

Managing the Laikom Sacred Forest in the Boyo Highlands of Cameroon: Customary Laws, Traditional Institutions, Taboos and Penalties for Non-Compliance

Loh Mariline Nkenkuh¹, Titus Fondo Ambebe^{*2}, Nyong Princely Awazi³

^{1,2,3}Department of Forestry and Wildlife Technology, College of Technology, the University of Bamenda, P.O Box 39, Bambili, Cameroon

ABSTRACT

The Laikom sacred forest, in the Boyo Highlands of Cameroon, is a critical ecological and cultural heritage site governed by centuries-old customary laws and traditional institutions. A study was carried out to assess the roles of indigenous governance, taboos, rituals, and penalties in the management of the 21.9-hectare forest, located in the environs of the Kom Palace in Laikom. Data were collected through key informant interviews and observations. The findings reveal a deeply embedded system of traditional forest governance upheld by key institutions such as the Kwifon (sacred council), Fon, sub-chiefs, traditional practitioners, and women associations (Fumbuien). Customary laws regulate agricultural practices, hunting, cleansing rituals, and forest use, often transmitted through oral traditions, community gatherings, and ceremonies. The forest's sanctity is protected by taboos against activities such as tree felling, hunting, and unauthorized entry, particularly by women, against severe social, spiritual, and supernatural penalties. Despite the resilience of these traditional systems, Laikom faces growing challenges including encroachment, internal leadership conflicts, climate change, and erosion of cultural knowledge. Nonetheless, traditional management strategies such as community guardianship, ritual ceremonies, and agroforestry practices remain effective in conserving the forest's biodiversity and cultural relevance. This study underscores the importance of integrating customary laws and traditional institutions into formal environmental policy frameworks. Recognizing and supporting indigenous knowledge systems can enhance biodiversity conservation and cultural preservation. Policy interventions should aim at legally recognizing sacred forests, providing capacity-building for traditional custodians, and fostering collaborative governance models that respect local cultural values while addressing modern conservation challenges.

Published Online:

April 28, 2025

KEYWORDS: cultural heritage, customary laws, forest conservation, indigenous knowledge systems, sacred forests, taboos and penalties, traditional institutions

Corresponding Author:

Titus Fondo Ambebe

1. INTRODUCTION

Across many African societies, sacred forests represent not only ecological sanctuaries but also spiritual and cultural landscapes intricately woven into the very identity of communities (Ogar, 2023; Shiferaw et al., 2023). These sacred spaces are often preserved through unwritten rules and indigenous knowledge systems developed over generations, primarily enforced through customary laws, taboos, and traditional institutions (Ossai, 2024; Muchenje et al., 2025). Unlike formal conservation models which rely on statutory laws, sacred forests in Africa embody a socio-ecological system where belief, governance, and biodiversity converge. The forests are central to indigenous religious practices, ritual ceremonies, and the maintenance of social order. The enduring resilience of such systems across diverse African communities' points to their effectiveness in regulating access to and use of natural resources, often achieving conservation outcomes more sustainably than modern policies (Sinthumule, 2024; Nche and Michael, 2024). In various African contexts, including among the Yoruba in Nigeria, the Mijikenda of Kenya, and the Bakongo of the Democratic Republic of

Loh M.N. et al, Managing the Laikom Sacred Forest in the Boyo Highlands of Cameroon: Customary Laws, Traditional Institutions, Taboos and Penalties for Non-Compliance

Congo, sacred forests serve as community-conserved areas, preserved by a strong code of taboos, spiritual sanctions, and cultural norms. Such forms of conservation emphasize collective responsibility, rooted in spirituality, where disobedience is not only a social wrong but a spiritual transgression with potential repercussions such as illness, misfortune, or ostracism (Onebunne and Chijioke, 2021). These deeply spiritual environmental ethics reinforce the sacredness of nature, often promoting biodiversity preservation even without the intervention of the state or international organizations.

In Cameroon, the role of customary governance in forest management remains prominent, especially in rural areas where indigenous institutions continue to function alongside formal state structures (Kimengsi et al., 2022; Kimengsi and Mukong, 2023). The country is home to diverse ecological zones and over 250 ethnic groups, each with distinct cultural practices, including sacred forest management (Ntoko and Schmidt, 2021; Hoyte, 2023). Sacred groves are often embedded within traditional chieftaincies and used for rituals, ancestral veneration, initiation rites, and spiritual protection (Tchatchouang et al., 2021; Maffo et al., 2024; Tiokeng et al., 2024b; Juscar et al., 2025). Studies in the Western Highlands of Cameroon, including among the Bamileké and Tikar peoples, highlight how traditional laws and kinship-based institutions oversee the allocation of land, the regulation of tree cutting, and the observance of sacred days (Maroti, 2022; Tiokeng et al., 2024a). Despite pressures from modernization, land commodification, and environmental degradation, customary authorities in Cameroon, especially Fons (traditional rulers) and councils of elders, continue to play central roles in mediating land use and conservation. However, challenges have emerged due to the lack of formal legal recognition of customary laws, leading to conflicts between statutory and traditional governance systems (Che et al., 2021; Mbuy, 2023; Njoh et al., 2024). Furthermore, the expansion of logging concessions, agriculture, and infrastructure development has resulted in the encroachment and degradation of many sacred forests across the country.

In the North West Region of Cameroon, particularly within the Boyo Highlands, sacred forests are critical to the spiritual and environmental identity of the Kom people (Takor and Ankiandalibesa, 2021). The Laikom sacred forest, located within the immediate surroundings of the Kom Palace in Fundong Subdivision, is one of the most emblematic examples of this integration between culture, spirituality, and conservation. The Kom people trace their origin to Babessi and have, since their settlement in Laikom in the 18th century, designated and preserved this forest as a spiritual refuge and a site for ritual and traditional practices. The forest, which spans approximately 21.9 hectares at elevations ranging from 1700 to 1975 meters, is not only ecologically rich but deeply rooted in the historical, spiritual, and cultural narratives of the Kom people. Unlike many other sacred sites in Cameroon, the Laikom sacred forest has a clearly demarcated territory composed of distinct compartments, such as Aku-a-Mufu, Aku-a-Fuchuo, Aku-a-Beighe, and Aku-a-Chong, each with its own spiritual and ritual significance. The management of this forest is regulated by complex customary laws that govern access, harvesting, hunting, and agricultural practices. These laws are not codified in written form but are deeply embedded in the oral traditions, ritual ceremonies, and spiritual beliefs of the community. The Kwifon (an elite male secret society regarded as the "wise men of the land") plays a significant role in enforcing these rules, often invoking spiritual sanctions to deter defaulters and uphold ecological balance.

