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Indigenous Cultural Practices and Environmental
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Forest of Kenya



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**Indigenous Cultural Practices and Environmental Conservation: A Case Study of Ogiek
Community of Mau Forest of Kenya**

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Abstract

Purpose: The purpose of this study was to examine how cultural practices are used by the Ogiek indigenous community to enhance environmental conservation.

Methodology: The study drew on the descriptive survey design. The data collection tools comprised of closed questionnaires and semi-structured interview guides. The study constitutes a sample size of 417 (male & female) respondents 18 years of age and above. The study participants were selected through simple random sampling and purposive sampling techniques. Quantitative data was collected through the questionnaires and was coded and entered the Statistical Package for Social Sciences (SPSS) version 25 for analysis. Thematic analysis was employed in analysing qualitative data. Inferential statistics was used to run frequencies, pie charts, cross tabulations among others for analysis and interpretation.

Findings: Findings revealed that cultural practices such as Totemism, taboos, and sacredness of water sources within the Ogiek indigenous community are essential to environmental conservation since they foster environmental conservation. Sacredness of water sources is among the technique used to enhance the conservation of water bodies. Cutting certain trees is considered taboos among the Ogiek Community. Such trees are always conserved and available in plenty. Their totems include certain animals such as Owl and deer and plants such as Mukeu that serve as honey bees' attraction for the production of honey. The strategies adopted in enhancing cultural practices in conservation efforts among the Ogieks indigenous community are the use of decrees of deities which define the

relationship between community members and the environment. Orders are also given by the council of elders on the restricted killings of certain animals, cutting of trees, and limited access to certain water sources to enhance conservation.

Unique contribution to theory, practice and policy: On integration of cultural practices among the Ogieks community into modern-day conservation techniques, both local and national government should support the council of elders and local administrative leaders with material and financial resources to streamline their abilities in the management of natural resources and the environment. Indigenous education methods including community dialogue, apprenticeship, and community elder are word of mouth and indigenous innovations need to be engaged. Challenges faced by the Ogiek community in maintaining cultural practices in conservation efforts include lack of policies and legislation to protect indigenous values, beliefs and practices relating to environmental conservation, inadequate support by both the National and County governments, interference of cultural practices by the Top-Down decision-making and framework formulation policy, negative attitude of some Ogiek community members who shy away the indigenous people from showcasing their conservation knowledge.

Key Words: *Indigenous Cultural Practices, Conservation Techniques, Cultural Practices Maintenance Challenges and Ogiek Community*

Background of the Study

Cultural practices are the learned beliefs, values, rules, norms, symbols, and traditions that are held in common by the people in a given community and are practiced from generation to generation. Some aspects of culture are visible while others are not visible to one's conscious awareness (Carpernter, Barrier and Erdogen, 2010). According to Schein (2020), there are three levels of culture namely, artifacts, espoused beliefs and values and underlying assumptions. History shows numerous instances related to cultural practices of diverse communities in close relationship with environment for many centuries. In the United Nation(2017) Conference on 'Environment and Development' it had been stressed out that the contribution of indigenous knowledge is beneficial and is urgently needed for the protection of Earth's biological diversity. The conservation, protection and management of indigenous, ecological, and sacred sites have in recent times received global attention because of the tremendous potential they hold for sustainable livelihoods, recreation, and scientific research. The maintenance of these sites is invariably linked to the preservation of local cultures because of the mutual interactions and interdependence that exist between the local people and their natural environment (Guru & Dana, 2018).

In the earlier times, rulers were engaged to preserve and promote environmental protection and safety which had developed from a western concept which originated in the nineteenth century. Adams (2004) states that the first moves towards what we would consider as conservation today, came from

the elite hunting communities in the United Kingdom and North America who sought to halt the significant decline in numbers of game in America and in Southern Africa. From these roots, there arose what Adams (2004) term as the “age of preservation”, starting with the development of game reserves. Not long after, conservation began to extend beyond protecting animals for hunting to the idea that people had a duty to protect nature (Adams, 2004; Ladle and Whittaker, 2011). With these changes in the ideologies of conservation came another type of reserve, National Parks (NP). The first NPs, such as Yosemite and Yellowstone in the US were what were known as ‘Nature Monuments’ (or Naturdenkmal) (McNeely and Schutyser, 2003; Ladle & Whittaker, 2011). Ladle and Whittaker (2011) comment that “The concept of Naturdenkmal captured the value that aesthetic and intellectual contemplation of nature is integral to the biological and cultural inheritance of many people” (Pg 177). They note that the creation of nature monuments spread across Europe and the world. These sites were formally protected, with set boundaries and separate from people. In fact, despite previous habitation by native Indians (who were moved to create the national parks), the absence of human presence was considered to be what made the national monuments in the US valuable (Ladle & Whittaker, 2011).

The concept of keeping humans away from nature in order to protect it has now come to be known as ‘Fortress conservation’. Hutton et al. (2005) highlight that so called ‘Fortress Conservation’ is based on a number of concepts, which include the perception that people are responsible for the destruction of nature and therefore protecting nature is best achieved when people are kept separated from it. This perspective was not unfounded; Brandon et al., (1998) state that “virtually all threats to biodiversity result from human actions”. These attitudes supported conservation based on barriers, which involved the designation of Protected Areas (PAs), which kept nature safely in and people out. Many of the PAs created throughout the twentieth century involved the re-location of indigenous communities, they often allowed only limited access for scientific or management purposes, no extractive/consumptive use was permitted, and for some sites, very limited eco-tourism (Ongugo et al., 2002; Adams, 2004; Hutton et al., 2005; Coad et al., 2008; Okech, 2010).

