

Linkages Between Sustainable Biodiversity and Cultural Values: A Case Study of Ramogi Hill Forest and Its Environment

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Abstract

The study investigates how Luo belief system and a more inclusive ecosystem approach contribute to sustainable biodiversity of Ramogi Hill Forest and it's environ. We adopted descriptive survey research design for this study. The target population was 6,490 comprising Luo elders, elites and youth leaders. A sample of 330 was drawn through purposive and snowball sampling techniques. A questionnaire was used to collect data through face to face interviews with informants and was analysed qualitatively. The response rate was 85% which was considered reasonable enough for statistical generalizations. Secondary data was obtained from existing literature, reports and journals based on the study area. The findings of the study show that the Luo people of Ramogi Hill believe that the earth is a self-regulating complex super organism, the ecosystem processes are linked and humans are part of the system and so humans do not exist in isolation. The study demonstrates that the biodiversity in Ramogi Hill and its environs is part of complex historical interactions among bio-physical and social-cultural systems. Protecting these areas, by isolating them, will certainly create resentments and resistance among those who cultivated these forest landscapes for generations. Therefore humanity's collective knowledge of biodiversity and its use and management resides in diversity of culture which helps to strengthen cultural integrity and values. This advocates for incorporation of indigenous knowledge and livelihoods into conservation policy. Indigenous people should not be treated as passive objects in central state dominated activities related to the use and conservation of natural resources. The study has empirically brought out the need for policymakers to incorporate cultural and religious values and indigenous knowledge in measures to maintain biodiversity and promote sustainable use of natural resources to accelerate socio-economic development.

Keywords: Kenya, Ramogi Hill, biodiversity, sustainability, conservation, preservation, spirituality

1. Introduction

1.1 Background

We were motivated to carry out this study by the observation that the Government of Kenya seems to neglect integrating traditional/indigenous beliefs, practices, teachings and knowledge systems in environmental management. The country is confronted with environmental challenges which need to be mitigated through appropriate and timely interventions. Thus, we got interested in investigating if there are linkages between sustainable biodiversity and cultural values.

Major world religions and faiths teach that God created the universe, including the earth, and gave man the responsibility of taking care of the earth. For example, according to Jewish tradition, humanity is a steward of the natural world, not its owner. Stewardship implies care for an entity that is in one's power, it does not imply exploitative use. Since humanity does not own the natural world, it cannot have unrestricted dominion over the world because the world belongs to God – creation belongs to the creator and nature is an expression of the creative power of God.

Concerned about threats to the environment, Pope John Paul II called the world to undergo ecological conversion to protect the environment and make the earth a habitable place for human life. To an audience of several thousands of people at the Vatican on 17th January 2004, he said, "Man has devastated without hesitation plains and forested valleys, polluted the waters, deformed the earth's habitats, made the air unbreathable, disturbed the hydro-ecological and atmospheric systems and turned green space into deserts." (Bakanja Mkenda, 1 April 2010)

Today, nature is seen as part and parcel of human existence. Many nations are aware that if nature dies man perishes. Thus, ecology has come to the fore as a science of relationships of living and non-living organisms in the world community. Within the ecological system, there is man who is realising more than before that upsetting the interdependence of nature is like committing suicide, if not genocide. Man and nature cease to be rivals and opponents and become one.

We selected Ramogi Hill Forest¹ and its environment for case study because it is a unique and isolated case in the wake of environmental crises; its original biodiversity is still intact despite the myriad challenges. Ramogi

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¹ A view of Ramogi Hill is given in Appendix 1.



was a famous Luo¹ ancestor and leader. He had four wives and settled on the hill after migrating from Sudan through Uganda. His original name was Lamogi -- Lamo means prayer, Mogi means worship; Lamogi means a place of prayer and worship. Thus, Ramogi Hill is a cultural and ritual residence of the Luo people. The hill is considered not only as a symbol of cultural and heritage centre of the Luo people but also as a spiritual and religious centre with several sacred sites². To date, the community uses this forest for cultural and religious practices and as a source of herbal medicine.

