

# The Role of Bakweri Traditional Beliefs in the Management of Mount Cameroon National Park

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## Abstract

The sustainability of Parks are threatened because traditional beliefs are not enshrined in the management processes. Despite efforts made by many researchers to demonstrate the significance of these traditional beliefs in Africa, the traditional beliefs are side-lined in resources management. This research investigated the situation in Mount Cameroon National Park (MCNP), where natural resources management has been challenging despite numerous management strategies. MCNP is the home or '*chariot of gods*' of the gods of Bakweri clan '*Ihvarza Mote*' the practice of traditional beliefs has declined and so have the natural resources. We surveyed 228 households and randomly selected 14 from the 41 villages in MCNP. Four hundred and eighty seven (487) questionnaires were administered (minimum of 30 per village). Focused Group Discussions (FGD), key informant interviews and participant observations were used as study instruments. Secondary data was obtained from the Ministry of Forestry and Wildlife and also from Park management. Data was analysed using descriptive statistics, multiple response analysis (MRA) to compute aggregate score within conceptual components. We found significant evidence  $P < 0.05$  that there are traditional beliefs in the gods of Mount Cameroon '*Ihvarza Mote*' which affect natural resource management in all the four clusters in MCNP. Majority of the respondents (89.5%) perceived that degradation of natural resources was due to disregard of traditional beliefs. Chi square indicated significant association ( $P < 0.001$ ) that traditional forest conservation was practiced in areas that have traditional beliefs associated with forest resources. Spearman's Rho elucidates significant ( $P < 0.05$ ) relationship between perceived traditional importance of forest and perceived importance of collaborative forest management. Focused group discussions disclosed dissatisfaction in management strategies especially from hunters. There has been a momentous decline in the use of the Bakweri culture which has caused erosion of culture and indigenous knowledge. We conclude that the non-enshrinement of the traditional beliefs has caused degradation of natural resources, unsustainable livelihood; non-compliance of regulations and poor participation in collaborative natural resource. We recommend enshrinement of traditional beliefs, empowerment and involvement of local people in decision making processes in MCNP. There is a need for an in-depth study of traditional beliefs and culture to inform policy makers and management in resources conservation worldwide.

**Keywords:** '*Ihvarza Mote*', Traditional Beliefs, Collaborative Management, Natural Resources Management, Mount Cameroon National Park.

## 1 Introduction

The conservation of Parks are threatened because traditional beliefs are not enshrined in the management processes. Despite efforts made by many researchers to prove the significance of traditional beliefs in Africa, the sustainability of the practices are still threatened (Kokou *et al.*, 2008, Sarfo-Mensah and Oduro, 2010). For instance, Jehu-Appiah *et al.* (2012), investigating folklore in Edo State Nigeria showed that despite the significance of traditional beliefs in resources conservation the practices are depreciating considerably. This is because cultural resilience is vital in achieving sustainable rural livelihood. Thus, a vibrant cultural system enables people to pursue robust livelihood strategies that provide resilience which enables people to cope with vulnerability in mountain communities (Daskon, 2010).

A good example is China where taboos in the Tibetan sacred mountain has demonstrated significant role in natural resource management (Shen *et al.*, 2012). Similarly, in India traditional beliefs has played a major role in the protection of sacred groves and the worship of their god *Niyam Rajah* in Donria kondh (Leah Temper and Martinez-Alier, 2013). There is great concern that prescription governance has not made due consideration of the traditions and pre-existing institutions which can handicap resources management because the conditions of local people in the management process is quite relevant, yet negated (Cox *et al.*, 2014).

In Cameroon, and particularly in Southwest region, colonial masters took a major portion of the land for plantation use (BLCC, 2006) and also established many protected areas. All this destabilised traditional systems which undermined the livelihoods and aspirations of the local population. These years of mixed feelings about

traditional natural resources management has established lack of cooperation between stakeholders and eventually habitat destruction that has affected wildlife in MCNP. With 41 villages around the MCNP management has been a major challenge. The increase in restriction is causing the local people to complain about their traditional rights (Nana and Tchamadeu, 2014). This is because the aspirations and traditional belief of the local people's and their god, 'Ihvarza Mote', has not been enshrined in management of the Park which has been detrimental to the management processes (Amungwa, 2011).

It is posited that communities closer to natural resources can play vital roles in sustainable natural resources management, (Cinner and Aswani, 2007, Shahabuddin and Rao, 2010). This is why the relationship between spirituality and resource management has received enormous attention lately. However, many countries in Africa have alienated the traditional beliefs which is crucial for successful conservation.

### 1.1 Background of the study

Research has shown the significance of traditional beliefs all over the world. For instance, in China the Baima Tibetans have embarked on the development of their ruined culture, traditions and customs which had been neglected by powerful modern scientific knowledge. The local people have played a critical role in the conservation of biodiversity and livelihood preservation of the local inhabitants because the aspirations and beliefs of the local people were preserved in the management of protected areas (Luo *et al.*, 2009). Shen *et al.* (2012), concluded that Tibetan sacred mountains could have an important role in conservation, not only because they cover a considerable area, but also because of strong local participation in conservation of sacred mountains. Similarly in India the Supreme Court of India passed a judgement in favour of the people of Donria Kondh to worship their gods 'Niyam Rajah' whose resting place is the Nyamgiri Mountain which is sacred to them (Leah Temper and Martinez-Alier, 2013).

Nonetheless, the sustainability of the practice of these traditional beliefs are threatened because they are not enshrined in the management of protected areas. The Dongria's taboo on cutting trees on top of Nyamgiri is a good example of traditional beliefs that restrain overexploitation (Padel and Das, 2010). Such beliefs which are part of the daily lives of the local people need to be part of the management process in protected areas.

Berkes (2008), emphasizes that, unlike Western science, traditional system inherently linked with traditional beliefs and folklore that conveys interrelatedness between humans and the rest of the ecosystem. Powerful spiritual symbols are used to pass on moral codes, ecological knowledge, and management systems to future generations. Traditional societies have understood nature for a long period of time from generations to generations and they are custodians of wealth of knowledge that can be used to enhance conservation but are gradually being eroded in most of Africa (Zobeck *et al.*, 2013).

For instance, Maconachie *et al.* (2012), making a comparative study between Ethiopia and Sierra Leone concluded that though traditional beliefs displayed skill in wetland management but the practicality has been influenced by external forces. Similarly, Jehu-Appiah *et al.* (2012), investigated the significance of folklore on environmental conservation in the rainforest belt of Edo State, Nigeria and found out that although folklores played a major role in the management of resources the influence of religion has affected the practice considerably. Findings from Uganda by (Howard and Nabanoga, 2007), and in Tanzania (Msuya and Kideghesho, 2009), have also shown the importance of traditional beliefs but recommended the preservation of these traditional beliefs in resource conservation. Many parks have failed to fully integrate important factors, such as social, cultural, and political issues which has caused the collapse of management (Murphy, 2013, Ghai and Vivian, 2014).