Taboos play a critical role in regulating behavior around the sacred forest (Kimengsi et al., 2022). Certain animals such as pythons, leopards, and the Bannerman Turaco are considered sacred and are not to be hunted or consumed. Women are generally prohibited from entering the sacred forest, particularly during menstruation, pregnancy, or breastfeeding, as it is believed to desecrate the spiritual purity of the space. Violating these taboos can result in severe penalties ranging from ostracism and community service to spiritual afflictions such as illness, sterility, or death. These sanctions are believed to be enforced by ancestral spirits, reinforcing the sacred forest's role as a custodian of moral and ecological order. Despite these strong cultural frameworks, the Laikom sacred forest faces increasing threats due to external pressures such as land encroachment, deforestation, and climate change. Internally, generational shifts, cultural erosion, and power struggles within traditional institutions have weakened the transmission and enforcement of customary laws. As the youth become increasingly disconnected from ancestral practices and more aligned with globalized lifestyles, the continuity of these traditional conservation systems is under threat. This study explored the intricate mechanisms through which the Laikom sacred forest is governed by indigenous knowledge systems. It aims to identify customary laws/practices, traditional institutions involved in forest management, taboos and penalties for non-compliance, and challenges faced in the management of this sacred site.

2. METHODOLOGY

2.1. Location of the study area

This study was carried out in the Laikom sacred forest from February to July 2024. The sacred forest is located in Laikom at altitudes between 1700 and 1975 m. It is found between latitudes 6°16'30" and 6° 17'0" N and longitudes 10°19'20" E and 10°19'50" E (Figure 1). The sacred forest covers a surface area of 21.9 ha, forms part of the Bamenda Highland Forests and is socio-culturally, economically and ecologically important to the people of Laikom in particular and the Kom Fondom in general. It is found within the immediate fringes of the Kom palace in Laikom, the traditional headquarters of the Kom Fondom, Fundong Sub Division, Boyo Division, North West Region of Cameroon. It is bounded by the Ijim plateau to the East, Fujua village to the West, Abuh to the North and Yang to the South. While the site for the sacred forest is Laikom, the study is designed to cover key informants from

villages in Fundong made up of three administrative units of Fundong, Njinikom and Belo that all depend for traditional administrative orders from Laikom, which is the seat of the Fondom.

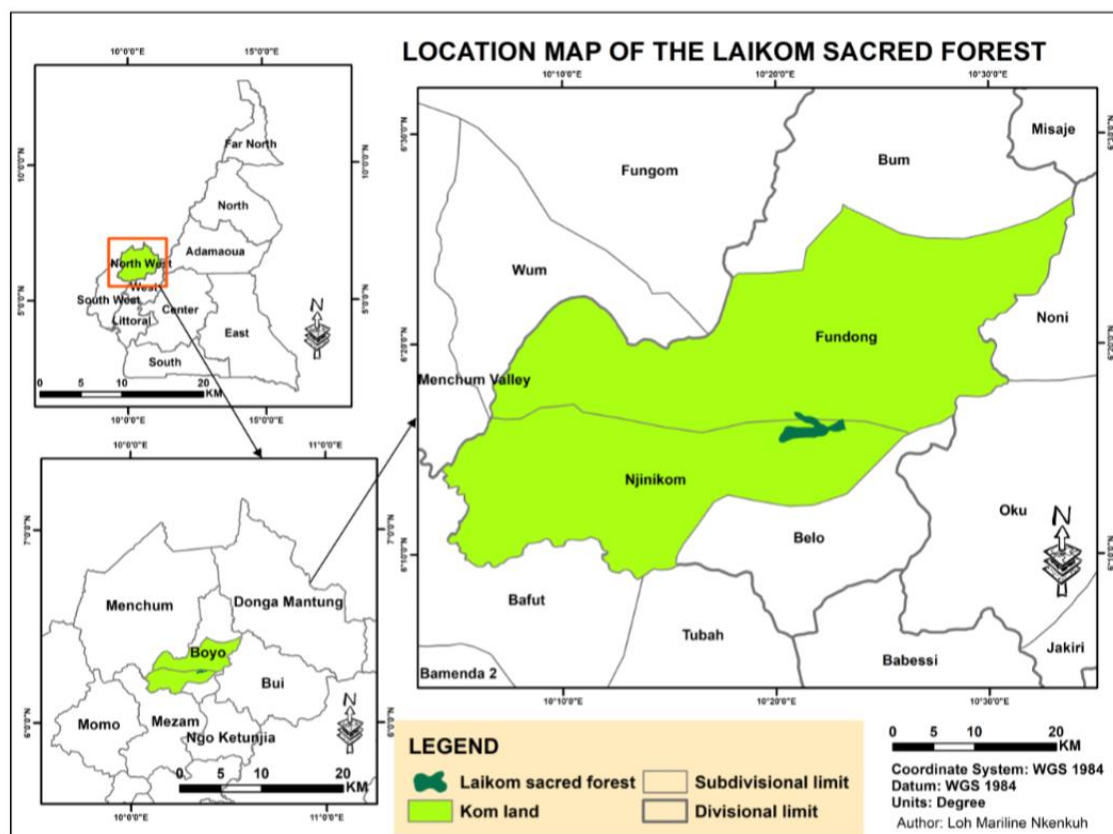


Figure 1: Location of Laikom in Fundong subdivision, Boyo Division Northwest region of Cameroon

2.1.1. Brief description of the Laikom Sacred Forest

The Laikom sacred forest is a natural forest found around the Laikom palace. It is composed of four compartments amongst which are Aku-a-Mufu, Aku-a-Fuchuo, Aku-a-Beighe and Aku-a-Chong. The Laikom sacred forest is a sacred site used for religious worship, ritual practices and promotion of culture aimed at the defense of the land, its productivity as well as the protection of human life. It was designated upon arrival from Babessi by the Kom people around the 1730s and has been site for perpetuation of religious, ritual, spiritual and cultural practices aimed at sheltering and protecting the land against evil spirit. Although found in Laikom, the sacred forest has overall influence on actions and activities around the Kom Fondom with many of its chief priests and wardens selected from across the Fondom as required by tradition. Those who serve in the category of chief priests are generally appointed, designated or volunteers in some cases like royal guards to the palace known as *Nchisintoh* in Kom.

2.1.2. Climate

With regards to climate, Laikom in Fundong Subdivision experiences two main seasons; the rainy season (wet) from mid-March to mid-October which is characterized by heavy down pours of over 2,800 mm and relative humidity of 82%. The annual average rainfall stands at 2400 mm per annum and the dry season that spans from mid-October to mid-March is characterized by extreme dry weather, dust and laden winds. Temperatures run from 15 °C to about 27°C with an annual average of 21° C. The coolest month is August. However, with the current dispensation of climate change, Kom in general and Laikom in particular are experiencing changes in weather patterns and seasonal variations. The seasons have become unpredictable in the area, more especially, with variations in the climatic elements (FCDP, 2012).