1.2 Location of Ramogi Hill Forest

Ramogi Hill Forest is located in Yimbo Location, Bondo District, Siaya County, on eastern shores of Lake Victoria in western Kenya. The forest lies at an altitude of 1,240 metres above sea level and comprises two adjacent hills, namely Minyenjara (200 ha) and Nyaidi (83 ha). The hill is at the edge of Lake Victoria and the confluence of rivers Yala and Nzoia before the two pour into the lake. It is surrounded by lakes Victoria, Sare, Nyamboyo and Kanyamboli. There exists the Yala Swamp which separates Ramogi Forest from the Samia Hills further to the northwest. The sacred forest covers an area of about 283 hectares (Sigu, et al). The forest is surrounded by Usigu, Oraro and Jusa settlements. Standing on the top of the hill, one has an excellent view of Lake Victoria across to Uganda. The reason why it was chosen for settlement was to enable the residents spot the enemies from far (Mhando, 2003). There are about eleven clans living around the hill comprising about 600 households having over 3000 individuals. Most of them rely on subsistence agriculture for their livelihood.

The forest was classified as a county council forest in the 1950s in the context of Swynnerton Plan³. The Siaya District Council conceded the forest's management to the national government in 1968 under a formal council resolution, to be a national forest reserve. The forest has not been gazetted despite past attempts to do so and currently stands as a community forest (Odhiambo and Odede, 2012).

The hill is home to a diversity of fauna and flora. A rapid assessment of Ramogi hill biodiversity carried out in July 1993 and June 1994 documented a total of over 100 species of plants, 12 species of mammals, four species of reptiles, three species of amphibians, and 64 species of birds (AAS, 1996). A further 22 orders of invertebrates (including a large number of insect species) were documented (Sigu, *et al*).

1.3 Objective

Our research focused on the religious and ethical approaches to sustainable biodiversity of Ramogi Hill Forest and its environment. The main objective of the research was to investigate how indigenous populations contribute to environmental conservation and sustainability by invoking cultural norms and values. The investigation was conducted in the context of Luo belief system and sustainable biodiversity of Ramogi Hill Forest and its environment. Ramogi Hill Forest was selected for this research not as a mere physical feature, but as a pre-historic site, a sacred site of the Luo community, quite telling of people's cultural values, teachings, beliefs and practices that surrounded the various sacred sites within the hill and their implication among the members of the community.

2. Methodology

We targeted three groups of informants to assist in achieving the stated objective of our study. One group was the Luo traditionalists on the basis of traditional understanding and knowledge with regard to the Luo indigenous traditional socio-religious knowledge. The second group was the Luo elite who would support our study by giving us the scholarly understanding and application of the indigenous Luo socio-religious knowledge to environmental conservation and the third group, the youth leaders, to give their contemporary attitudes towards the environment and biodiversity.

We adopted descriptive survey research design for this study. The target population was 6,490 comprising Luo elders, elites and youth leaders. A sample of 330 was drawn through purposive and snowball sampling techniques. A questionnaire was used to collect data through face to face interviews with informants and was analyzed qualitatively. The response rate was 85% which was considered reasonable enough for statistical generalizations. Secondary data was obtained from existing literature, reports and journals based on the study area. The data on Luo teachings, beliefs and practices were collected then analyzed to establish the morals transmitted through them and their implications for the community and sustainable biodiversity conservation.

Focus groups of five to seven individuals were conducted with the researcher as the moderator. This

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¹ The Luo (also called Joluo or Joramogi/Nyikwaramogi, meaning Ramogi's heirs) are an ethnic group in western Kenya, northern Uganda, and in Mara Region in northern Tanzania. They are part of a larger group of ethno-linguistically related Luo peoples who inhabit an area ranging from South Sudan, South-Western Ethiopia, Northern and Eastern Uganda, South-Western Kenya and North-Eastern Tanzania.

² A sample of the sacred sites is given in Appendix 2.

³ The Swynnerton Plan was a colonial agricultural policy that appeared as a government report in 1954 in Kenya, aiming to intensify the development of agricultural practice in the Kenya Colony. The plan was geared to expanding native Kenyan's cash crop production through improved markets and infrastructure, the distribution of appropriate inputs, and the gradual consolidation and enclosure of land holdings.



technique enabled us gather in-depth information on the Luo community's beliefs, practices, ideas and teachings. We applied two theories in our attempt to achieve the stated objective of the study. First, Richard (Richard, 1979), in his social cultural theory, argues that *among the indigenous people's teachings, beliefs and practices is a special knowledge that is used by the concerned community in environmental conservation*. This theory guided our study in examining specific indigenous religious knowledge, beliefs and practices that have influence on the environment.