Despite the fact that traditional societies are connected to nature through their traditional beliefs and knowledge (Castells, 2011), these traditional beliefs are not enshrined in the management of National Parks (Ghai and Vivian, 2014), especially in sub-Saharan Africa (SSA) where colonial rule distorted traditional systems and the local aspirations and livelihoods are not considered in the management and decision making process of protected areas (Agrawal and Perrin, 2009, Bennett and Dearden, 2014).

In Cameroon Mbile *et al.* (2005), concluded that the successful management of Korup National Park may well depend on the involvement of the local communities. They observed that successful management through approaches that minimize the potential contributions and aspirations of the local people will be difficult to achieve. Research findings show that the involvement of the local population in management increased wildlife substantially (BirdLife International, 2008), after government had dislocated the traditional system (Fisiy, 1997). The sacred grove or 'chariots of the gods' of the Bakweri clan 'ihvarza mote' (half man) is no longer sacred. The disregards of the traditional beliefs and culture has not only rendered the home of the gods unholy but also exposed natural resources to accelerated degradation.

Mount Cameroon National Park (MCNP) has 41 communities living around the park with over 400 000 people, management is a challenge. Efforts have been made to involve the local people through collaboration (sensitizations, setting-up of village forest development committees (VFMC) and cluster platform meetings, among others, by park management and partners) but cultural ties are affecting regulation compliance and eventually management of natural resources. The role of the Bakweri traditional belief systems on natural

resources management has not been investigated. Each protected area in the world has peculiar beliefs and culture which if disregarded can cause an adverse effect to the peoples' livelihoods and management of the natural resources (Norgaard, 2006, Simons, 2013), such is the situation with MCNP. Future research must embrace ways to integrate resources conservation and traditional belief in order to avoid environmental degradation and cultural erosion. The World Bank (2001) and FAO (2005) had been anticipating that natural resources, especially forest, could be a major source of poverty reduction by 2015 (Angelsen and Wunder, 2003, Sunderlin *et al.*, 2005), but the situation is still lacking. We argue that the non-enshrinement of traditional beliefs in the management process of MCNP is responsible for the unsustainable livelihoods and natural resources degradation in MCNP. We ask the question how has the non-enshrinement of traditional beliefs affected management in MCNP?

## 2 Method of Study

### 2.1 Study Site

The MCNP is found in the Southwest Region of Cameroon covering an area of 58, 178 ha. The Park which was established by Prime Ministerial degree N0. 2009/PM of 18 December 2009, is a biodiversity hotspot hosting many endemic plants and animal species (Brooks *et al.*, 2002). Over 400,000 people live around MCNP the natural resources in the area are exposed to overexploitation. The climate is humid and tropical in the south and dry in the north. The different climatic patterns has favoured the development of great rivers (Sanaga, Wouri, Nyong, Manyu) flowing through luxuriant, dense forests that provide a habitat for a multitude of plant and animal species (Wanji *et al.*, 2003). In Cameroon humid forest zone covers 270, 162 km<sup>2</sup> which is about 58% of the total land surface (Ndoye and Kaimowitz, 2000). However, the rate of forest loss in the humid tropics of Cameroon is one of the highest in Central Africa (Sunderlin *et al.*, 2000). With an estimated population of 21.7 million (WorldBank, 2014), annual deforestation in Cameroon is on the rise, estimated to range between 80 000 to 200 000 ha<sup>2</sup> (Ndoye and Kaimowitz, 2000), or 0.4–1.0% of forest cover. According to Awono *et al.* (2014), deforestation is higher in the South West Region, where MCNP is located, 46.2% of the original natural forest was converted into agricultural land use systems between 1987 and 2010. Considering the need to meet up with the sustainable development goals (SDGs) by 2030 the dichotomy between forest loss and poverty eradication remains a major debate.

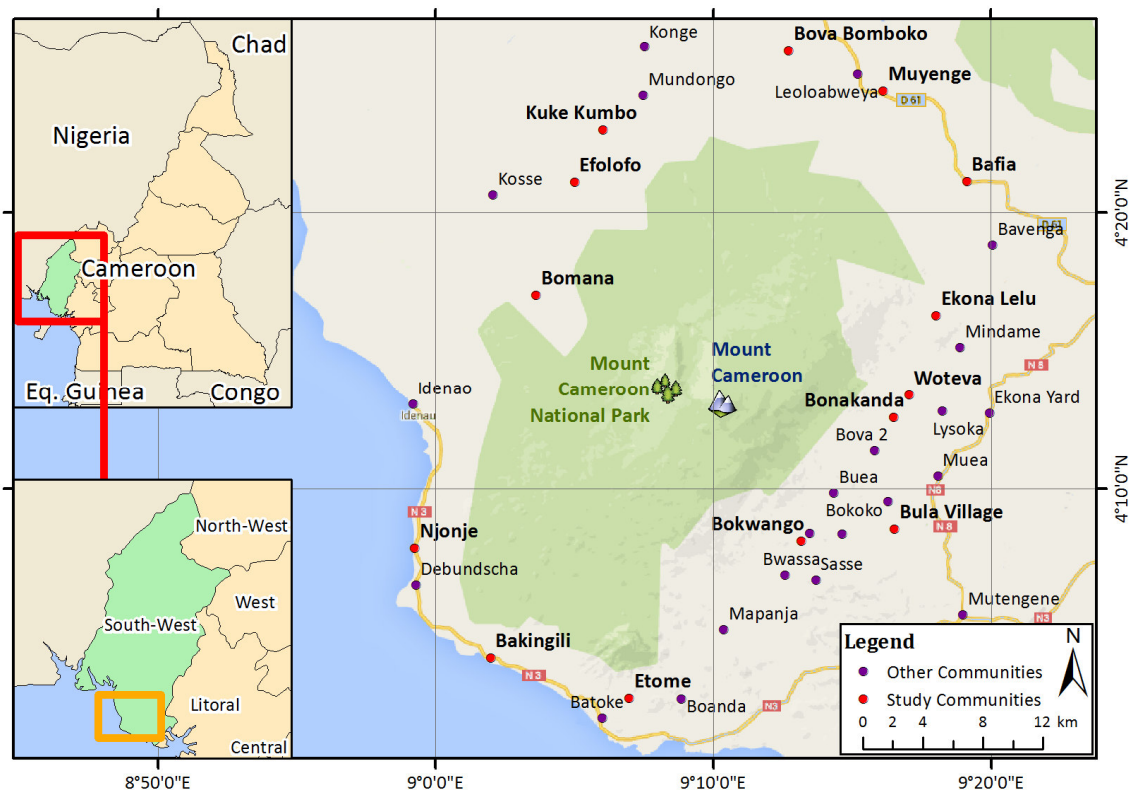


Figure 1 Map of Cameroon showing the Study Area

### 2.2 Study Design

The study used the mixed methods approach, quantitative and qualitative, stems from the recognition that no research method is free from limitation and that biases in one method could potentially be checked by other methods (Johnson and Onwuegbuzie, 2004, Creswell, 2013).