Most African cultures forbid the exploitation and consumption of certain component of the environment. Where people believe that the gods or goddess lives, there is the total protection of the habitats of the gods from exploitation, utilization, entrance, and agricultural activities, this can either intentionally or unintentionally propel the conservation of resources. Some African culture forbid the exploitation and consumption of certain species of biodiversity, these are termed totems, forbidden items, or totemism. Some areas are majorly delineated for the worship of the gods of the land, these restricted areas are used for the worshiping of the gods, and these practices also contribute to the conservation and management of natural resources (Helvetas, 2011; Gaillard and Mercer, 2012; Eneji, et al, 2012). These African cultural strategies or natural resource conservation and management have somehow been eroded by acculturation and enculturation of most African cultures through the

introduction of Christianity as a modern way of worship (Smith & Wishnie, 2017). There is therefore the urgent need to re-visit the principles of African indigenous cultural practices to assist in the conservation of natural resources, especially where modern conservation programs could integrate traditional knowledge systems into their activities in the conservation and management of our natural resources (Chikaire et al., 2012; Kala, 2012; Wasongo et al., 2011; Hilhorst, 2015). In several countries across sub-Saharan Africa, local deities take their origins from the forests, rivers, caves, and other designated areas in the landscape. The existential connection between the local people and these deities has ensured the conservation and protection of these sacred sites. Additionally, the annual festivals of some of these deities, which are also occasions for exposition of the rich culture of the people, attract tourists (Awoonor, 2006).

The Ogiek people in Kenya are known to be the largest community of forest dwellers in East Africa with a population of approximately 52,000 people (Census, 2019). They have a distinct dialect and culture (GoK, 2009). They are a hunter-gatherer group of people known to be the original owners of the Mau Forest (MF). The indigenous Ogiek people stand out as the first community to set a significant procedural precedence on matters related to the land rights of indigenous people (Claridge, 2017). They have in times past and within their own geographical settings developed a distinctive manner of life economically, socio-politically, culturally, and are solely dependent on the forest for their civilization, livelihoods, and existence. Their diverse forms of knowledge, deeply rooted in their relationships with the environment as well as in cultural cohesion have allowed members of these communities to maintain a sustainable use and management of natural resources, to protect their environment and to enhance their resilience. The Ogieks have tenaciously clung to their culture and have always resisted any outside influences which may have negative effects on their culture, enabling them to sustain some semblance of unity, identity, and cultural distinction to date. Over the years, this community has thrived to put herself and territory on the global map in pushing for acknowledgment and reconnaissance of their indigenous ways of conservation and for a stronger participation in policies discussions (OPDP, 2017). However, external, and internal factors like marginalization, stigmatization, lack of financial and material resources have hindered the documentation and mainstreaming of their indigenous conservation techniques and has subjected them to challenges like evictions and change of livelihoods. They however maintain that they have managed to survive in the Mau Forest without causing significant environmental degradation and constitute part of the solution to the current challenges ravaging the Mau ecosystem like deforestation and land encroachment. The African Court on Human and Peoples' Rights (2017) declared that the Ogiek were not responsible for the depletion of the Mau Forest, and conservation of the forest could not be used to justify the Ogiek's eviction, nor could it be used to deny their rights to practice their traditional livelihoods. The Court also ruled the Mau Complex was indeed the ancestral land of the Ogiek, to which they therefore hold rights.

Statement of the Problem

Globally, indigenous people base on their cultural practices and thoughts on nature are of the opinion that they are part of the environment and include the human dimension in the management of natural resources (Parrotta and Trosper, 2012). However, the degradation, deforestation and depletion of the environment have usually been blamed on indigenous people and their ways of live. In July 2008, the Kenyan Government commenced an aggressive campaign to evict people living in the Mau Forest that it deemed to be living there illegally. This included the indigenous Ogiek people. These displacements jeopardized the lifestyles and livelihoods of the indigenous Ogiek families who had to sort other means of subsistence like cattle raring and crop cultivation for survival and was challenged at the African Court on Human and Peoples' Rights. The Kenyan communities' report (2020) stated that members of the Ogiek community during the peak of the Covid-19 pandemic were continuously evicted from their ancestral lands (Mau Forest). Their homes and other belongings were destroyed by the government forces. The Report added that the Kenya Forest Service (KFS) demolished over 300 Ogiek homes in the Mau Forest leaving Children and other vulnerable community members homeless. The Kenya government argued that the evictions were necessary to conserve the Mau Forests which is a closed canopy forest and an important watershed. This decision to evict the indigenous Ogiek community among others contradicts the 2017 ruling of the African Court on Human and Peoples' Right (ACtHPR). The ACtHPR in their 2017 ruling found that Ogieks were not responsible for the depletion of the Mau and conservation could not be used to justify their eviction nor could it be used to deny them rights to their lands, heritage, and livelihoods.

The Ogieks who are the Mau forest-dependent community have over the years held intact forest patches, wildlife, and water bodies sacrosanct through cultural practices such as totemism, taboos, and sacredness. The community has adopted strategies such as decrees of deities, orders from council of elders and family heads to nurture conservation ethics. However, they face challenges like stigmatization, marginalization as a community which cannot contribute anything to conservation, lack of financial and material resources in pushing for stakeholder's acknowledgment of their techniques of conservation. These cultural practices, their strategies of implementation, challenges, and prospects of integration into modern conservation techniques remain undermined and undocumented in the specific case of the Ogiek community prompting a gap in literature that needs to be filled. Therefore, this study sought to fill this existing gap in literature by examining indigenous cultural practices and environmental conservation in the case of the Ogiek community of the Mau-forest of Kenya.

Research Objectives

- i. To analyze the indigenous cultural practices used in conservation among the Ogieks.
- ii. To investigate the strategies adopted in enhancing cultural practices in conservation efforts

among the Ogieks.

- iii. To examine how these cultural practices could be integrated into modern-day conservation techniques.
- iv. To examine the challenges in maintaining cultural practices in conservation efforts.