2.1.3. Relief

The relief of Kom is generally hilly and interspersed with incised valleys and steep escarpments. The common rock types are basalts. Laikom is found to the western slopes of an adjoining ridge to the Ijim forest which ends in a picturesque escarpment made of basalts. With respect to relief, Laikom is found in the mountainous stretch of the Western Highlands of Cameroon with 40-70% slopes range, grazing plains, steep and gentle highland areas, undulating hills and deep dry and wet valleys. There is also the existence of warm tropical swamp. The highland areas are highly used for grazing while the plains and deep fertile valleys are used as cultivable lands (FCDP, 2012). Many streams drain the landscape. Laikom has only two streams that drain through the boundaries

Loh M.N. et al, Managing the Laikom Sacred Forest in the Boyo Highlands of Cameroon: Customary Laws, Traditional Institutions, Taboos and Penalties for Non-Compliance

of the community. They are Jua Molombo and Jua Aku-a- Mufu. Laikom is a catchment area with many springs. They are amongst others, the Ikui, Achaff and Itsinala springs which hitherto served as drinking sources for the village until recently when pipe borne water has been harnessed from a spring at Ijim for the community (FCDP, 2012).

2.1.4. Soils

The soils are mainly well drained, moderately dark to light brown and deep brown to brown, friable clay loam to clay in places with humus top soil. They are predominantly Cambisols, with considerable amounts of weathered minerals. These Cambisols occur mainly on steep foot slopes, hills and high-level uplands while Lixisols and Arenosols are found at the lower ends of slopes and most low lying areas. Soils are thick, humus and rich e.g. sedimentary warm humus rich/fertile soils which favours the cultivation of rain-fed crops like beans, maize, cocoyam, soya beans, Irish and sweet potatoes, cassava and vegetables (FCDP, 2012).

2.1.5. Flora

The vegetation cover of Laikom is comprised mainly of mixed forest (humid montane forest located about 1800 m asl). The flora is made up of many species of trees, shrubs, herbs, grasses and climbers. Some plant species recorded in the Laikom sacred forest were *Maesa lanceolata*, *Agauria salicifonia*, *Ficus lutea*, *Adansonia digitata*, *Ficus thonningii*, *Sida acuta* etc (FCDP, 2012). The vegetation of the village is made up of tropical grasslands or humid Savannah with predominantly forest woodland and re-growth as well as Savannah with grass and shrubs. There is also a dense montane forest called Aku-a-ngei (giraffe forest) which is part of the adjoining Ijim montane forest. Other vegetation types are dominated by crops and the plantations around homesteads mostly made up of coffee, plantains, bananas, kola nuts, pears, mangoes and sometimes eucalyptus. Apart from this, the dominant vegetation in the community is that represented in the Laikom sacred forest found at 1925-1975m asl. The sacred forest represents the richest and densest ecosystem in the community.

2.1.6. Fauna

The area is found adjacent to Kilum-Ijim Forest in the Bamenda Highlands of Cameroon; an important biodiversity hotspot and endemic bird area of the world. Some animal species observed in the Laikom sacred forest as highlighted by the FCDP (2012) are *Galago alleni*, *Cephalophus monticola*, *African civet*, *Bannaerman's Turaco*, Grey headed sparrow, swallow bird, hawk and weaver birds, duiker, antelope, deer, monkeys, and baboons, etc. However, due to rapid increase in population and environmental degradation often associated with habitat loss, many of the species are becoming vulnerable and some threatened with extinction. Other species found here are reptiles such as agama lizard, snakes; insects such as butterfly, grasshopper, wasp, bees; and amphibians like frogs which all add significant value to the ecosystems of the area (FCDP, 2012).

2.1.7. Hydrology

According to the FCDP (2012), Fundong subdivision is drained with rivers, streams and springs. The major rivers found within the area are: Nkoini which serves as the natural boundary between Fundong and Njinikom subdivisions; the Jviaffief, which flows from Ijim forest crossing through Fujua to Fundong Town and down to Menchum in the west; Jvia Ngwa which runs from Ijim via Muteff, Abuh, Ngwa and Meli and it also separates the Fundong subdivision and ZOA Council; Jvia Ngunabum which flows from Ijim passing through Ilung and Ngunabum and joins River Kimbi. Other streams of significant value are Jvia Ibolem, Jvia Mboh which both flow from Ijim Forest and into Jvia Ngwa. Also found are prominent springs and waterfalls like "Tchimni" in Fundong Centre and the Laikom, Akeh and Ajung waterfalls.

2.1.8 Human milieu

The Kom fondom is believed to have been founded about 1730 (Nkwi, 1979). The history of the sacred forest and the mythical python could be linked to the Kom migratory history. According to Kom oral traditions or origin myths, the ancestors of the Kom migrated from Ndobbo in North Cameroon with other Tikar groups fleeing from the jihads, as those who were not willing to be converted to Islam migrated. Oral information further maintained that the Kom first moved to Babessi where they settled temporarily, and where the king of Babessi plotted to eliminate them. Kom is a fondom, located in the Bamenda Grassfields in the present-day North West Region of Cameroon. A fondom (akin to a classical state) is ruled by a fon locally known as foyn (supreme leader) who exercises judicial, quasi-religious, and executive powers over his people. According to the Kom, the foyn is the spiritual leader, the chief priest, and pontiff of his people (Nkwi, 1976). Kom is one of the principal ethnic groups of the North West Region of Cameroon where traditional government institutions are very important. The capital of Kom is Laikom, and it is made up of over 65 villages and it is the seat of the ruler, the Fon, and his advisory council, the Kwifoyn, who continue to be the most respected leaders. Foyn Ndzi II is the current paramount leader of Kom. The Kwifoyn is headed by a Bobe Kwifoyn (traditional prime minister) who is usually appointed by the reigning Fon. Bobe Kwifoyn thus presides over Kwifoyn sessions which are made up of Nchisindo (sub-chiefs) distinguished by the red feathers of the Turaco and quills of the porcupine they carry on their hats or caps and responsible for enacting laws and legislation to ensure the effective and smooth running of the fondom. The Fon is usually in company of palace

Loh M.N. et al, Managing the Laikom Sacred Forest in the Boyo Highlands of Cameroon: Customary Laws, Traditional Institutions, Taboos and Penalties for Non-Compliance

attendants known as Nchisintoh who are responsible for palace errands and can represent the Fon in missions if deemed fit for the purpose.