### 2.3 Sampling and Data Collection

Out of 41 village we selected 14 villages purposively considering distance from park boundary (with one near the park  $\leq 8$ km and far from the park  $\geq 12$ km from each of the four clusters). Sample size was estimated using calculations for one proportion with the support of EpiInfo 6.04d (CDC, 2001). Secondary data from forestry included records of villages from agro-ecological survey, forestry instruments used in governing natural resources and village sensitization reports. Development index score was computed by summing educational level, income, and the ability to take care of family health, children education, feeding and assets owned like farm, animals, televisions, car, land or house. It was then ranked by sharing into four ranges using the quartiles cut points. Women were interviewed to get the female (42.5%) viewpoints of beliefs and resources management. Snowball sampling strategy was used to identify key informants. Community survey, semi-structured questionnaires, focused group discussion, key informant interviews, and participant observations were all used as instruments for data collection.

### 2.4 Data Entry and Analysis

Statistical Package for Social Sciences (SPSS) Standard version, Release 17.0 was used for data analysis (Statistics, 2008). We used descriptive statistics to present the distribution of subjects between and within subsets using frequencies and proportions, and more specifically Multiple Response Analysis (MRA) (Nishisato, 2014). Relationship between conceptual indicators and background indicators for categorical variables was appraised using Chi-Square test of independence/equality of proportion while the non-parametric Spearman's Rho correlation test was used to assess strength and direction of relationship of variables that though subjective could be polarized (Commission, 2008). Results were presented using statistical tables, charts and code-quotation-grounding report for thematic analysis and conceptual diagrams. All statistics were discussed at the 0.05 significant level ( $\alpha=0.05$ ). Whenever, the P-value was less than Alpha, the significant relationship, P-values =0.000 were mathematically represented as  $P<0.001$ . Transcriptions of the interviews were analysed according to the principles of grounded theory described (Strauss and Corbin, 1990), using open and axial coding.

## 3 Results and discussions

### 3.1 Profile of respondent

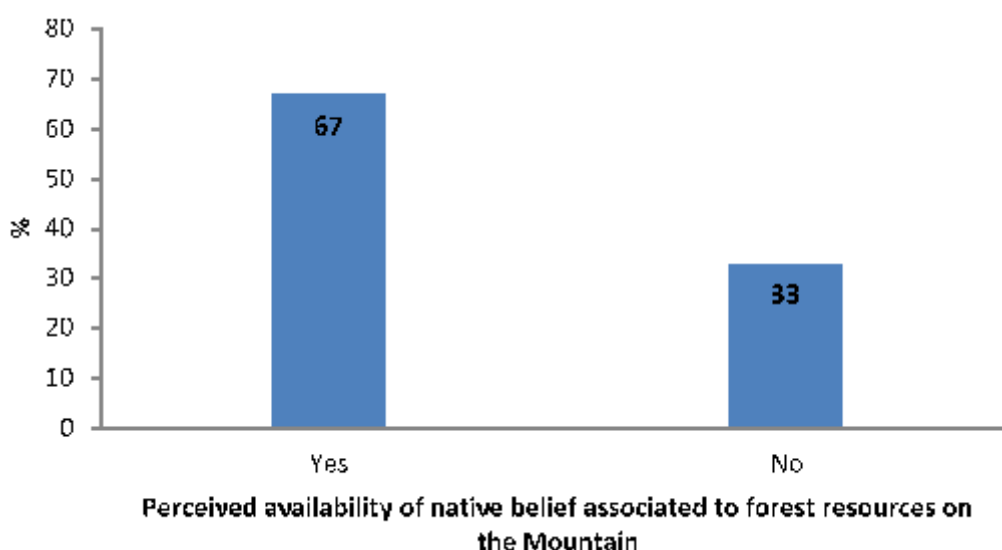
Majority of the respondents (51.1%) were between the ages from 25-45 while those above 45 years were 42%. Based on type of settlement, 58.9% were rural and 41.1% were semi-urban. A greater majority 86.5% of the respondents had farming as their main occupation. As regards to educational status 50.9% had primary while 20.9% had no formal education. It was noticed that 74.7% respondents were married with 92.5% practicing Christian religion and only 7.5% were 'traditionalists.' The income status of respondent was not encouraging as 37% earned less than 30,000 FRS a month, 39.8% and 6.8% 30,000 and 100,000 FRS respectively and only 6.8% earned over 100,000FRS.

### 3.2 Development Index

Development index varied significantly among the various clusters  $P<0.001$  with West Coast having the highest proportion of those with high development index 26 (34.2%) followed by Buea, while Bomboko had the highest proportion of respondents with low development index 36 (37.1%), and Muyuka with 34 (33.7%). Overall, more than half of the sampled population had low development index 185 respondents (50.4%).

### 3.3 Availability of Traditional Beliefs associated to Forest Resources in MCNP

The *Bakweri* and the *Bomboko*, are major tribes in the villages around MCNP, however due to the fertile nature of the soils many other tribes have migrated to the area increasing pressure on the natural resources. Findings from this study elucidated that Mount Cameroon popularly known as 'the chariots of the gods' is the home for the god of the people of the Bakweri clan known as '*ihvarza mote*' (half-man) the study shows traditional beliefs in this god and traditional practices related to this god of the Mountain.



N=469

**Figure 2: Perceived availability of native belief associated to forest resources on MCNP**

There was significant evidence (67.0%) that traditional beliefs related to forest resources exist in all the clusters in MCNP (see Figure 2). The respondent's attachment to these beliefs varied among the various clusters. The Bomboko cluster was the most attached (78.3%) and the least was the West Coast cluster (59.8%) (Table 1). There was significant evidence ( $P < 0.001$ ) that these traditional beliefs were more present in rural communities than semi urban; as was the case in Kuke Kumbu 33 (100.0%), Ekona Lelu 31 (96.9%) and Efolofo 29 (96.7%). Meanwhile the results went below 50% in Bafia and Bakingili which are highly cosmopolitan. The existence of these beliefs was significantly higher in rural area, among the male and among the indigenes but not related to age, (Figure 3). FGDs with all the clusters emphasised that the authorities have a complete disregards of the traditional beliefs which has a negative impact on natural resources management.