Theoretical Literature Review

Hardin's "Tragedy of the Commons" Theory

Hardin's "Tragedy of the Commons" Theory was first conceptualized in 1833 by British writer William Forster Lloyd. Hardin however was the first to make use of the theory in 1968. The Tragedy of the Commons refers to a scenario in which commonly held land is inevitably degraded because everyone in a community is allowed to graze livestock there. The theory argues that resource users cannot be left to decide alone how to use the resources and that their use has to be curtailed to prevent over exploitation. It was embraced as a principle by the emerging environmental movement. As Hardin (1968) noted about tragedy of the commons, individuals acting independently and rationally according to each self-interest behave contrary to the best interests of the whole group by depleting some common resource which is in turn based upon an essay by a Victorian economist on the effects of unregulated grazing on common land. Common-pool resources yield finite flows of benefits (such as firewood, fish, forest, and water) where it is difficult and costly to exclude potential users (Ostrom, Gardner and Walker, 1994). Each person's use of a resource system subtracts resource units from the quantity of units available to others, as Hardin so dramatically described. Policy analysts tend to look for certainty in understanding if the tragedy of the commons theory is right or wrong. A more productive approach is to ask under what conditions it is correct and when it makes the wrong predictions. In settings where there is a large group, no one communicates, and where no rights to the resource exist, Hardin's theory is supported by considerable evidence. There are many settings in the world where the tragedy of the commons has occurred and continues to occur— ocean fisheries and the atmosphere being the most obvious.

National Research Council (2002) report provides an excellent overview of the substantial research showing that many common-pool resources are governed successfully by non-state provision units and that some government and private arrangements also succeed. No simple governance system has been shown to be successful in all settings (Dietz, Ostrom and Stern, 2003). One of the key findings on collective action and common-pool resources is the multiplicity of specific rules-in-use found in successful common-pool resource regimes around the world. One of the most important types of rules is boundary rules, which determine who has rights and responsibilities and what territory is covered by a particular governance unit. Many different boundary rules are used successfully to control common-pool resources around the world, but an important aspect of these rules is the match between

the organization of users and the resource rather than the specific rule used. The 35th anniversary of the publication of Hardin's original article was celebrated with a special issue of *Science* (Dietz, Ostrom and Stern, 2003), demonstrating that all forms of ownership could succeed or fail and that more critical than the form of ownership was the establishment of legitimate and agreed-upon boundaries that were effectively enforced.

Tragedy of the Commons in a dynamic economy composed the joint dynamics of land congestion and moral behaviors (Cultural practices) which are transmitted through a cultural transmission process (Verdier, 2001) where the evolution of cultural traits is the result of family socialization actions and role modeling within the community. In that setting, parents can influence the probability to transmit their trait (cultural practices) to their offspring, motivated by a form of imperfect selflessness. The dynamics of moral traits thus depends on parental socialization efforts which are functions of the socio-economic conditions. Bonye and Samuel (2008) noted that traditional institutions are vibrant and organized on the basis of their religion and cultural beliefs to effectively manage natural resources. They occupy a unique position in the management of natural resources and are widely accepted by their subjects as the religious, political, judicial and the spiritual embodiment of their communities and therefore takes obligation in the management of community resources. The application of the theory in studying the indigenous communities including Ogiek of Mau-forest is helping in understanding the relationships between the local communities' practices on the common resources and how they influence the environmental conservation. The theory will be applied to support the study because the theory provides relevant information on the marginalization of indigenous communities globally in the management of natural resources (Environmental conservation). The application of the theory in studying the indigenous communities including Ogiek of Mau Forest will help in understanding the relationships between the local communities' practices and how they influence the natural resources. The theory explains the gains people achieve from the environment. The Tragedy of the Commons' Theory is considered relevant in evaluating the cultural practices of the indigenous Ogiek Community and environmental conservation through the use of cultural practices of the indigenous community.

Collective Action Theory

Collective action theory was introduced by Olson (1965), and then later popularized by Elinor Ostrom in *Governing the Commons* (Ostrom 2009) as a theory to explain why many communities using natural resources do not always experience overexploitation, that is, for common-pool resources, or under provisioning, that is, for public goods, a so-called tragedy of the commons (Hardin 1968). Building on *Governing the Commons*, an entire school studying the commons has emerged (Cox et al. 2010, Poteete et al. 2010). The theory hypothesizes a positive relationship between groups that are able to take effective collective action and the resulting social and environmental outcomes. The theory aims to understand how and why people cooperate through self-organization processes (that

is, a collective action) and what social (for example group size; knowledge of culture; social capital) and ecological variables (that is, resource mobility and environment conservation; system size; growth and replacement rates) influence self-organization (Ostrom, 2009).

The variables identified as influencing collective action are generally group size, growth and replacement rates, environment conservation among others which are in social-ecological systems framework (Ostrom 2009, McGinnis and Ostrom 2014, Partelow 2018). Ultimately, the theory aims to explain why self-organized collective action can lead to more desired social and ecological outcomes, for example, sustained provision or use, in some cases, and in others not. Ostrom's work on the framework has evolved into a commons and collective action take on what is now much broader social-ecological systems discourse. Collective action theory, focusing on community-based solutions in resource governance, is often juxtaposed as a third understanding, or governance perspective on, how to resolve resource appropriation and provision dilemmas through governance, which has historically been viewed as a problem of aligning individual and group interests. It is an alternative to other popularized approaches, such as privatization or top-down state enforcement to solve the same problems. Collective action theory has also been used to understand the self-organization of social movements and activism related to many issues including those related to the environment (Lubell 2002).