The Cameroonian government recognizes to some degree the authority of the Fons and local chiefs subject to them. Kom occupies most of Boyo division, including such towns as Fundong, Belo, Mbingo. The elaborate language and rich culture of Kom are very similar to neighboring groups, collectively known as the Tikar. The Kom language is also called Kom or Itangikom. During the 18th century migration in Cameroon, most tribes moved south in search of better economic opportunities. The Kom people, who originated from upper Mbum in Tikari, moved in search of fertile soils. They first settled in Babessi. While in Babessi, their population began to grow geometrically, and rapidly. The Fon of Babessi feared a possible attack from the Kom people. He then tricked the Fon of Kom (Manii) into believing that the increase in their male population was causing obstinacy and making rulership difficult and complicated. The gullible Fon of Kom believed this and subsequently accepted his proposal to burn all the healthy men in two separate huts. After the act was committed, the Fon of Kom realized that he had been tricked. The Babessi Fon had left a secret outlet into the forest through which his men escaped when the fire was lit. Unable to bear the loss and betrayal, the Fon of Kom committed suicide by hanging himself. He died without a son. Legend has it that a python trail appeared from the spot and led the remaining Kom in Babessi to their present settlement in Laikom around 1730 and it is from here that the population growth made the fondom to expand into other locations

2.2. Data collection and analysis

The Laikom sacred forest is not the only in the Kom Fondom. An socio-political crises that has been ongoing in the region since 2016 placed a limit to accessibility to other sacred forests leaving Laikom the site of interest. Data were collected through semi-structured interviews. The research employed a purposive sampling technique with 20 custodians including members of the advisory council (Kwifoyn), sub-chiefs (Nchisindoh), quarter heads, traditional practitioners, palace guards (Nchisintoh), and the Fundong Council. These stakeholders play key roles in enforcing customary laws governing the Laikom sacred forest and other natural resources in the area. The interview guide consisted of four sections: demographic information, perceptions on customary practices, traditional institutions and their roles in enforcing customary laws, and challenges in management of the forest. The interviews were conducted in Itangikom and pidgin-english. Also through observations, it was possible to physically experience some of the phenomena in the field rather than relying solely on the information provided by the interviewees. The data were analyzed descriptively and presented in tables.

3. RESULTS

3.1. Presentation of demographic information of key informants

The first part of this section focuses on the demographic characteristics of the key informants. From Table 1, 85% of the population was males and 15% were females. The majority (45%) of the key informants were 40-60 years old while the least representation was in the 81+ years old age group. An overwhelming 40% of respondents had undergone primary education, a number which declined through secondary and higher education to 15% with no formal education. In terms of position in the community, the majority (35%) of respondents was Traditional practitioner/herbalist/diviners and Kwifoyn/Wise-men of the land while the local council was the least represented with 5%. Between these extremes were Quarter heads (15%) and Sub-chiefs/Chindo (10%). While 75% of informants had lived in the community for 6 years and above, 0% had had a duration <1year as opposed to 25% who had been there for 1 – 5 years (Table 1).

Table 1: Demographic characteristics of key informants

Indicators	Characteristics	Frequency	Percent
Gender	Male	17	85
	Female	3	15
	Total	20	100
Age group	40-60	9	45
	61-80	7	35
	81+	4	20
	Total	20	100
Level of education	No formal	3	15
	Primary	8	40
	Secondary	5	25
	Higher education	4	20
	Total	20	100

Position in the community	Quarter heads	3	15
	Traditional practitioner/herbalist/diviners	7	35
	Kwifoyn/Wise-men of the land	7	35
	Sub-chief/Chindo	2	10
	Fundong Council	1	5
	Total	20	100
Duration of stay	<1year	0	0
	1-5years	5	25
	6 and above	15	75
	Total	20	100

3.2. Customary practices in managing Laikom sacred forest

The key informants highlighted four categories of customary laws and practices in the Kom Fondom that directly or indirectly impacted the management of Laikom sacred forest (Table 2). They included laws on agricultural practices, laws on cleansing and purification, Kwifon's hunting expedition, and Nga'ang.

Table 2: Customary laws

Customary laws	Purpose
1. Laws on agricultural activities	-Inaugurate the planting season -Ensure constant supply of food in Kom -Safeguard the land against spiritual threats posed by wandering spirits - Sacrifices offered are; guinea corn porridge, palm oil, salt and palm wine
Fuchuo-fi'Kom	
Ahzia and Ntul	-Ensure peace and fertility among Kom women -Important for continuity of Kom lineage -Limited to Kom Laikom palace -Members of Ndo-ntul protect crops, trees, plantains and boundary stems
Ngoesi ritual	It is being conducted in the month of May to protect sorghum crops from birds
2. Laws on Cleansing and purification	- This involves gathering of special herbs from the sacred forest and either burned at the key points or used in liquid form at public places to purify the land and protect it against bad omens - It is performed to cleanse the land against plagues and also to appease the gods against unforeseen calamities
Isu-iluo (Ngving)	
Isu-ise	Cleansing the land against skin disease through bathing and sprinkling water with castor and herbal concoctions
3. Kwifon's hunting expedition	-The royal annual hunt in kom is organized at the fondom level every April done by capable men -It is done once a year to prevent extinction
4. Nga'ang	-Foretell and devise strategies in safeguarding the management of the sacred forest Harbor by distinguished members of the kwifon

3.3. Traditional Institutions

Five (5) traditional institutions were identified to be involved in the management of Laikom sacred forest (Table 3). Traditional institutions in Kom revolved around the kwifon, Fon, chiefs, and sub-chiefs, etc. the Fon is the spiritual leader and a well organize council of elders (kwifon) being at the top. Conflicts between individuals at the quarter level are handled by quarter-heads who are responsible for traditional administration in every village.

Table 3: Traditional institutions

Traditional institutions	Potential function in sacred forest management
1. Kwifon (Sacred society)	<ul style="list-style-type: none"> - They enforce rules and regulations over sacred forest and control exploitation of the sacred forest resources -They use super natural powers to enforce injunctions on over exploitation, maintain peace, disciple and enforce payment of fines, -They enforce rules and regulations over sacred forest and control exploitation of the sacred forest resources
2. Fon	<ul style="list-style-type: none"> - He ensures effective and efficient management of the sacred forest - He works in collaboration with the traditional council to enforce customary laws - He has full control over resources and is the only person authorized to harvest timber for social services
3. Traditional practitioners	<ul style="list-style-type: none"> - Offers rituals, cleansing and healing - Cultural guidance - Spiritual guidance - Mediators between the community and the spirit world - Preservers of traditional knowledge
4. Notables	<ul style="list-style-type: none"> - Enforce management policies at clan level - Initiates tree planting among members - Keep sacred shrines around trees, water and forest - Plant peace trees to settle land disputes
5. Women association (Fumbuien)	<ul style="list-style-type: none"> - Promote biodiversity (keeps trees in farms as shades) - Key persons involved in sending out witches or defaulters of customary laws through composed songs - They reduce pressure on sacred sites since they are not allowed to farm in the forest - They organize social and cultural activities to promote unity, cooperation and sense of belonging among community members linked to the sacred forest

3.4. Transmission and enforcement of customary laws

The key informants mentioned community meetings and assemblies as key platforms for transmitting customary laws. Cultural practices and ceremonies are crucial for transmitting customary laws through rituals, initiations. They are also passed on via visual arts and at the market square and other community gatherings (Table 4).

