weakening though there are rural development structures that are emerging. The emerging institutions require deliberate strengthening.

Mistrust between the Loita Maasai community those from outside has developed and now affects the management of the forest. In spite of the mistrust, partnerships with other stakeholders in management of the forest is inevitable and needs to be enhanced the community has several opportunities which can facilitate Participatory Forest Management (PFM) as the major option for managing Loita forest (Mbuvi et al, 2009).

Finally, the current management approach where communities are in-charge of forest management (Community Based Forest Management) is contributing to improved livelihoods and better condition of the forest. Though there is need to build capacity and put in place strategies for tackling emerging forest management challenges especially the one posed by increasing population, the Loita management scenario also confirms that communities have systems for forest management and benefits and costs distribution which can be enhanced to meet challenges of modern forest management.

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