The second theory known as systems theory which was advanced by Taylor (Taylor, 2015), states that "in a particular system which involves animals, human beings, flora and fauna in any particular ecological setting have an intimate relationship on how it relates to one another so as to maintain equilibrium." His hypothesis is that people's teachings, beliefs and practices in a particular eco-system are meant for preservation of the ecological organisms in that bio-system. The whole system is impaired whenever one of the relationships is disrupted. It was in light of this theory that we investigated the linkages between the traditional Luo cultural norms and values and sustainable biodiversity with particular reference to Ramogi Hill Forest and its surroundings.

3. Findings

Our study established that the Luo religious and ethical approaches had contributed immensely to sustainable biodiversity of Ramogi Hill Forest and its environment. The findings show that there are linkages between sustainable biodiversity and cultural values.

The study determined that the Luo people of Ramogi Hill and its surroundings used their environment for their spirituality in various forms. In the process of communicating their spirituality, they worshiped and deified everything below the earth, on the earth, between the earth and heaven and in the heavens. They believed that the environment was the abode of the spirits, the living dead and ancestors. The natural environment had spirits which defined the relationship between humans and nature, which is linked and is interdependent. Therefore, taboos, religious beliefs, sacred sites and totems provided a framework for defining acceptable resource use. Taken together, these traditional practices create an ecological balance which ensures rational use of animals and plants for food and other purposes. They guide the philosophy of resource utilization, conservation and environmental protection.

The findings also revealed that there were various ways of regulating the use of the environment. For example, no sharp objects were to be carried to the forest, no pregnant animal was killed by hunters, creeping animals which were considered sacred were not killed, and rare and medicinal trees were preserved by strict rules.

Furthermore, the study found that the Luo people of Ramogi Hill and its surroundings believe that the earth is a self-regulating complex super organism, the ecosystem processes are linked and humans are part of that system. So, the humans do not exist in isolation. These Luos also perceive their sacred mountains/sites as gods with human personalities. Indigenous cultures and natural phenomena were often socialized and social phenomenon was described in ecological terms. Therefore, the indigenous people should not be treated as passive objects in central state—dominated activities related to the use of natural resources and cultural preservation and conservation. However, our findings indicate that indigenous people are still generally regarded as passive objects in these matters.

Results from the study indicate that in addition to government enforced rules, the recognition of indigenous rights to forest resources management and utilization can lead to successful management practices as demonstrated by less negative impact within the sacred zone. The results underscore the strength of the local institutions associated with the sacred forest in that people tend to abide by the rules the elders prescribe. Thus, government's environmental conservation policies should be cognizant of traditional and spiritual values and practices.

The study established that indigenous knowledge was necessary for environmental conservation and preservation, the richness of cultural diversity in Ramogi Hill Forest and its surroundings was undeniable. For generations the Luo people around Ramogi Hill have lived in a natural ecosystem in which they have developed and practiced life-styles and belief systems that draw upon their deep knowledge about local plants, wildlife and ecology. Nevertheless, the local people with their knowledge are often unable to use it in modern world in which state policy overrides. Local management, scientists and development planners are, however, increasingly recognizing the importance of indigenous knowledge to biological resource management and the maintenance of biodiversity.

The concept of sacred amongst the Luo people implies something set apart, holy or revered. It is often associated with the sacred or forbidden. The main objective of the traditional management of sacred sites was to maintain their separateness or sanctity by controlling access to them. This was achieved largely through the strength of spiritual beliefs and social rules and norms. Active physical policing of sacred places by custodians has tended to be more the exception than the rule. More commonly, taboos and other religious observations have



been applied, regulating access and conduct at the sites, and threatening dire punishment from the spirit world for those who flouted the rules. These have proven fairly effective in reinforcing self-restraint among individual members of the group if a breach occurs.