**Table 1: Perceived availability of traditional beliefs associated to forest resources on Mount Cameroon by clusters**

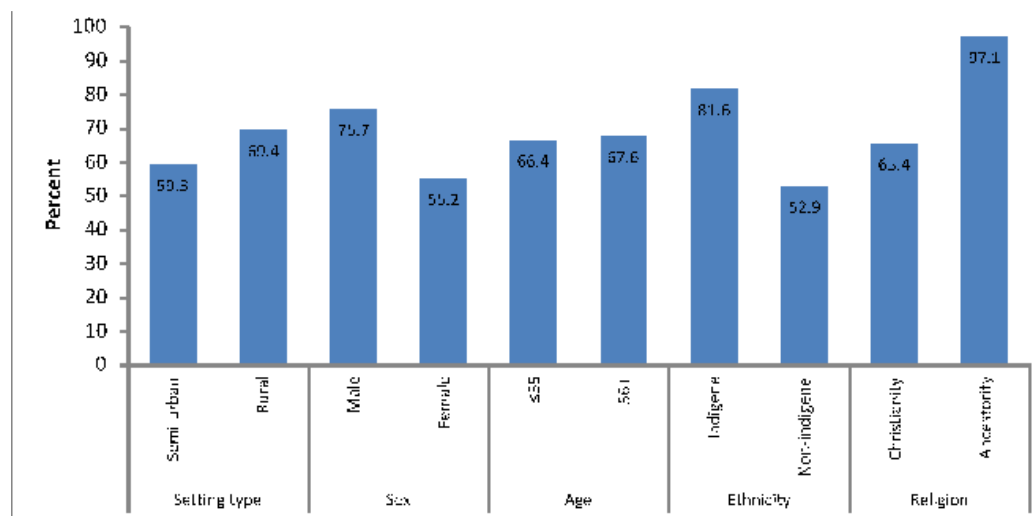
Sub-division of residence	Do you have any native belief associated to forest resources on the Mountain?		Total respondents
	Yes	No	
<u>Bomboko</u>	101 (78.3)	28 (21.7)	129 (100)
<u>Buea</u>	75 (65.2)	40 (34.8)	115 (100)
<u>Muyuka</u>	80 (62.5)	48 (37.5)	128 (100)
West Coast	58 (59.8)	39 (40.2)	97 (100)
Total	314 (67)	155 (33)	469 (100)

$\chi^2=11.050$ ;  $df=3$ ;  $P=0.011$ .

\*Numbers in parenthesis are percentages

In China Luo *et al.* (2009), showed how the Baima Tibetans have embarked on the development of their ruined culture, traditions and customs which had been neglected by modern scientific knowledge. The engagement of local people have increased conservation of biodiversity and livelihood preservation of the local inhabitants because the aspirations and beliefs of the local people were preserved in the management of protected areas in China. In this study in MCNP the findings were not associated with neither income nor educational level  $P > 0.05$ . However, it was also noticed that 97.1% of those who practiced ancestral religion (worshiping their ancestors) are those who upheld to the traditional beliefs (Figure 3). The findings also displayed that indigenes practiced traditional beliefs more than the non-indigenes 81.6% and 52.9% respectively, which explains why rural areas

practiced traditional beliefs more than semi urban areas.



N=469

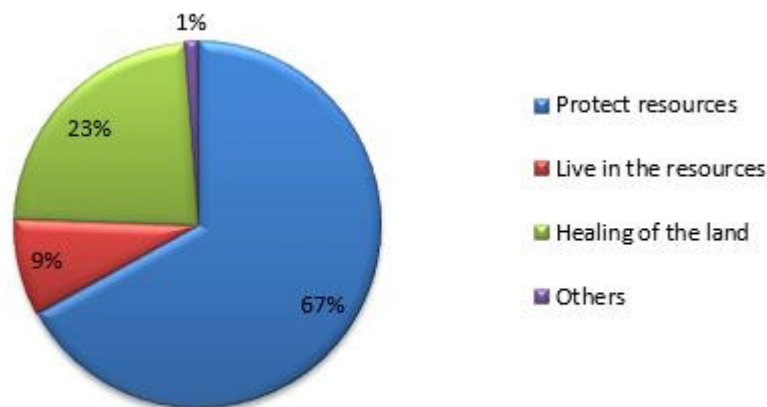
**Figure 3: Perceived availability of traditional belief associated to forest resources in the MCNP: distribution by setting type**

Setting type:  $\chi^2=3.947$ ;  $df=1$ ;  $P=0.047$ ; Sex:  $\chi^2=21.862$ ;  $df=1$ ;  $P<0.001$ ; Age:  $\chi^2=0.079$ ;  $df=1$ ;  $P=0.779$ ; Ethnicity:  $\chi^2=42.003$ ;  $df=1$ ;  $P<0.001$ ; Religion:  $\chi^2=14.927$ ;  $df=1$ ;  $P<0.001$

Results from focused group discussions (FGDs) showed that these beliefs are connected to the god and affect the natural resources. The gods of the mountain 'ihvarza mote' protects the resources while *Nganya and Maley* are groups which do the rituals and cleansing 'tanize' of the land to increase food production. They believed that the poor production and loss of biodiversity are all connected to the anger of the gods of the Mount Cameroon. In the event of showing his anger there will be an earth tremor, volcanic eruption and lava flow. The 1999 lava flow *Bakingili lava flow* which crossed a major road and almost entered the sea was believed to be out of the furious anger of the gods coming as a warning sign destroying properties and farms. To calm down the lava flow a libation was done by elders and chiefs (who also are members of *nganya* and *maley groups*). Libations are done, mostly by the head of all the chiefs (Paramount Chief of Buea) *mokanele we ekome*, at the *Navico* (a sacred, stony, and bottomless pit) to appease the gods and obtain calmness in the land.

### 3.4 Impact of Beliefs on Livelihoods and Resources Management

The majority of the people (67%) believe that the god 'ihvarza mote' protect the land and heal the land (23%) which is why the beliefs should be revived to appease the gods. They believe the gods are angry because these beliefs are undermined and many taboos are happening defiling the land. This strong conviction in their traditional beliefs and god is an indicator of non-acceptance of modern practices in resources management. They argued in FGDs that they have to do their hunting unless an alternative was given to them and they have ways 'spiritually' to do it without being obstructed. Hunting had spirituality attached to it, notwithstanding they refused to release that information but explained that they use forces to do hunting which protects them from the wild dangers and other intruders. Hunting is one subject that sparked heated argument of moral assessment during this research.