Table 4: Medium of transmission of customary laws

Medium	Description
Oral tradition	Storytelling, myths, folklore, proverbs and sayings
Cultural practices and ceremonies	Rituals, ceremonies, initials, cultural festivals and events
Community gatherings	Meetings, assemblies, councils and gathering during crisis
Visual Arts and performance	carvings, sculptures, paintings, music and cultural dance
Market square	Passing of information concerning future warnings and calamities

3.5. Management efforts in protecting sacred forests

The responses from the key informants concerning efforts in anaging Laikom sacred forest revealed a variety of community-led conservation initiatives guided by customary laws including community guardianship, rituals, hunting and traditional meetings which have successfully protected the ecosystem and maintained their spiritual and cultural significance (Table 5).

Table 5: Traditional management practices

Practice	Description
Forest guardianship	Designated community members protect the forest
Rituals and ceremonies	Regular rituals and ceremonies promote spiritual connection and conservation
Traditional hunting and gathering	Sustainable hunting and gathering practices ensure resource use without depletion
Agroforestry	Integration of agriculture and forestry maintains forest cover and biodiversity
Community meetings	Regular meetings ensure coordination and cooperation

3.6. Challenges faced in managing Laikom sacred forest

The key informants raised several challenges faced by traditional institutions in managing Laikom sacred forest. They were broadly categorized as external pressures, internal conflicts, limited resources, and cultural erosion. There were also challenges related to government policies as well as changing climatic and environmental conditions (Table 6).

Table 6: Challenges

Challenges	Description
A. External Pressures	<ul style="list-style-type: none"> - Encroachment and deforestation - Urbanization and infrastructure development
B. Internal Conflicts	<ul style="list-style-type: none"> - Arising from disagreements among community members and power struggle within traditional institutions
C. Limited Resources	<ul style="list-style-type: none"> - Due to financial constraints - Lack of technical expertise
D. Cultural Erosion	<ul style="list-style-type: none"> - Loss of traditional knowledge and practices - Disconnection from ancestral heritage
E. Government Policies and laws	<ul style="list-style-type: none"> - Lack of recognition of customary laws in Laikom sacred forest
F. Climate Change and Environmental factors	<ul style="list-style-type: none"> - Wildfires - Soil degradation and erosion - Changing precipitation patterns

3.7. Taboos and penalties of non-compliance

The key informants highlighted certain character exhibits that were considered as taboo in Kom. The taboos have a direct relationship with the mismanagement of the Laikom sacred forest. These include stealing of private or communal property, cutting down of sacred trees, hunting in sacred sites and women access to the sacred forest. The key informants were unanimous on the fact that taboos were essential for maintaining social harmony and the integrity of the Laikom sacred forest. Penalties for non-compliance ranged from bad luck to death depending on the taboo in question (Table).

Table 7: Taboos and penalties

Taboo	Penalties
1. Cutting down of trees in the sacred site	Ostracism, sudden illness, and sterility.
2. Hunting of animal during forbidden seasons and sacred days and eating of sacred animals (python, tiger, Bannerman Turaco)	Bad luck, ostracism
3. Entering the sacred sites without permission especially women passing through the sacred site while pregnant, breastfeeding or menstruating	Missing, instant death, miscarriage sterility and endless menstrual flow
4. Stealing of private or communal property, especially things of considerable value placed under the custody of the gods or ancestors	Exclusion, sudden illness, mysterious dead

5. Farming near watersheds or destroying sacred waters and fetching water in the sacred spring\streams other than using of a calabash	The family is subjected to ill fate that is a family member can be burned mysteriously; the defaulter will be beaten by the spirits of that water.
6. Slash and burn around the sacred forest for agriculture	Poor crop yield
7. Violation of the sacred days as defined by the Tradition	Summon at the palace or beaten by spirits
8. Sacrilege in the sacred forest, (getting into the forest with an unclean mind as a sorcerer	A heavy calamity will befall the family of the offender

4. DISCUSSION

4.1. Customary laws

According to the key informants, three major rituals were associated with farming activities in the Kom fondom, including Fuchou, Azhia, Ntul, and Ngoesii. These rituals are performed in Laikom by the Fon for the general welfare of the Kom people. In the different ritual activities, the Kom people demonstrate the three Kom hands of Ghu wu Kom tual namely ghu wain (child), afuo iyini (food crops), and nyam ngvin (bush meat) (information obtained from a key informant in Kom, April 2024). These seek to protect the people against the muuso which is a mystical power believed to extract the goodness from the crops and then emaciate human beings to death. This aligned with the findings of Takor and Ankiandalibesa (2021), who conducted research highlighting the various ceremonies that reflect the community's deep connection with the land and its natural resources, including the forest. These rituals involved offerings, prayers and other forms of veneration aimed at ensuring the health of the forest ecosystem and the community. Customary practices are deeply ingrained in the culture and identity of indigenous communities, guiding behaviors and relationships among community members (Kirmayer et al., 2003; Ahrén, 2004; Obiero et al., 2023; Mal and Saikia, 2025). Customary ceremonies and their importance across various cultures, rituals are carried out to pay homage to the spirits inhabiting the forests, recognizing their indispensable role in sustaining life and the ecosystem. This demonstrates that African traditional practices have values that align with the objectives of the sustainable development goals (SDGs), which can be used to promote sustainable development and achieve the SDGs.

Dario (2025) stated that the indigenous populations of the Amazon region conduct rituals to honor particular trees renowned for their medicinal properties and ecological significance. These practices not only protect biodiversity but also strengthen communal bonds and cultural heritage. Studies such as those of Akalibey et al. (2024) and da Silva et al. (2024) have revealed that regions where traditional ceremonies are integrated into forest management tend to exhibit heightened levels of biodiversity and ecological robustness and the case of Laikom sacred forest is not an exception. Research conducted in the Tehuacán Valley demonstrated that communities practicing traditional agroforestry techniques, in conjunction with their customary rituals, maintained more resilient ecosystems compared to those reliant solely on contemporary agricultural methods (Vázquez-Delfin et al., 2022). This suggests that the spiritual and cultural dimensions of these ceremonies significantly contribute to ecological well-being and sustainability.