Collective action theory is useful for this study since the theory provide information that demonstrates the local nature of self-organization processes, and the role that individual and group level play in shaping cooperative processes driving environmental commons outcomes (Environmental conservation). The Ogiek community believes that they are the protectors of the forest (Mau Forest). They blame the damage being caused to the forest on the irregular allocation of land to outsiders, as well as the loggers and other settlers who cut down the trees to either sell it for timber or burn it for charcoal. According to Chavez Carrillo et al. (2019), Ogiek community view Mau Forest land not as a factor of commercial production but as central to the cultural wellbeing in promoting environmental conservation such as through practicing totemism, sacred water sources and taboos as well as religious sites, traditions, and customs of their community.

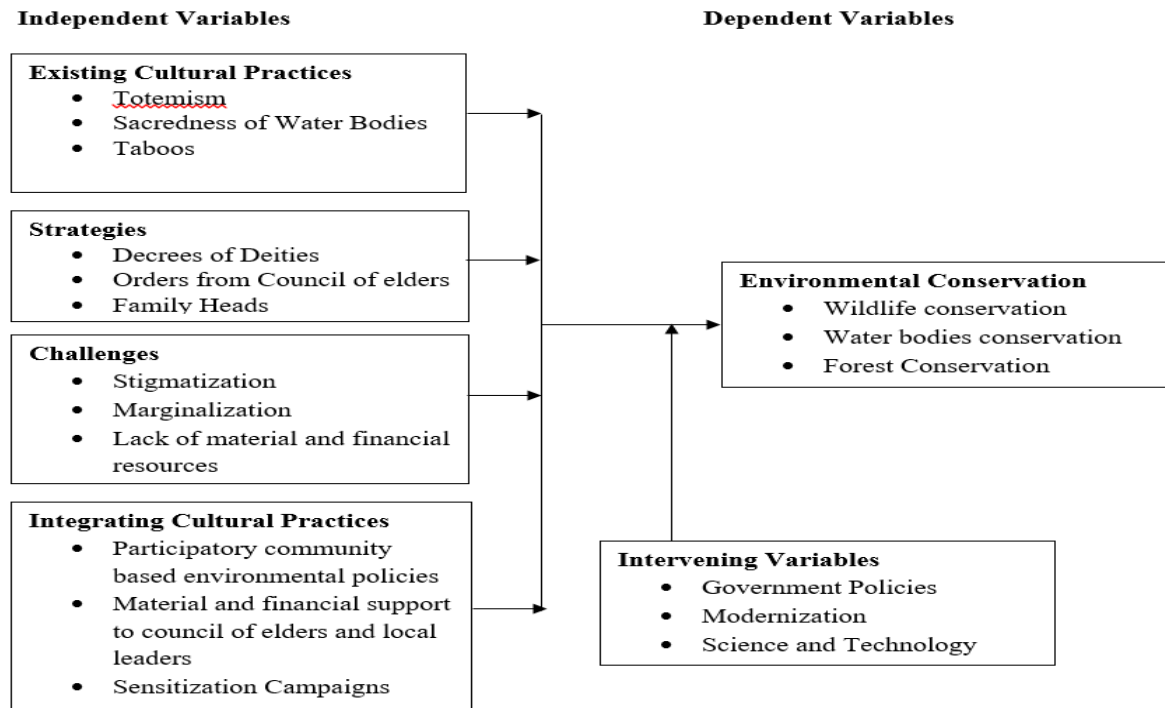


Figure 1: Conceptual Framework

Research Methodology

Research Design

This study employed a descriptive survey design. The target population comprised of local administrative leaders (chiefs and assistant chiefs), herbalists, the Ogiek council of elders, and the Ogiek community members in and around the Mau Forest complex. The purposive sampling technique was used to get 7 local administrative leaders, 3 herbalists and 10 members of the Council of elders for qualitative and quantitative data. Yamane (1967) sampling formula was adopted in selecting a sample of 397 Ogiek community members. The instruments that were used for collection of data relevant to this study were questionnaires for Ogiek community members and the local administrative leaders, and interview guides for Herbalists and Members of the Council of elders. Qualitative data was thematically analyzed that is; identifying, analyzing and reporting patterns or themes within the data. Quantitative data was analysed using descriptive statistics such as measures of central tendency and dispersion through the use of SPSS (version 25). The researcher also used inferential statistics to compare the findings from different groups of the respondents in this study, provide explanations and make generalizations about the larger population of subjects matter in the study.

Results

Response Rate

The results on the response rate indicate that the response rate for Ogiek community members in the Mau Forest were 390 which gave 98.2% of the total Ogiek community members in Mau Forest. The non-response rate show that 7 Ogiek community members from the sample size did not participate in responding to the questionnaires which represents 1.8% of the Ogiek community members. Local administrative leaders' response rate was 71.4% which were 5 and non-response 2 which constitute 28.6% of the sample size. The 3 out of 3 Herbalists who were interviewed responded 100%. 7 (70%) of members of the Council of elders were interviewed while 3 (30%) did not participate in the study. Therefore, the reported response rate of the study was 97.1% of the total sample (405) that gave the study a high degree of representativeness that could be relied upon to generalize the respondents' views on the study. This was in tandem with Cooper & Schindler (2003) who argued that response rate exceeding 30% of the total sample size provides enough data that can be used to generalize the characteristics of a study problem as expressed by the opinions of few respondents in the target population

Descriptive Analysis of Variables

The Indigenous Cultural Practices Used in Conservation among the Ogieks

The respondents were asked to indicate the extent to which they agree or disagree with statements in rating cultural practices used in conservation among the Ogieks on a Likert scale of 1-5 where 1= strongly disagree, 2= disagree, 3=neither agree nor disagree, 4=agree, 5= strongly agree. The findings were presented as shown in table 1.