N=332

**Figure 4: Association between beliefs/gods and forest resources on MCNP**

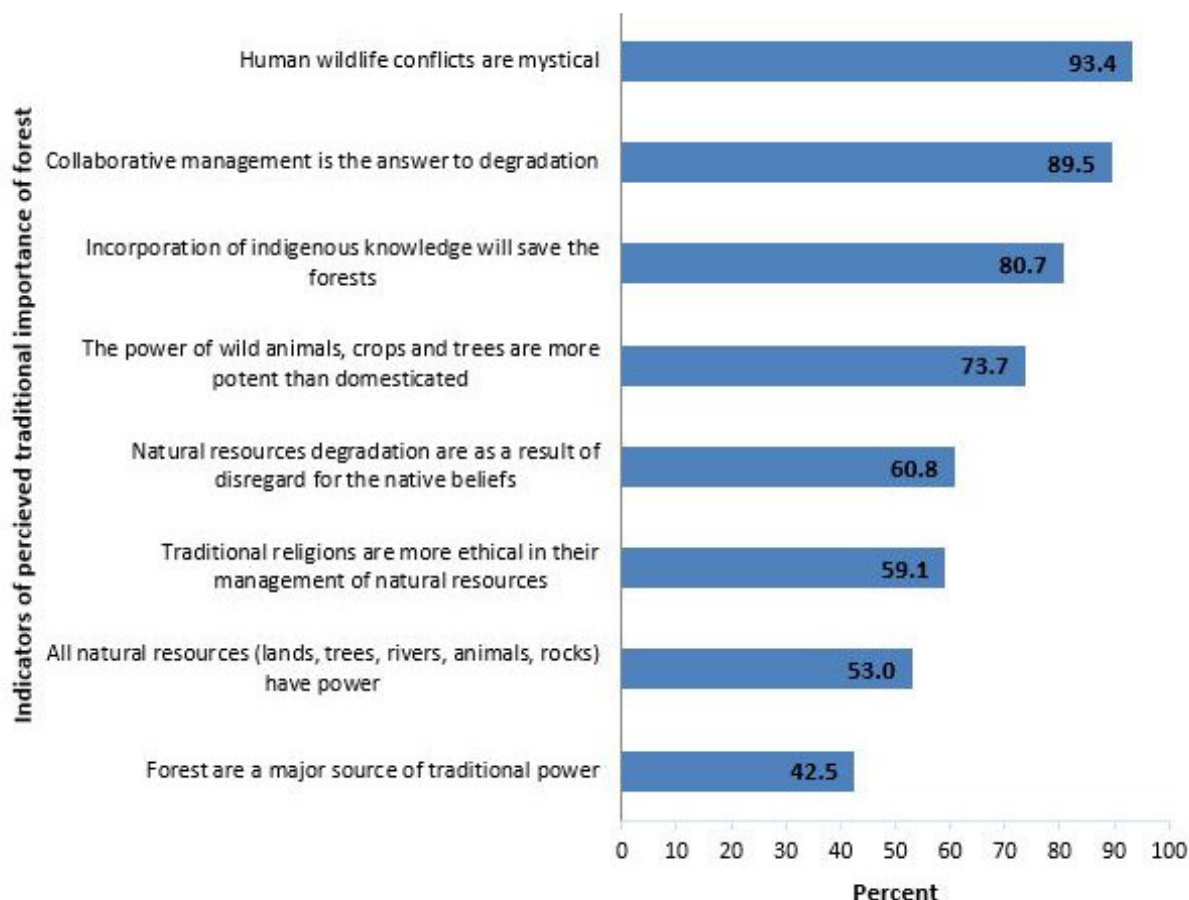
These findings were reiterated by the focused group discussion which explained the significance of these beliefs in community enhancement and wellbeing. Most communities mentioned that the disregard of the local people and their traditional beliefs is detrimental to the management of the natural resources. In a meeting with the hunters they expressed their grievances and dissatisfaction in the management of MCNP.

“The god ‘*ihvarza mote*’ (half-man) cannot be happy, they have destroyed our huts on the Mountain. We can still stay in caves when we go hunting. They don’t care how we survive or send our children to school. Hunting is transferred from father to son, all we know is hunting yet we are asked to withdraw without being given an alternative. Stealing has increased because of this. We have reduced hunting activities, but we cannot stop, they need to have a meeting with us and engage us in something that can give us real income to take care of our families, even the Spirits, ‘*elinge*’ is backing us”, one of them said. [Names Withheld]

It was evident that these hunters have certainly not withdrawn from their hunting activities. Although the quantitative results did not show hunting as their primary occupation they were still engaged in hunting alongside farming. They argued in FGDs that they have to do their hunting unless an alternative was given to them and they have ways ‘spiritually’ to do it without being seen. As Anke Fischer *et al.* (2013) records, these moral argument are necessary for legitimation and de-legitimation of hunting practices. Recent studies by Bennett and Dearden (2014) revealed agitations by Mu Koh Surin people of marine protected areas MPA in Thaiwan when they were deprived from the traditional Moken community from fishing and harvesting in the area without providing other livelihoods options. Although fishing in the Tsitsikamma National Park in South Africa had officially been terminated in 2001, the local communities in Tsitsikamma still had the desired to fish and many started doing illegal fishing practices in the park. Despite efforts of co-management by forestry and technical partners in MCNP, there is need to incorporate the beliefs and involve traditional groups in the management and decision making process. The development index shows that people are leaving in very hard conditions lacking basic necessities like water, toilets, and roads. Their food products which they could sell to augment their income, is bought at low cost due to bad roads and inadequate market competition (buyers set the prices). These issues all coupled up have weakened regulation compliance and derailed resources conservation in MCNP.

To supplement their livelihood they have to do many things to earn a living including harvesting forest and NTFP. Some timber species extracted from the forest include: Mahogany (*Khaya sp* and *Entandrophragma sp*), Zingana (*Microbelinia bisulcata*), Small Leaf (*Pterygota sp*) and Kandang (*Pycnanthus angolensis*. Common non-timber forest products NTFPs in the area are Njangsang (*Recinodendron heudeloti*), Eru (*Gnetum africanum*), Bush mango (*Irvingia gabonensis*), Bush pepper (*Piper guinensis*), Cola nut (*Cola accuminata*; *C.nitida*), Bitter cola (*Garcinia kola*), Rattan (*Laccorsperma spp*. *Eremospatha spp*) and Raffia (*Raphia hookeri*) which are mostly done by women and children. Hunting has reduced the African Elephants (*Loxodonta africana*) in the Park.