Closely related to the fuchuo ritual, which is performed in the Laikom sacred forest are Azhia and ntul ritual. Azhia is a ritual which is performed to ensure a regular rainfall and it also ensures sufficient sunshine and a future bumper harvest. Ntul ritual is limited to Laikom palace and it is performed to ensure peace and fertility of Kom women and the need for continuity of Kom lineage. Members of the ndo-ntul are also called upon to protect crops and trees, plantains, and boundary stems. People who uproot these crops are liable to a fine of a goat (Nkwi, 1982). These rituals are crucial for food production and sustainability, as famine is seen as a bad omen in Kom. Lang (2024) found that fertility, farming and crop yield rituals are performed in the grassfield regions of Cameroon to ensure successful crops and prevent tornado damage. The decline in these rituals is noted, but they remain important in the Northwest Region of Cameroon. Territorial cults operate on the principle that management of nature depends on the correct management and control of society. The case of Kom does not show the contrary and rather re-enforces the way indigenous peoples could understand and conserve their environment. By putting in place certain taboos they inadvertently keep the devastation of their environment intact.

The local people in the Far North Region of Cameroon also performed agriculturally related rituals annually. Sacrifices are made to ensure a bountiful harvest, emphasizing the belief in rituals for successful farming. This belief encourages hard work in farming. In accordance to the performance of traditional rituals for food security, fertility and sustainability, Gimandze and Mvetumbo (2025) pointed out that sacrifices took and are still taking place in rural communities in the form of blood for purification or cleansing purposes. Rituals occupied an important place in African traditional religions. It is through these rituals that the Africans through their traditional priests communicate with their ancestors, the living and the dead, and fertility of their land is achieved and through these rituals there is conservation. Azaglo et al. (2024) showed that in Ghana rituals play an important role in the offerings to

ancestors and local gods. Azong (2021) pointed that in the Bamenda highlands of Cameroon, rituals are very important in local farmers beliefs and perspectives as far as the fight against climate change is concerned.

In Kom, through fuchuo and azhia rituals, the Fon and the chief priests (kwifon) who performed the rituals are empowered more through these acts. The fuchuo and azhia rituals illustrate more importantly the cultural understandings of Kom people and their environment. The premise upon which the rituals are performed is to prevent insecurity thereby protecting the environment. Cultural understandings are a means which people employ to deal with insecurity situations. Through these rituals, the Kom people illustrate the extent to which indigenous knowledge is a powerful force in conserving their environment.

The sacred forest in Kom is reserved for a unique ceremonial practice known as Ko angang (pilgrimage) during which, distinguished members of the Kwifon, esteemed herbalists, and seers convene annually for duration of one Kom week, spanning eight days, to deliberate, foretell, and devise optimal strategies for safeguarding, nurturing, and enriching the prosperity of the Kom territory. This location serves as the specific spot from which the selected individual to be crowned Fon of Kom gathers their final fuel wood before their coronation. Access to this site is strictly restricted to the general public and is only granted during ceremonial occasions (Information obtained from a key informant in Atoyini Kom, March 6, 2024). An analogous ritual and sacred site in another country is the yearly journey to Mecca in Saudi Arabia for the Hajj. Bashir (2024) stressed that pilgrimage holds great significance in the Islamic faith, bringing together millions of Muslims to engage in religious rites, meditate, and seek spiritual rejuvenation. Entry to the sacred sites in Mecca is rigorously controlled and limited to those partaking in the pilgrimage. Sacred shrines therefore remain one of the most important sacred places which are significantly promoting social, cultural and religious activities in various communities and in Laikom especially.

4.2. Taboos and penalty of non-compliance

Taboos have played an important role in traditional African societies and still have their influence felt in the modern societies. They help regulate life and property. One particular area where this is very much evident is among the Kom people, as taboos play a distinguished role in their governance. Cutting down trees in sacred sites is a taboo that has significant environmental implications. Research has shown that sacred forests are crucial for maintaining biodiversity and ecosystem services (Melaku et al., 2023). Violating this taboo can lead to habitat loss and disruption of ecosystem balance.

According to the key informants, violating taboos will incur the wrath of the gods, including the earth gods and ancestral gods. Hunting animals during forbidden seasons and sacred days, as well as eating sacred animals like the python, tiger, and Bannerman Turaco in Kom, is another taboo that has conservation implications. Studies have shown that overhunting can lead to population decline and even extinction (Fa et al., 2022; Hinsley et al. 2023). Moreover, eating sacred animals can disrupt the spiritual balance and have negative consequences for the community.

Entering or passing through sacred sites without permission, especially for women who are pregnant, breastfeeding, or menstruating, is a taboo that highlights the importance of respecting cultural heritage. Research by Sinthumule (2022) has shown that women's roles in sacred site management are crucial for maintaining cultural and environmental balance. Taboos are deeply rooted in cultural heritage, reflecting a community's history, values, and beliefs. Violating sacred days as defined by tradition is a taboo that underscores the importance of respecting cultural heritage. Research has also shown that cultural significance of sacred days can lead to social cohesion and spiritual balance (Opara, 2024). Violating taboos can have severe consequences, including spiritual imbalance, social ostracism, and environmental degradation. Farming near watersheds or destroying sacred waters, as well as fetching water in sacred spring streams other than using a calabash, is a taboo that highlights the importance of water conservation. Research has shown that watershed degradation can lead to water scarcity and negative impacts on human well-being (Samba et al., 2021).

4.3. Taboos and its significance

In numerous indigenous communities in Africa, sacred forests are shielded by stringent customary laws and taboos. The case of Mijikenda community of Kenya could be taken into account, it is believed that felling trees or exploiting resources from sacred forests without the consent of the community elder can bring about misfortune and ill luck (Keida, 2022). In Cameroon, sacred forests serve as the locations for rituals, initiations, festivals, and ceremonies, including the selection and installment of Kings (Fomin, 2008; Juhé-Beaulaton and Salpeteur, 2017). Preserving these sacred sites provides local communities with various advantages, such as socio-cultural, spiritual, and economic benefits, enabling them to practice their faiths and uphold traditional customs. The Laikom sacred forest is no exception, as numerous sacred sites have been identified for rituals, ceremonies, and worship, contributing to the conservation of the sacred forest and its diverse range of flora and fauna.

5. CONCLUSION AND POLICY IMPLICATIONS

5.1 Conclusion

The Laikom sacred forest stands as a powerful testament to the enduring relationship between indigenous knowledge, spirituality, and environmental stewardship. Rooted in centuries-old traditions of the Kom people, its management relies on a complex interplay

of customary laws, traditional institutions, taboos, and spiritual sanctions. This study has revealed how deeply embedded cultural norms and values continue to shape forest governance in Laikom, serving not only ecological purposes but also social and spiritual ones. The forest is managed by a range of actors, including the Kwifon, Fon, sub-chiefs, traditional practitioners, and women's associations, each playing distinct roles in ensuring that customary rules are respected and enforced. Key customary practices—such as rituals, communal hunting, agricultural restrictions, cleansing ceremonies, and sacred days—are maintained through oral traditions, visual art, community gatherings, and spiritual teachings. These mechanisms serve to regulate access and usage, promote biodiversity, and instill a strong conservation ethic among the local population. Penalties for violating taboos are believed to result in severe consequences, ranging from spiritual afflictions to social exclusion, demonstrating the effectiveness of spiritual deterrence in resource management. However, the study also highlights emerging challenges that threaten the continuity and effectiveness of this traditional governance system. These include encroachment, deforestation, internal power struggles, erosion of traditional values among the youth, limited legal recognition of customary laws, and the broader effects of climate change. The marginalization of traditional institutions in formal environmental governance structures has further weakened their authority and capacity to respond to these modern pressures.