Table 1: Indigenous Cultural Practices used in Conservation

Statement	1%	2%	3%	4%	5%
The Ogiek indigenous community has cultural practices which are essential to environmental conservation efforts	2.0	13.0	5.0	7.3	72.7
Totemism as a cultural practice is one of the techniques used by the Ogiek indigenous people to foster environmental conservation.	10.0	8.7	5.0	34.7	41.6
Environmental taboos upheld by the Ogiek indigenous community results to environmental conservation.	9.9	10.0	13.6	11.6	54.9
Sacredness of water sources within the Ogiek indigenous community is used as a technique to enhance the conservation of water bodies.	1.9	3.5	5.5	32.1	57.0
The young, old, and elderly are bound to respect these cultural provisions.	3.0	6.4	2.0	8.0	80.6

As per Table 1, majority (72.7%) of the Ogiek community members and the local administrative leaders in the Mau Forest complex strongly agreed with the statement that the Ogiek indigenous community has cultural practices which are essential to environmental conservation efforts and 7.3% agreed. However, 13.0% disagreed, 2.0% strongly disagreed while 5.0% neither agree nor disagree. "Totemism as a cultural practice is one of the techniques used by the Ogiek indigenous people to foster environmental conservation." 41.6% of the respondents which were the majority strongly agreed with the statement and 34.7% agreed. On the other hand, 10.0% strongly disagreed, 8.7% disagreed and 5.0% remained noncommittal. On whether environmental taboos upheld by the Ogiek indigenous community results to environmental conservation, 54.9% of the Ogiek community members and the local administrative leaders strongly agreed with the statement, 11.6% agreed, 10.0% disagreed, 9.9% strongly disagreed while 13.6% were undecided. Majority (57.0%) of the respondents strongly agreed with the statement that sacredness of water sources within the Ogiek indigenous community is used as a technique to enhance the conservation of water bodies and 32.1% agreed. However, 3.5% disagreed, 1.9% strongly disagreed and 5.5% neither agree nor disagree.

On whether the young, old, and elderly are bound to respect these cultural provisions, 80.6% of the respondents strongly agreed, 8.0% agreed, 6.4% disagreed, and 3.0% strongly disagreed while 2.0% were undecided. The findings revealed that cultural practices such as Totemism, taboos, and

sacredness of water sources within the Ogiek indigenous community are essential to environmental conservation efforts. These cultural practices were found to foster environmental conservation for example sacredness of water sources was found to be a technique used to enhance the conservation of water bodies. The study further revealed that the young, old, and elderly are bound to respect these cultural provisions. The Herbalist and members of the council of elders were asked through the interview to name some of the cultural practices used in environmental conservation among the Ogieks community. Findings were as analyzed.” Traditionally in the Ogiek Community it was a taboo for people to kill certain animals. People were only allowed to kill animal that are edible but they would not kill those animals that are not edible by the community. Animals such as elephants, lion were not allowed to be killed unless your life was in danger or being attacked by the animal. It was also a taboo to kill any female animal of any kind. They were highly protected especially the pregnant, older and those which are breastfeeding. Any community member who killed these animals was punished by the council of elder. In so doing the animals were protected and conserved (Interview, some Council of Elders, October, 2022)” Sacred rivers sources within the community were believed to be shrines of the gods within the community where very limited people were allowed and no activity like hunting is permitted around these sacred places unless allowed by the community elders. Any individual who accessed such places illegally was to be punished. These places are preserved and they always to remain in their natural state (Interview, Some Herbalist, October, 2022). These findings coincides with the findings of the (Kiriro, 2011) who affirmed that most African communities practice totemism whereby a clan uses a certain plant or animal species which they have a spiritual connection with as their symbol. For example, animals such as lions and leopards are believed by certain clans to be symbols of bravery. As Henshey (2011), notes African communities have beliefs in ancestral spirits who are usually souls of dead people living in the spirit world. These spirits are believed to appear in other forms such as animals and to live in forests, rivers, lakes, and caves which are usually not destroyed and out of bound for the communities unless they need to meet with the spirits resulting in their conservation.

The Strategies Adopted in Enhancing Cultural Practices in Conservation Efforts.

The study sought to investigate the strategies adopted in enhancing cultural practices in conservation efforts among the Ogieks indigenous community. Ogiek community members and the local administrative leaders in the Mau Forest complex were asked to indicate the extent they agreed or disagreed with the statements in rating the strategies through which cultural practices enhance environmental conservation among the Ogieks on a Likert scale of 1-5 where, 1=strongly disagree, 2= disagree, 3= neither agree nor disagree, 4= agree, 5= strongly agree. Findings were presented in Table 2.

Table 2: Strategies Adopted in Enhancing Cultural Practices in Conservation Efforts

Statement	1%	2%	3%	4%	5%
Decrees of deities define the relationship between community members and the environment	4.0	12.1	4.0	17.3	62.6
Patches of forest, water sources outlined by the deities as spiritual harbors are free from all kinds of human activities.	1.0	5.7	5.0	16.7	71.6
Orders are giving from the council of elders on the restricted killings of certain animals, cutting of trees, and limited access to certain water sources to enhance conservation.	4.0	5.8	1.6	24.6	64.0
During the initiation of young boys into adulthood, the code of conducting hunting activities is emphasis and articulated by the family heads to the young stars to avoid violating conservation ethics.	2.0	13.4	5.5	2.1	77.0
The council of elders has the sole right to physically sanction violators of conservation ethics.	1.1	6.3	2.0	20.0	70.6
Community members endeavor to abide by the decrees of their deities on the interdependent relationship between them and the environment to avoid incurring the rod of the goods.	1.9	5.0	1.1	36.0	56.0
Community members respect the rulings of the council of elders and orders from family heads in relation to the conservation of the environment.	1.0	5.0	5.0	21.0	68.9