Sacred natural sites have significant values in the Luo community. A sacred natural site is an important element linking nature and culture and is often an anchor for cultural identity. It can also constitute an effective means for environmental conservation as it is embedded in local and traditional belief system.

The most important part of the Ramogi Hill Forest traditionally was Ramogi itself, the central clearing -- in a metaphorical and literal historical sense, the home of the community. This tended to be set at the centre of the forest. The Luo people approached from only a few well-trodden and defined paths. It was unlucky to use any other route. Historically, use of any other trail but these paths and gates signified bad faith and enmity.

Certain old trees and unusual landforms such as rocks had ritual importance. The cutting of trees, quarrying, bee hiving and other activities that could potentially cause damage to the forest around Ramogi Hill and its environment and sacred spots were strictly forbidden by the Luo elders. One kept to the traditional paths and avoided wandering freely in the forest. Trampling vegetation and disturbing secret sites and grazing livestock in the forest were forbidden. Uncommon animals, particularly large snakes, were to be left alone if encountered. In addition to these restrictions on physical interactions at the site, there were behavioural controls as well, designed to maintain the tranquility of the Luo people. Blood was not to be shed within the forest under any circumstances, except for sacrifices to the ancestors. However, all members of the Luo community, including women, were entitled to visit the site if they wished, as well as using the site under the elders' guidance for ritual and ceremonial purposes.

The penalty for infringement varied depending on the magnitude of the transgression, but it usually consisted of fines of cattle, fowl, goats or lambs which were sacrificed to appease offended spirits. If the offence was committed secretly, it was believed it would come to light sooner or later when attempts were made by healers to investigate the root cause of an illness or other misfortune which would surely befall the culprit. In such cases, he or she might, out of guilt, be persuaded to make a full confession. These spiritually possessed regulations regarding acceptable and profane behaviour within the Ramogi sanctuary relating to physical disturbances of the sites, including cutting and removal of forest material, have proven valuable in terms of conservation.

Throughout history, Ramogi Hill Forest and other ecosystems have supported the Luo community around Ramogi Hill, providing goods such as food, game meat, folder, organic fertilizer, timber, non-timber forest products including medicinal plants and services such as soil formation, watershed protection, climate regulation, pollination and the provision of habitats for animals and humans. In addition, Ramogi Hill Forest and its environment have supported a range of cultural services including spiritual recreation.

Ramogi Hill Forest is a repository of varied medicinal plants used by traditional healers within and across borders of Kenya. Tapping on and enhancing this market segment would greatly boost the number of visitors to Ramogi Hill Forest (Republic of Kenya, 2010; Hayombe *et al*, 2012).

4. Conclusions

If we are to maintain biodiversity in the landscape and forest ecosystem today, we need to recognize that these forests are present because of the actions of the local people who live in and around them. Biodiversity in Ramogi Hill Forest area has been demonstrated to be part of complex historical interactions among bio-physical and social-cultural systems over time (Sajise, 1995). Traditional livelihoods that rely on indigenous knowledge systems concerning the use of agriculture, technology, community forestry and trade have been particularly powerful human influences on forest ecosystems (McNeely, 1994). Protecting these areas by isolating them from people may destroy them and create resentment and resistance among those who have cultivated these forest landscapes for generations. The term protection is not the most appropriate term for the objectives of forestry policy. As in agriculture, the objective is to optimize the use of these forests for values that include the conservation of habitats and endangered species.

Sustainable development must promote real improvements in the quality of human life and, at the same time, maintain the life support systems on which our lives and the lives of all other species are based to guard ecological capital for future.

Any long term improvement in the condition of the world must start with individuals – our values, attitudes and practices. If each human being acts as a person, in a personal relationship with creation, then we not only lift creation up to the level of the human but also see creation as totality not a collection of unrelated things but as a community or body. Human beings have an awesome responsibility for survival of God's creation. By acting together, people become a strong and effective force, regardless of whether their community is wealthy or poor.

The habit of hindering frequent use of the sacred sites facilitates maximum ecological biodiversity at those

¹ Northern Tanzania, Southern Angola, The Central African Republic, Nigeria, Mozambique and Malawi among others



sites; and the social control of the use of natural resources found at these sites makes sure that degradation, pollution or contamination are minimized or avoided.