5.2 Policy implications

In light of the findings of this study, different policy implications emerge with the main one being legal recognition of customary laws, community-based conservation models, youth engagement and cultural transmission, climate adaptation and resource support, and conflict resolution mechanisms.

- There is an urgent need for national environmental and land policies in Cameroon to formally recognize and integrate customary laws and traditional institutions in forest management. Legal backing would strengthen the authority of traditional custodians and promote collaborative governance between state institutions and local communities.
- The Laikom sacred forest offers a successful model of community-led conservation. Policies should support and scale such approaches, especially in rural and indigenous contexts where formal governance structures are weak. Government and NGOs should work in partnership with traditional institutions to co-develop forest management plans that respect local knowledge systems.
- To ensure the sustainability of sacred forest management, there is a need for educational and cultural programs that reconnect youth with their ancestral values and practices. Support for cultural festivals, storytelling, and indigenous arts can play a critical role in preserving traditional ecological knowledge.
- Traditional systems must be equipped to deal with modern environmental challenges. This calls for capacity-building initiatives that blend indigenous knowledge with scientific understanding to enhance climate resilience. Financial and technical resources should be directed toward local custodians for effective forest monitoring and restoration.
- Strengthening internal governance through inclusive dialogue and recognition of different community stakeholders—including women's groups and youth—will help resolve internal disputes and reinforce collective responsibility in sacred forest protection.

REFERENCES

1. Ahrén, M. (2004). Indigenous peoples' culture, customs, and traditions and customary law-the Saami people's perspective. *Ariz. J. Int'l & Comp. L.*, 21, 63.
2. Akalibey, S., Hlaváčková, P., Schneider, J., Fialová, J., Darkwah, S., & Ahenkan, A. (2024). Integrating indigenous knowledge and culture in sustainable forest management via global environmental policies. *Journal of Forest Science*, 70(6), 265.
3. Azaglo, A. K., Adom, D., Kquofi, S., & Ebeheakey, A. K. (2024). Aesthetic elements in Tagbayiyi ritual performance of the Fiasidi tradition in the Klikor traditional area of Ghana. *Journal of African Art Education Volume*, 4(2), 1.
4. Azong, M. N. (2021). Impact of cultural beliefs on smallholders' response to climate change: the case of Bamenda Highlands, Cameroon. *International Journal of Environmental Studies*, 78(4), 663-678.
5. Bashir, H. (2024). Elucidating the role of contributors enriching spiritual and religious inspirations for the Muslims to perform holy umrah pilgrimage in Saudi Arabia. A prospective study: Umrah a spritual journey. *International Journal of Innovation and Business Strategy (IJBS)*, 19(1), 36-47.
6. Che, N. W., Michel, M. M., & Richard, M. (2021). The Need for an Effective Regulation and Conservation of the Forest Heritage in the Mount Cameroon Region: A Legal Appraisal. *Issue 3 Int'l JL Mgmt. & Human.*, 4, 3741.
7. da Silva, E. C., Guerrero-Moreno, M. A., Oliveira, F. A., Juen, L., de Carvalho, F. G., & Barbosa Oliveira-Junior, J. M. (2024). The importance of traditional communities in biodiversity conservation. *Biodiversity and Conservation*, 1-30.
8. Dario, F. R. (2025). The plant universe in the culture of Brazilian Indigenous peoples. *World News of Natural Sciences*, 59, 221-238.

9. Fa, J. E., Funk, S. M., & Nasi, R. (2022). *Hunting wildlife in the tropics and subtropics*. Cambridge University Press.
10. FCDP (2012). Fundong Council Development Plan. Elaborated with the support of the National Community Driven Development Program (PNDP). https://www.pndp.org/documents/05_CDP_FUNDONG1.pdf
11. Fomin, E. S. D. (2008). Royal Residences and Sacred Forests in Western Cameroon: The Intersection of Secular and Spiritual Authority. *Journal for the Study of Religion, Nature & Culture*, 2(3).
12. Gimandze, K. A., & Mvetumbo, M. (2025). Culture and Food Habits in the Yamba Society of the North-West Region of Cameroon: An Anthropological Analysis of the Challenges of Food Crop Production. *ASC-TUFS Working Papers*, 5, 103-121.
13. Hinsley, A., Willis, J., Dent, A. R., Oyanedel, R., Kubo, T., & Challender, D. W. (2023). Trading species to extinction: evidence of extinction linked to the wildlife trade. *Cambridge Prisms: Extinction*, 1, e10.
14. Hoyte, D. S. (2023). *Gorillas and Grandfathers: Baka hunter-gatherer conceptions of the forest and its protection, and the implementation of biocultural conservation through Extreme Citizen Science in the rainforests of Cameroon* (Doctoral dissertation, University of London, University College London (United Kingdom)).
15. Juhé-Beaulaton, D., & Salpeteur, M. (2017). Sacred groves in African contexts (Benin, Cameroon): Insights from history and anthropology. In *A History of Groves* (pp. 119-134). Routledge.
16. Juscar, N., Harrison, N., James, A., & Prossie, M. (2025). Contribution of Geospatial Data in the Mapping and Restoration of Sacred Forest in the Grassfield Communities in Cameroon. <https://www.intechopen.com/online-first/1198393>
17. Keida, K. (2022). Still a sacred void? Cultural heritage, sacred places, and living spaces of the Mijikenda Kaya Forests along the Kenyan Coast in East Africa. *Senri Ethnological Studies*, 109, 55-75.
18. Kimengsi, J. N., & Mukong, A. K. (2023). Forest resource endogenous cultural institutions in rural Cameroon: compliance determinants and policy implications. *Journal of Environmental Planning and Management*, 66(7), 1579-1600.
19. Kimengsi, J. N., Mukong, A. K., Giessen, L., & Pretzsch, J. (2022). Institutional dynamics and forest use practices in the Santchou Landscape of Cameroon. *Environmental Science & Policy*, 128, 68-80.
20. Kimengsi, J. N., Ndikebeng, K. R., & Mukong, A. K. (2022). Community-based forest management institutions in Cameroon: dynamics and compliance determinants. *Journal of Land Use Science*, 17(1), 629-647.
21. Kirmayer, L., Simpson, C., & Cargo, M. (2003). Healing traditions: Culture, community and mental health promotion with Canadian Aboriginal peoples. *Australasian Psychiatry*, 11(sup1), S15-S23.
22. Maffo, N. L. M., Mounmemi, H. K., Taedoung, H., Noiha, V. N., Mbaire, K. M. M., Nyeck, B., ... & Zapfack, L. (2024). Assessing Floristic Diversity, Stand Structures, and Carbon Stocks in Sacred Forests of West Cameroon: Insights from Bandrefam and Batoufam. *Open Journal of Forestry*, 15(1), 69-95.
23. Mal, P., & Saikia, N. (2025). Cultural persistence in health-seeking behaviour: a mixed-method study of traditional healing practices among Garo tribal women in Meghalaya, India. *Journal of Biosocial Science*, 1-20.
24. Maroti, D. P. (2022). Sacred Forests, Modes of Transmission of Cultural Knowledge and Security Geopolitics of Monarchs and Dignitaries Among the Bamileké of West Cameroon. *Open Journal for Studies in History*, 5(1).
25. Mbuy, T. (2023). *Fons of "Traditional Bamenda" and Partisan Politics in Contemporary Cameroon: Reconstructing Identity and Cultural Meaning*. African Books Collective. <https://books.google.cm/books?id=DsvlEAAQBAJ&printsec=frontcover#v=onepage&q&f=false>
26. Melaku, A., Ivars, J. P., & Sahle, M. (2023). The state-of-the-art and future research directions on sacred forests and ecosystem services. *Environmental Management*, 71(6), 1255-1268.
27. Muchenje, B., Pwiti, G., & Mhizha, A. (2025). The significance of myths associated with natural heritage tourism destinations in Zimbabwe: a case study of Nyanga Mountain, Eastern Zimbabwe. *Cogent Social Sciences*, 11(1), 2451745.
28. Nche, G. C., & Michael, B. O. (2024). "It Is Taboo to Clear Those Forests or Cut Trees from Them": How Sacred Forest Preservation in Abanyom, Cross River State, Nigeria Promotes Environmental Sustainability. *Worldviews: Global Religions, Culture, and Ecology*, 28(3), 268-294.
29. Njoh, A. J., Esongo, N. M., Ayuk-Etang, E. N., Soh-Agwetang, F. C., Ngyah-Etchutambe, I. B., Asah, F. J., ... & Tabrey, H. T. (2024). Challenges to indigenous knowledge incorporation in basic environmental education in Anglophone Cameroon. *Journal of Asian and African Studies*, 59(5), 1387-1407.
30. Nkwi, P. N. (1976). Traditional Government and Social Change: a study of the political institutions among the Kom of the Cameroon Grassfields. <https://www.africabib.org/rec.php?RID=83325569X>
31. Nkwi, P. N. (1979). Cameroon Grassfield chiefs and modern politics. *Paideuma*, 99-115.
32. Ntoko, V. N., & Schmidt, M. (2021). Indigenous knowledge systems and biodiversity conservation on Mount Cameroon. *Forests, Trees and Livelihoods*, 30(4), 227-241.