### 3.5 Perceived Importance of Forest in Relation to Traditional Beliefs



N=487

**Figure 5: Perceived importance of forest in relation to belief system around MCNP**

“How can life get better when the system does not respect our traditional beliefs and culture which are the basis of natural resources conservation? What is happening is really terrible. We are burying our culture and buying the Whiteman’s culture but the plants and animals around Mount Fako understand our language not that of the Whiteman and now our livelihoods are going down showing the death of our traditional beliefs.” [Name withheld]

The general perception in MCNP is that the degradation of natural resources is as a result of non-enshrinement of the traditional beliefs since these beliefs emphasize protection of the land and respect for natural resources. Formally certain rituals and libation were done before felling a tree or killing an animal and the purpose for the act has to be justified during the libation. Six indicators out of seven strongly support this perspective as their weight exceeded 50% and at the same time, the idea of co-management was supported by 436 (89.5%) indicating that management will be more effective with the enshrinement of traditional beliefs, (see Figure 5).

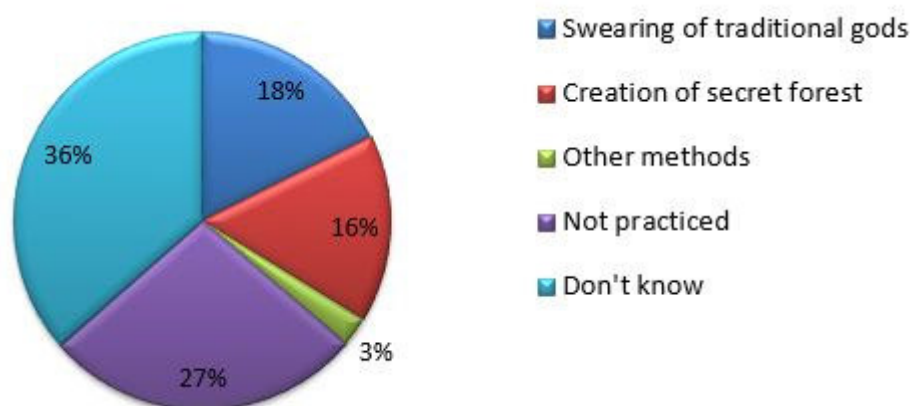
The fear of the gods at first caused people to ration the harvesting of the natural resources. People harvested what was needed for home consumption. Violation will attract punishment from God *lohwa*. For instance, it was believed that taking a long wood out of the forest was a violation and doing so will cause a swollen stomach to the violator until cleansing or *tanirze* was done. People were not allowed to take fruits out of the mountain, they could eat as much as they want but if they attempt to take some they will be unable to find their way out, and there were very diverse fruits to explore. They believe that at *Navico*, natives can actually do libations to stop a deadly lava flow that persist. The myth behind this area is completely known to the hunters and some very elderly people belonging to the Nganya and Maley groups. They refused to tell it all but according to them they have words in Bakweri they can say and the bottomless pit *Navico* will produce fog which will stop visibility to the stranger or authorities and the native will take advantage of the situation. The majority of the people believed that human wildlife conflicts are mystical. They explained that the elephant especially where used in destruction to express anger of the gods or an exceptional event that was to happen. They strongly believed this is still the case as they explained a case that happened in January 2014 of elephant destruction in the Bokwaongo village at the event of the death of a chief and a member of the elephant dance group. These relations in traditional beliefs and resources



conservation can no longer be ignored as it plays a major role natural resource management. As Awolalu (1976), rightly said African traditional beliefs is the “main identity for every African and though static it is in no way extinct”. In India the Dongria's taboo on cutting trees on top of Niyamgiri is a classic example of this restraint (Padel and Das, 2010) which helps in conservation of resources. The sacred groves in India has been instrumental in the conservation of many species since is a representation of the link between culture and conservation (Anthwal *et al.*, 2010).

### 3.6 Practice of Traditional Forest Conservation

Activities that could be related to traditional forest conservation were asserted by 170 (36.2%) respondent and included swearing of traditional gods (16.0%), creation of sacred forest (15%) and other methods (3%) that included avoiding the burning of trees or farms, creation of shrine and reforestation (figure 5). Majority of the respondents (66%) said traditional forest conservation is not practiced because too many people from other communities harvest these products (58%), no legal access to the forest (11%), cultural practices have been undermined by administration (24%) and lack of incentive from administration (7%). The main reason given for practicing of traditional forest conservation was done because forests served as a home for ancestral gods (47%) (Figure 6).



N=469

**Figure 6: Practice of traditional forest conservation MCNP**

There was significant evidence ( $P < 0.001$ ) that traditional natural resource conservation was practiced more in areas where traditional belief associated to natural resources exist with rate of 115 respondents (36.6%) against a lower rate where there were no belief associated to natural resources 8 (5.2%), Figure 7. This trend was significant  $P < 0.005$  among clusters but the least evident was Buea 13 (17.3%) and the most prominent was Bomboko 69 (68.3%), Table 2, existence of beliefs associated to forest resources was the highest 101 respondents (78.3%) in Bomboko as well.

**Table 2: Practice of Traditional Forest Conservation by Clusters in MCNP**

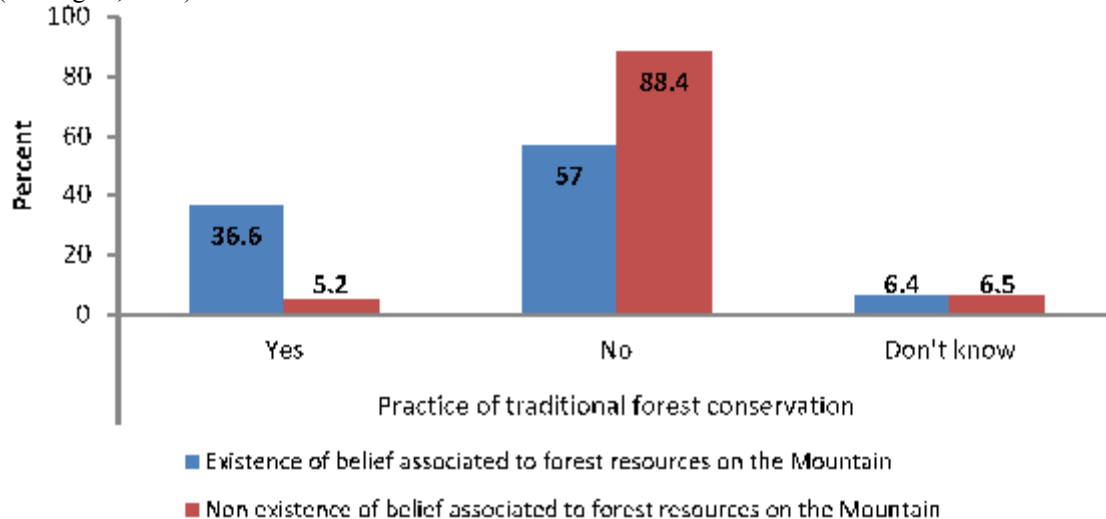
Cluster	Existence traditional belief system		$\chi^2$ -test
	Yes	No	
<u>Bomboko</u>	69 (68.3)	5 (17.9)	$\chi^2=39.620$ ; <u>df</u> =2; $P < 0.001$
	101	28	
<u>Buea</u>	13 (17.3)	2 (5.0)	$\chi^2=7.670$ ; <u>df</u> =2; $P=0.006$
	75	40	
<u>Muyuka</u>	22 (27.5)	1 (2.1)	$\chi^2=16.526$ ; <u>df</u> =2; $P < 0.001$
	80	48	
West Coast	11 (19.0)	0 (0.0)	$\chi^2=10.887$ ; <u>df</u> =2; $P=0.004$
	58	39	
Total	115 (36.6)	8 (5.2)	$\chi^2=54.338$ ; <u>df</u> =2; $P < 0.001$
	314	155	