Findings in Table 2 indicated that majority (62.6%) of Ogiek community members and the local administrative leaders strongly agreed with the statement that decrees of deities define the relationship between community members and the environment and 17.3% agreed. On the other hand, 12.1% disagreed, 4.0% strongly disagreed while 4.0% remained noncommittal. On whether patches of forest, water sources outlined by the deities as spiritual harbors are free from all kinds of human activities, 71.6% strongly agreed and 16.7% agreed, 5.7% disagreed, 1% strongly disagreed and 5.0% neither agree nor disagree. Majority (64.0%) strongly agreed with the statement that orders are giving from the council of elders on the restricted killings of certain animals, cutting of trees, and limited access to certain water sources to enhance conservation, 24.6% disagreed, 5.8% disagreed, 4.0% strongly

disagreed and 1.6% remained non-committal. “During the initiation of young boys into adulthood, the code of conducting hunting activities is emphasis and articulated by the family heads to the young stars to avoid violating conservation ethics,” 77.0% of the respondents strongly agreed with the statement, 2.1% agreed, 13.4% disagreed, 2.0% and 5.5% remained non-committal. “The council of elders has the sole right to physically sanction violators of conservation ethics,” 70.6% of the respondents strongly agreed with the statement, 20.0% agreed, 6.3% disagreed, 1.1% strongly disagreed while 2.0% of the respondents neither agree nor disagree.

Majority (56.0%) of respondents strongly agreed with the statement that community members endeavor to abide by the decrees of their deities on the interdependent relationship between them and the environment to avoid incurring the rod of the goods, 36.0% agreed, 5.0% disagreed, 1.9% strongly disagreed and 1.1% were noncommittal. “Community members respect the rulings of the council of elders and orders from family heads in relation to the conservation of the environment,” 68.9% of the respondents strongly agreed with the statement, 21.0% agreed, whose who disagreed and who remained undecided were equal (5.0%) while 1.0% strongly disagreed. It can therefore be revealed that the strategies adopted in enhancing cultural practices in conservation efforts among the Ogieks indigenous community is the use of decrees of deities which define the relationship between community members and the environment in those patches of forest, water sources outlined by the deities as spiritual harbors are free from all kinds of human activities. Secondly, council of elders give on the restricted killings of certain animals, cutting of trees and limited access to certain water sources to enhance conservation. Moreover, during the initiation of young boys into adulthood, the code of conducting hunting activities is emphasis and articulated by the family heads to the young stars to avoid violating conservation ethics. It was farther revealed that the council of elders has the sole right to physically sanction violators of conservation ethics. Community members endeavor to abide by the decrees of their deities on the interdependent relationship between them and the environment to avoid incurring the rod of the goods. They also respect the rulings of the council of elders and orders from family heads in relation to the conservation of the environment.

These findings relate with the findings of Chibememe (2014) in his study in the Sangwe community of Zimbabwe where the community has certain village head of sacred pool that is expected to monitor fish stocks in their designated pool, informing the chief when it is ready for harvesting or when illegal harvesting has occurred as a strategie in conserving environment. The respondents were further asked some of the strategies adopted in enhancing cultural practices in conservation efforts among the Ogieks indigenous community. Findings were as analyzed. ‘Elders were regarded and remain vital among the Ogiek community because elders are the ones who know what happens to those who probably did not respect cultural provisions. So, elders within the community are responsible in telling the community on what they are supposed to do and what they are not supposed to do. Every member of the community is therefore expected to respect the decrees and decision of the elder and the deities

within the community. On the other hand, those who did not respect decrees are punished by the elders and this punishment could be in terms of the victim providing beehives to the community or doing manual work in terms of punishment,' (Interview, some Council of Elders, October 2022). "It is considered a taboo for any member of the community to cut certain trees such as Cedar, Chelubut, Mukeu. This is because trees such as Mukeu produce flowers that attract honeybees into the beehives. Honey production is considered a livelihood source within the community and by cutting such trees is considered cutting off community livelihood sources. The community also considers orders from local administrators like chiefs whom they can trust with information as strategic stakeholders in enhancing cultural practices in conservation efforts," (Interview, Some Herbalist, October 2022).

How Cultural Practices could be integrated into modern-day Conservation Techniques.

In the third objective of the study, the researcher sought to establish how cultural practices such as Totemism, taboos and sacredness of water sources could be integrated into modern-day conservation techniques. Ogiek community members and the local administrative leaders in the Mau Forest complex were asked to indicate the extent they agreed or disagreed with the statement in rating how cultural practices could be integrated into modern day conservation techniques on a Likert scale of 1-5 where, 1=strongly disagree, 2= disagree, 3= neither agree nor disagree, 4=agree, 5= strongly agree. Findings were shown in Table 3.

Table 3: Integrating Cultural Practices Modern-day Conservation Techniques.

Statement	1%	2%	3%	4%	5%
Indigenous cultural beliefs and practices are constantly struggling to maintain their place in environmental conservation in a system dominated by scientific worldviews.	0	0.5	2.2	27.0	70.3
Participatory community based environmental management policies should be encouraged.	1.4	4.0	2.7	13.5	78.4
The council of elders and local administrative leaders should be supported with material and financial resources to streamline their abilities in the management of natural resources and the environment.	2.7	1.4	4.0	27.0	64.9
Sensitization campaigns are needed to wipe off the stigmatization of indigenous communities with respect to their ways of life which are often regarded as local.	12.1	6.8	0	59.5	21.6
Avoid marginalization of indigenous communities and bring all stakeholders on board to streamline environmental conservation.	2.8	1.5	4.3	60.8	30.6
Engage Indigenous education methods including community dialogue, apprenticeship, community elder's word of mouth and indigenous innovations are central to sustainable ecological conservation in Ogiek Community.	2.9	4.0	1.1	26.0	66.0

As per the findings in Table 3, 70.3% of Ogiek community members and the local administrative leaders in the Mau Forest complex strongly agreed with the statement that indigenous cultural beliefs and practices are constantly struggling to maintain their place in environmental conservation in a system dominated by scientific worldviews, 27.0% agreed, 2.2% remained noncommittal, and 0.5% disagreed. Majority (78.4%) of the respondents strongly agreed with the statement that participatory community based environmental management policies should be encouraged, 13.5% agreed, 2.7% were neutral, 4.0% disagreed and 1.4% strongly disagreed. "The council of elders and local administrative leaders should be supported with material and financial resources to streamline their abilities in the management of natural resources and the environment," 64.9% strongly agreed, 27% agreed, 4% were noncommittal while 2.7% strongly disagreed with the statement and 1.4% disagreed.