33. Obiero, K. O., Klemet-N'Guessan, S., Migeni, A. Z., & Achieng, A. O. (2023). Bridging Indigenous and non-Indigenous knowledge systems and practices for sustainable management of aquatic resources from East to West Africa. *Journal of Great Lakes Research*, 49, S128-S137.
34. Ogar, M.B. (2023). *Sacred Forests and Rivers: The Role of Indigenous Religion in Promoting Environmental Sustainability in Abanyom, Cross River State, Nigeria*. University of Johannesburg (South Africa). <https://www.proquest.com/openview/e7947191a901131c3edc0b219eef961c/1?cbl=2026366&diss=y&pq-origsite=gscholar>
35. Onebunne, J. I., & Chijioke, N. I. (2021). African Sacrality and Eco-Spirituality. *African Ecological Spirituality: Perspectives in Anthroposophy and Environmentalism a Hybrid of Approaches*. https://books.google.cm/books?id=-7V9EAAAQBAJ&source=gbs_navlinks_s
36. Opara, K. C. (2024). Community Values And Social Cohesion: Traditional African Religious Practices In Contemporary Nigerian Society. *Ama: Journal Of Theatre And Cultural Studies*, 18(1).
37. Ossai, A. (2024). Traditional Ecological Knowledge in Igbo Society: Exploring Igbo Culture for Environmental Sustainability. *Sist Journal of Religion and Humanities*, 4(1).
38. Samba, G., Fonteh, M. L., & Fokeng, R. M. (2021). Urban dynamic Stressors in the Sisia-Menteh Watershed of Bamenda, North West Region Cameroon. *GSJ*, 9(5).
39. Shiferaw, A., Hebo, M., & Senishaw, G. (2023). The spiritual ecology of sacred landscapes: Evidence from sacred forests of the Sebat Bête Gurage, Central-South Ethiopia. *Cogent Social Sciences*, 9(1), 2210900.
40. Sinthumule, N. I. (2022). Gender and sacred natural sites: The role of women in sacred sites protection and management in Vhembe region, Limpopo Province of South Africa. *Global Ecology and Conservation*, 35, e02099.
41. Sinthumule, N. I. (2024). Sacred forests as repositories of local biodiversity in Africa: A systematic review. *Forest Science and Technology*, 20(4), 337-348.
42. Takor, N. K., & Ankiandalibesa, N. C. (2021). Herbbal Potency, Ecological Threats and Changes in Medico-Spiritual Healing of Patients in the Kom Chiefdom of Cameroon. *African Indigenous Ecological Knowledge Systems*. <https://acjoi.org/index.php/jassd/article/view/1912/1891>
43. Tchatchouang, F. C. L., Djomo, C. C., Tajeukem, V. C., Djibrilla, P., & Happi, J. Y. (2021). Studies On Diversity, Structure and Carbon Stocks from Three Pools in the Kouoghap Sacred Forest, Hedgerows and Eucalyptus Plantations in the Batoufam Locality, West Cameroon. *Mod Adv Geogr Environ Earth Sci*, 6, 1-14.
44. Tiokeng, B., Gatchou, D., Alex Bruno Dong, E. A. B., Lacatuce Tene Kenne, T. L., Victor François Nguetsop, V. F., & Mapongmetsem, P. M. (2024b). Floristic Diversity and Carbon Stock of Woody Stands in Some Sacred Forests in the West Cameroon Region. *Journal of Agriculture and Ecology Research International*, 25(2), 42-52.
45. Tiokeng, B., Ngougni, M. L., Roger, T., & Nguetsop, V. F. (2024a). Sacred forests in the Western Highlands Cameroon: What benefits for local population and nature?. *Research, Society and Development*, 13(5), e10413545720-e10413545720.
46. Vázquez-Delfin, P., Casas, A., & Vallejo, M. (2022). Adaptation and biocultural conservation of traditional agroforestry systems in the Tehuacán Valley: access to resources and livelihoods strategies. *Heliyon*, 8(7).