Sustainable biodiversity of Ramogi Hill Forest and its surroundings is closely linked to the Luo beliefs and cultural values. Thus, the Luo indigenous knowledge system, teachings, beliefs and practices on environmental sustainability could be revitalized and used in environmental conservation.

5. Policy Recommendations

A number of policy recommendations that would ensure sustainable biodiversity emerge from the findings and conclusions of the study. They are summarised below.

- 1. Establish a forest management paradigm to promote participatory forest ownership and management by local community and assure equitable flow of benefits to them. The community must also maintain the vitality of its local ecosystem.
- 2. Empower local community institutions to undertake sustainable management of natural resources, promote awareness of the importance of social values of sacred forests, sites and groves in development. Strengthen democratic institutions at all levels and provide transparency and accountability in governance, inclusive participation in decision making and access to justice.
- 3. Develop community-based enterprises anchored on promising alternative sources of livelihood and wealth generation and build methodologies and technologies for sustainable natural resource management through research and development. For example, through promoting sustainable management of wood for domestic use and trade, developing capacities for business skills, and rearing of fast growing high value trees, aromatic and medicinal plants.
- 4. Develop Ramogi Hill Forest as a tourist destination with recreational amenities. Actions required would involve conducting socio-anthropological studies; documenting the region's treasured history and splendour, recasting traditional tools, implements, rehabilitating and restructuring sacred sites within and around the hill and viewpoints (observation posts); providing opportunities for ecological and cultural education; constructing a community museum, promoting folklores, dances, poetry, traditional religion and developing inspiring adventures trials across forests embracing fantasies and fairy tales on past Africa lifestyles; and developing facilities to support non-consumptive use of existing forest and lake water resource (lake cruises) and other activities of socio-cultural value.
- 5. Incorporate cultural and religious values and indigenous knowledge in measures to maintain biodiversity and promote sustainable use of natural resources to accelerate socio-economic development. A community based natural resource management will improve their livelihoods, and promote socio-economic development through sustainable use of biodiversity (forest goods and services) and management of forest based micro enterprises such as ecotourism, including the conservation of the sacred sites.
- 6. For policy purposes, sustainable environmental conservation should involve the community as a whole from the grassroots where policy makers, professionals, extension workers, researchers, teachers and students are engaged in the conservation process. The African traditional ways of environmental sustainability should be revitalized and used accordingly. The indigenous knowledge system about environmental conservation should be used by infusing it into the present curriculum. The valuable knowledge should be integrated into interdisciplinary projects dealing with links between culture, the environment and development, in areas such as conservation of biological diversity, management of natural resources, understanding of natural hazards and mitigation of their impact.
- 7. Respect and care for community of life
 - a. Promote principles for respecting and caring for the community of life and life in all its diversity.
 - b. Care for the community of life with understanding, compassion and love. Build democratic societies that are just, participatory, sustainable and peaceful.
 - c. Work with local communities in an effort to sustain the earth's bounty and beauty for present and future generations.
- 8. Protect ecological integrity
 - a. Provide special protection to unique areas with samples of different types of ecosystems and habitats of rare or endangered species.
 - b. Establish and safeguard viable nature and biosphere reserves including wild lands and marine areas, to protect earth's life support systems, maintain biodiversity and preserve our natural heritage.
 - c. Prevent harm as the best method of environmental protection and when knowledge is limited, apply a precautionary approach.
 - d. Adopt patterns of production, consumption and reproduction that safeguard earth's



regenerative capacities, human rights, and community well-being.

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APPENDIX 2: SACRED SITES OF RAMOGI HILL FOREST







ALTAR WHERE LEGION MARIA SECT MEMBERS PRAY AND FAST FOR FIVE DAYS, DAY AND NIGHT



ASUMBI BABA
The hole has water that never dries up, the water is medicinal.



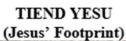
The hole has water that never dries up, the water is medicinal.





It's believed that the lid when removed it just slides back











GRINDING STONE





LUANDA LAURE (NAM - TOGO)

A lake believed to be the breeding point for all the fish found in Lake Victoria



WHISTLING STONE ON RAMOGI HILL

(It's believed, it whistles to communicate)