Majority (59.5%) of the respondent agreed with the statement that sensitization campaigns are needed to wipe off the stigmatization of indigenous communities with respect to their ways of life which are often regarded as local, 21.6% strongly agreed while 6.8% disagreed and 12.1% strongly disagreed. “Avoid marginalization of indigenous communities and bring all stakeholders on board to streamline environmental conservation”, 60.8% of the respondents agreed, 30.6% strongly agreed, 4.3% were neutral, 2.8% strongly disagreed and 1.5% disagreed. “Engage indigenous education methods including community dialogue, apprenticeship, community elder’s word of mouth and indigenous innovations are central to sustainable ecological conservation in Ogiek community,” 66.0% of the respondents strongly agreed with the statement, 26.0% agreed, 4.0% disagreed 2.9% strongly disagreed and 4.0% disagreed.

The study revealed that cultural practices among the Ogiek community of the Mau-forest of Kenya can be integrated into modern day conservation techniques by the both local and national government supporting council of elders and local administrative leaders with material and financial resources to streamline their abilities in the management of natural resources and the environment, encouraging participatory community based environmental management policies, sensitization campaigns to wipe off the stigmatization of indigenous communities with respect to their ways of life which are often regarded as local, both national and local government should avoid marginalization of indigenous communities and bring all stakeholders on board to streamline environmental conservation. Engage indigenous education methods including community dialogue, apprenticeship, community elder’s word of mouth and indigenous innovations which is the central to sustainable ecological conservation in Ogiek Community. The respondents were further asked how cultural practices such as Totemism, taboos and sacredness of water sources could be integrated into modern-day conservation techniques. Findings were as analyzed.

‘The Ogiek community who were originally forest owners is pleading with the government for dialogue so that they can be partners in the cause of environmental conservation because in as much as the government wants conservation, the Ogiek community actually want better conservation because it is only from this conservation that their livelihood can be restored. The government through scientific development should also provide the community with massive seedlings for their indigenous trees species like Mukeu which within the community is actually a taboo to cut as they believe that nobody will cut these trees within the community since these trees produces flowers which attract honeybees for honey production as their main economic activity,’ (Interview, Some Council of Elders, October, 2022). The government should build more trust with indigenous Ogiek people through stakeholders who can understand what they want because over the years the trust seems to be lost due to bad fate of some politicians who has made the Ogiek to lose faith in any initiative that is aiming in bringing Ogiek Community together with the Government. Moreover, some community encroach the remaining portion of the forest and to stop this encroachment the chiefs need

to be given material means such as motorbikes to facilitate their movement and finance in order to attend to some issues regarding conservation within their areas of jurisdiction. Some of the chiefs believe that Ogiek community are actually in the right position of protecting the forest much better than the government and if left alone within the forest space, that is, if the intrusion of the forest by other community is avoided, we believe 77% that the Ogiek community can actually regulate conservation challenges much better and of course with the government providing them with indigenous trees seedlings E.g Cedars and Mukeu (Interview, Some Herbalist and elders October, 2022).

Challenges in Maintaining Cultural Practices in Conservation Efforts

This section addresses the presentation on the challenges experienced in Ogiek Community in maintaining cultural practices in conservation efforts. Ogiek community members and the local administrative leaders in the Mau Forest complex were asked to indicate the extent they agreed or disagreed with the statement in rating the challenges faced by the Ogiek community in maintaining cultural practices in conservation efforts on a Likert scale of 1-5 where, 1=strongly disagree 2=disagree, 3= neither agree nor disagree, 4=agree 5= strongly agree. Table 4 present the findings.

Table 4: Challenges Experienced in Maintaining Cultural Practices.

Statement	1%	2%	3%	4%	5%
Indigenous values, beliefs and practices relating to environmental conservation have been lost due to lack of policies and legislation to ensure their protection.	4.0	9.0	10.0	15.0	62.0
There has been inadequate support by both the National and County governments in assisting Ogiek communities to document, preserve and disseminate indigenous cultural practices on environment conservation.	4.0	6.0.0	2.0	56.0	32.0
The current Top-Down decision-making and policy framework formulation policy contributes in the marginalization of the indigenous community and their knowhow.	6.0	10.0	10.0	54.0	20.0
Stigmatized shy away the indigenous people from showcasing their conservation knowledge since they are regarded as old and outdated.	11.0	0.0	15.0	22.0	52.0

The lack of material and financial resources affects the smooth documentation and the preservation of the Ogieks indigenous knowledge. 0.0 2.0 18.0 58.0 22.0

The modern education system does not support indigenous forms and methods of knowledge acquisition. 12.6 12.4 9.2 19.3 66.6