\*Numbers in parenthesis are percentages

### 3.7 Relationship between Traditional Belief and Practice of Forest Conservation

Practiced of traditional forest conservation was significantly associated with settlement types, religion, sub-division and level of dependence on forest resources (estimates based on the number of resources exploited), however, external forces have affected these practices as the people complained. Findings from Jones *et al.* (2008), shows that the imposition of external conservation rules in Ranomafana National Park in Madagascar weakened traditional management. He concluded that informal institutions are important to conservation because they

suggest ways of improving cultural understanding and conservation communication. It is posited that when formal and informal institutions agree in decision making outcome will enhance resources conservation (Osei-Tutu *et al.*, 2015). National parks and protected areas are well thought instruments of conservation but they also have a have the tendency to attract conflicts over resources which was the situation in the North West Region of Cameroon (Amungwa, 2011).



$\chi^2=54.338$ ;  $df=2$ ;  $P<0.001$

Figure 7: Relationship between belief and practice of traditional forest conservation

The association between beliefs and practice of tradition imply integration of traditional beliefs will augment conservation and facilitate collaborative management. Byers *et al.* (2001), and Ntiemoa- Baidu *et al.* (2001), show how spiritual values and beliefs have played significant roles in protecting sacred forests of Zimbabwe and Ghana, respectively. According to Kokou *et al.* (2008), sacred groves have played a major role in the conservation of species in Togo. In India, despite the pressure from overpopulation, the sacred groves protected many wildlife species (Colding and Folke, 2001, Banjo *et al.*, 2006) and the traditional medical systems of northern India (such as Ayurveda and Tibetan) are a part of time tested culture (Kala *et al.*, 2006, Anthwal *et al.*, 2010).

### 3.8 Belief in Traditional Cleansing



Plate 1 Elephant dance in a village around MCNP

Traditional cleansing is an important process practiced to appease the gods of the land in MCNP. At first, sacrifices 'yawo yaawo' were done using albinos or *moongo*, to appease the gods of the land, however, there are other offerings used instead of the *moongo* presently. The *mooka mo maley* is a sacred place used by the *Maley* people to do cleansing 'tanize' and the *ekoloko la maley* is used to control conflicts in the land. In the event of a conflict the *ekoloko la maley* will set up an injunction order on the disputed property until the dispute was resolved by native authorities. This traditional protocol enabled proper traditional management of the resources which enhanced sustainability.

The elephant dance is a popular traditional dance which portrays the beliefs of the Bakweri culture. This dance which shows the elegance and force behind the elephant was formally done once a year by each village,

Plate 1 & 2. The Bakweri clan has strong totemic ties with the montane elephants, *Loxodonta Africana* known as *njoku*, members from the maley group are believed to transform into elephants to do many spiritual manipulations and protections. This made them protect the specie, but due to erosion of the traditional beliefs the specie is getting scarce on the mountain because of indiscriminate harvesting. Logging is also a major reason for their disappearance since the Makore tree (*Tieghemella heckelii*), which is a major food source for elephants is threatened by logging.

That the *maley* dance was used to appease the gods and fellowship with them such that they can bring prosperity to the land. One woman in Bova Bomboko said;

“Gone are the days when elephants or ‘*njoku*’ were living with people, all was well. The chief passed orders and people obeyed his orders. The gods are angry and the elephants are far from us, which is why all is going wrong. The land need cleansing ‘*tanirze*’ to appease the gods”, she said.

The *Maley* group, which is the elephant dance, is meant to portray the powers behind the elephants ‘*njoku*’ over the area and the people. The *Nganya* dance (by men) is also used to cleanse the area in order to appease the gods. Many rituals and libations are done in the process. During this process, the young females are not allowed to see the *moseke* masquerade if they do it is believed they will they get barren. This masquerade is released only at night during the cleansing period. The *naganya* dance is also a cleansing dance which is accompanied by *malowa* done by the old women naked late at night to accompany the males in the cleansing or ‘*tanirze*’ process. After cleansing the food production of land is expected to increase and the women will become fertile. These are traditional procedures which were followed strictly to enable cleansing and boys were initiated early in the culture to allow continuation of culture, Plate 1&2. They complained that traditions are eroding. An old man commented on this saying;

“These are the issues which made the place productive and people feared the gods, now Christianity has taken over and there is no fear of nature and the gods anymore, even the ‘*magic stick*’ (with spiritual values) on the mountain was cut down without fear that is why all is going wrong. There is need to appease the gods by incorporating traditional beliefs into natural resources management. We have abandoned our *mooka/ikuma* or shrines that is why all is going wrong. The powers ‘*nginya*’ given to us by the gods are not as they should be because the beliefs are not respected, this is not correct. God ‘*Lohwa*’ who gave us these beliefs knows why, therefore, they should be respected and incorporated in the resources management process. Now we have Christianity infiltrating our traditional beliefs, *mojeeli* (strangers) increasing exploitation and disobeying our customs. The management has undermined our beliefs and customs and preventing us from our resources who shall we trust then”. [Name withheld]

It was evident from the findings that all the villages had shrines ‘*mooka*’ as is common with the Bakweri tradition. It is here that libations are done by each village to appease the gods of the land so that plants, animals and man will be productive and live in harmony. There are three group of people they accuse the government, strangers or *mojeeli* and Christianity as being responsible for the degradation as a result of not practising the beliefs. Sarfo-Mensah and Oduro (2010), found out that in Ghana Christianity has influenced the practice of traditional beliefs which affects protection of the sacred groves in Ghana. The chariots of the gods is destroyed because the traditional beliefs and customs are not enshrined in the management of the Park and the local people are relegated.