Table 4 shows that majority (62%) of Ogiek community members and the local administrative leaders in the Mau Forest complex strongly agreed with the statement that indigenous values, beliefs, and practices relating to environmental conservation have been lost due to lack of policies and legislation to ensure their protection, 15% agreed, 10% were non-committal and 9% agreed and 4.0% strongly disagreed. Fifty percent (56%) of the respondents agreed that there had been inadequate support by both the National and County governments in assisting Ogiek communities to document, preserve and disseminate indigenous cultural practices on environment conservation, 32% strongly agreed, 6.0% disagreed, 4.0% strongly disagreed and 2% were undecided with the statement. “The current Top-Down decision-making and policy framework formulation policy contributes in the marginalization of the indigenous community and their knowhow,” 54% of the respondents agreed with the statement, 20% strongly agreed, those who were neutral and disagreed were equal (10%) while 6% strongly disagreed. Fifty two percent (52%) of the respondents strongly agreed that stigmatized shy away the indigenous people from showcasing their conservation knowledge since they are regarded as old and outdated, 22% agreed, 15% neither agree nor disagree while 11% strongly disagreed with the statement. “The lack of material and financial resources affects the smooth documentation and the preservation of the Ogieks indigenous knowledge,” 58.0% of the respondents agreed, 22% strongly agreed, 18% remained non-committal while 2% disagreed with the statement. The modern education system does not support indigenous forms and methods of knowledge acquisition, 66.6% strongly agreed, 619.3% agreed, 12.7% disagreed, 9.2% were undecided and while 12.6% strongly disagreed. Therefore, the study established that challenges faced by the Ogiek community in maintaining cultural practices in conservation efforts include lack of policies and legislation to protect indigenous values and beliefs and practices relating to environmental conservation. Secondly, inadequate support by both the National and County governments in assisting Ogiek communities to document, preserve and disseminate indigenous cultural practices on environment conservation. The study farther revealed the interference of cultural practices by the Top-Down decision-making and framework formulation policy which has contributed in the marginalization of the indigenous community and their knowhow. Another challenge which was identified was negative attitude of some other communities towards Ogiek community members which shy away the indigenous people from showcasing their conservation knowledge since they are regarded as old and outdated.

The lack of material and financial resources which affects the smooth documentation and the preservation of the Ogieks indigenous knowledge is another challenge identified in the study. Also, the modern education system does not support indigenous forms and methods of knowledge acquisition. The researcher sought the opinion of the respondents on some of the challenges faced by the Ogiek community in maintaining cultural practices in conservation efforts. Findings were as analyzed. The existing conflict of interest between some politicians and the community is a very serious issue that needs to be addressed because most of the time the politicians do not really represent the voice of people especially when it comes to their desire to get back their land and protect it by themselves. Also, the elders are overwhelmed with the continuous marginalization of the community in such a way that they are not even allowed to do the things in their own ways. Their voices are not being heard by those in the government both local and national level. Elders believe that environmental conservation laws are being dictated on them instead of them doing things the way they have known for century of years back. The irony is that the conservation law is being imposed on them by people that do not know about the usefulness of their cultural practices in environmental conservation,' ' (Interview, Some Council of Elders, October, 2022). 'Another challenge is that indigenous cultural beliefs and practices are constantly struggling to maintain their place in environmental conservation in a system dominated by scientific worldviews because as much as some of the indigenous trees are being planted, intruders still come and cut this tress and do away with them due to scientific reasons so there is need for trained forest officers who actually know what they are doing and control the invaders from cutting trees,' (Interview, Some Herbalist, October, 2022).

Conclusion

In conclusion, cultural practices such as Totemism, taboos, and sacredness of water sources within the Ogiek indigenous community are essential to environmental conservation since they foster environmental conservation. Sacredness of water sources is a technique used to enhance the conservation of water bodies. Cutting certain trees is considered taboos among the Ogiek Community. Such trees are always conserved and available in plenty. Their totems include birds and animals such as Owl, dears and plants such as Mukeu that serve as honeybees attraction for the production of honey. People were and are not allowed to kill any female animal of any kind. They were highly protected especially the pregnant, older and those which are breastfeeding. Any community member who killed these animals was punished by the council of elder. In so doing the animals were protected and conserved. The strategies adopted in enhancing cultural practices in conservation efforts among the Ogieks indigenous community is the use of decrees of deities which define the relationship between community members and the environment. Orders are also given by the council of elders on the restricted killings of certain animals, cutting of trees, and limited access to certain water sources to enhance conservation. The council of elders has the sole right to physically sanction violators of conservation ethics. Community members endeavor to abide by the decrees of their deities on the

interdependent relationship between them and the environment to avoid incurring the rod of the gods.

On integration of cultural practices among the Ogieks community into modern-day Conservation techniques, both local and national government should support council of elders and local administrative leaders with material and financial resources to streamline their abilities in the management of natural resources and the environment. Indigenous education methods including community dialogue, apprenticeship, community elder's word of mouth and indigenous innovations which is the central to sustainable ecological conservation in Ogiek Community need to be engaged. Challenges faced by the Ogiek community in maintaining cultural practices in conservation efforts include lack of policies and legislation to protect indigenous values, beliefs and practices relating to environmental conservation, inadequate support by both the National and County governments, interference of cultural practices by the Top-Down decision-making and framework formulation policy, negative attitude of some Ogiek community members who shy away the indigenous people from showcasing their conservation knowledge and lack of material and financial resources affect the smooth documentation and the preservation of the Ogieks indigenous knowledge. Also, the modern education system does not support indigenous forms and methods of knowledge acquisition.

Recommendations

1. There is need to enhance indigenous cultural beliefs which are constantly struggling to maintain their place in environmental conservation in a system dominated by scientific worldviews. The community laws and customs should ensure communities take care of natural resources including Land use and are formed out of the need for the community to survive.
2. The study recommended that there is need to improve indigenous values, beliefs and practices relating to land use and natural resource conservation lost due to lack of policies and legislation to ensure their protection. This can be carried out by both the National and County governments in assisting communities' to document, preserve and disseminate indigenous knowledge on environment conservation and land use.
3. There is need to engage indigenous education methods including community dialogue, apprenticeship, community elder's word of mouth and indigenous innovations which is the central to sustainable ecological conservation among the indigenous cultural practices.
4. There is need for Ogiek community to be involved in some of the decision-making platform regarding environmental conservation where they can actually contribute and give their own knowledge on how things have been done.
5. Local government such as chiefs needs to be provided with bikes and motorbikes in the region to facilitate their movement from one area to another within their areas of jurisdiction where they

can actually run and intervene to pressing issues of land encroachment.

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