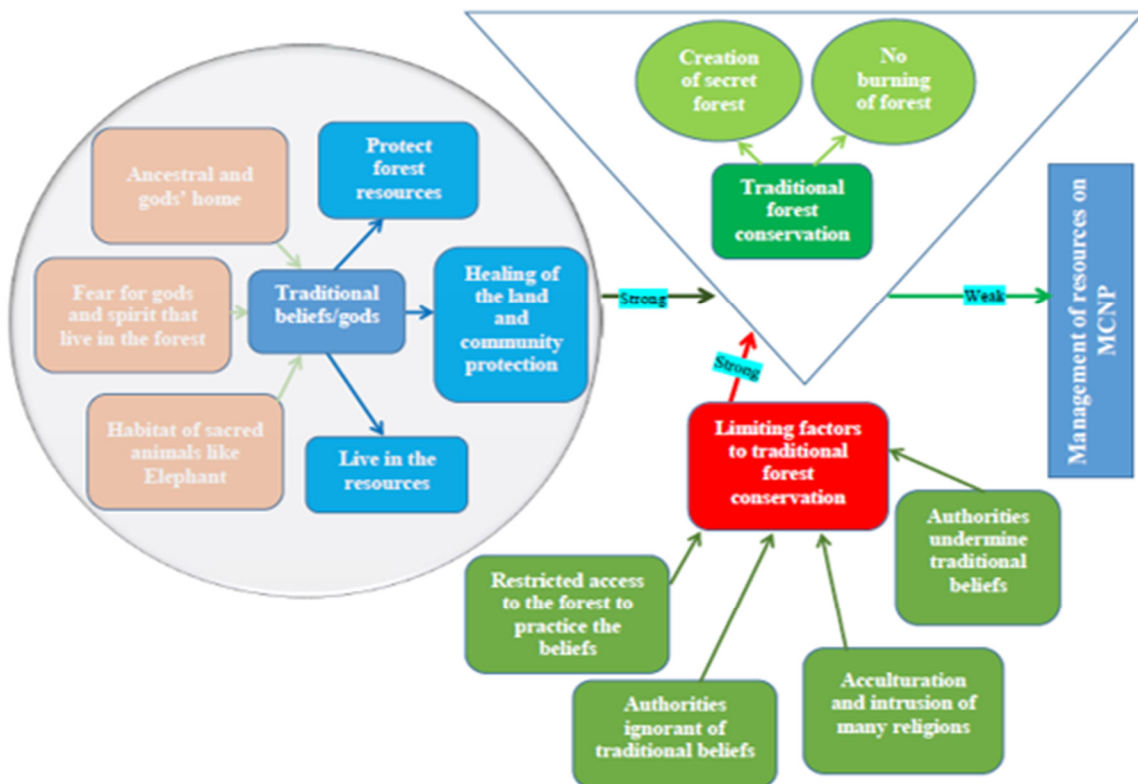
### 3.9 Influence of Belief System on the Management of Resources in MCNP

There was a significant association (Spearman’s Rho:  $P < 0.001$ ) between perceived traditional importance of forest and perceived importance of collaborative forest management as well as traditional forest management. Those who believed in traditional forest management endorsed the idea of collaborative forest management (Table 3). The people are convinced that the disregard of their traditional rules is what has angered the gods and caused degradation of the resources. With the concept that traditional beliefs are more ethical than modern rules in natural resources management (Figure 3)  $P < 0.001$ , and disregard of the native beliefs is the reason for natural resources degradation  $P < 0.001$ , Table 3, it will be difficult to convince them otherwise. This implies that for management to succeed there is need to recognise and integrate traditional beliefs into management of natural resources in MCNP. Research has shown that local people’s participation in collaborative management is based on how their aspirations and needs are handled by management (Ramcilovic-Suominen and Hansen, 2012, Bennett and Dearden, 2014).

**Table 3: Relationship between perceived importance of forest and perceived need for collaborative forest management**

Independent variables	Dependent variable: collaborative forest management	
	Spearman's' Rho	N
Forest are a major source of traditional power	R=0.221** P<0.001	487
All natural resources (lands, trees, rivers, animals, rocks) have power	R=0.169** P<0.001	487
Traditional religions are more ethical in their management of natural resource	R=0.309** P<0.001	487
Natural resources degradation are as a result of disregard for the native belief	R=0.321** P<0.001	487
The power of wild animals, crops and trees are more potent than domesticated	R=0.311** P<0.001	487
Incorporation of indigenous knowledge will save the forests	R=0.284** P<0.001	487
Human wild life conflict are mystical	R=0.037** P=0.421	487
Sum of score perceived importance of forest	R= 0.454** P< 0.001.	

The local people are convinced that integrating the beliefs into management will better save the natural resources R=0.284\*\* P<0.001, FGDs confirms these findings. It was clear that the people perceived that the reinstatement of their customary practices will save the resources. The conceptual diagram (Figure 7) summarizes the influence of traditional belief on the management of MCNP. In a nutshell, though traditional beliefs associated with resources still existed, their effect on the management of MCNP was weak as seriously hindered by number of limiting factors (see Figure 7). Focused group discussion also confirmed that management does not encourage traditional forest conservation to prevail through beliefs systems. Nonetheless, there is need to understand the complexities and dynamics of these systems in order to achieve sustainable management of the natural resources in MCNP.



**Figure 7: Conceptual diagram of traditional forest conservation**

#### 4 Conclusion and Recommendations

We conclude that to attain efficacy in resources conservation the enshrinement of traditional beliefs are inevitable. Resources are degraded because the sacred grove (chariots of the gods is exposed) and the god- *'ihvarsa mote'*, is unhappy. This situation has compromised resources management and the worship of people's gods. Local people will join collaborative management if their traditional beliefs are enshrined in decision making process of MCNP. Indigenes are disgruntled has affected regulation compliance and eventually the management of natural resources. Collaborative management is 'pretentious' because the authorities will not respect the beliefs of the local people and there is a 'concealed conflict' between factions which can result to struggles over natural resources. Those who favoured collaborative management also practiced traditional natural resources management which implies they are positive about protecting the resources but expect their traditional beliefs to be part of decision making process. There has been a momentous decline culture in of the Bakweri clan. Hunting has a spiritual inclination that need to be understood and exploited to enhance natural resource management. The attempt to establish collaboration has not been fruitful because the people feel they are being deprived from their traditional rights without adequate justification.

We therefore recommend the enshrinement of traditional beliefs in the management process of MCNP. Local people should be integrated in the management and decision making process (using a bottom-up approach in policy making) to enable sustainability of resources management. Traditional resources management should be encouraged and combined with state rules which will serve as a gateway to collaborative management. Hunters as well as other indigenous groups can be trained and employed as eco-guards because they are an asset to pass on indigenous knowledge and culture. We recommend an in-depth study of the Bakweri culture and traditions to safe guard cultural erosion and help revive some practices which can enhance livelihoods and sustainable natural resources management in MCNP. The reinforcement of article 8(J) of the Conservation of Biological Diversity which emphasis traditional issues should be reiterated at national level.

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