

**THE ROLE OF INDIGENOUS KNOWLEDGE IN FOREST MANAGEMENT PRACTICES AMONG THE KAFFECHO PEOPLE, GIMBO WOREDA, SOUTH WEST ETHIOPIA**¹Yeshambel Mulat, ^{*2}Meseret Alem¹Department of History and Heritage management, Faculty of social Science and Humanities, University of Gondar, P.O. Box 196, Gondar, Ethiopia.^{*2}Department of Immunology and Molecular biology, School of Biomedical and Laboratory Sciences, College of Medicine and Health Sciences, University of Gondar, P.O. Box 196, Gondar, Ethiopia.

Abstract

The indigenous knowledge attached to forest commonly restricts access to these sites. As a result, many sacred sites have survived for hundreds of years and act as important biodiversity reservoirs. This study is about the role of indigenous knowledge for forest management practices in Gimbo woreda, Kaffa zone of Ethiopia. In this woreda, the community practiced indigenous forest management systems since immemorial times. Three study sites, namely Wacha, Agama and Tulla were selected for this study. The research deals with indigenous cultural beliefs, values, ethics and taboos of indigenous knowledge in forest management practices at Gimbo woreda in the above selected sites. Accordingly, traditional religion (kollo and dedebetato), ecological knowledge and social organizations of the people are identified as units of analysis for this paper. The main objective of the study is to investigate and reveal the indigenous knowledge of Kaffecho society in forest management practices and to propose ways for maintaining useful forest knowledge for sustainable development. Both primary and secondary methods of data collection were employed to gather information in the study area. Informants such as women, men, development agents and experts were interviewed. The major findings of the research indicated that the indigenous knowledge practices of the community have important roles in forest management. Yet, some of the community knowledge has limitations on their effectiveness, functions and implementations. Similarly, scientific forest management practices have both negative and positive effects on the forest in the study area and on the community's knowledge. This called for a new strategy whereby indigenous knowledge is transformed by creating a synthesis with scientific knowledge and its application to forest management. This approach opened up the possibility for plural knowledge applications and positive outcomes between the community's indigenous knowledge and the governmental forest management practices in the study sites.

Keywords: Intangible cultural values, Forest management, Gimbo woreda.

Author for Correspondence:

Meseret Alem,
Department of Immunology and Molecular biology,
School of Biomedical and Laboratory Sciences,
College of Medicine and Health Sciences,
University of Gondar, P.O. Box 196, Gondar, Ethiopia.
Email ID: mese4839@gmail.com

Introduction

In the past, development planners, policy makers, experts etc devalued indigenous knowledge, depicting it as 'primitive', 'simple' and 'static'.^{1, 2} This historic neglect contributed to the decline and the shift from indigenous knowledge to 'Western' knowledge for African development program.^{1, 3} However, development program imposed from the West failed to achieve its intended goals due to inappropriateness for African local conditions.^{1, 4} Lack of understanding of the physical, social, political, economic, technological and cultural difference between the West and the third world countries have become hindrance for development.

There is no uniform approach for development. In actual case, there are different and appropriate answers for development depending on history and cultural heritage, religious traditions, human and economic resources, climatic and geographic conditions, and political pattern of nations. Due to the aforementioned facts, today the world recognizes the need to change policies and practices by giving due attention to the needs and rights of local communities.⁵ Here, the case of forest management is no exception. Thus, utilizing the potentials of indigenous knowledge is actually the key to local level development in general and forest management practices in particular.

One of the resources to be exploited to assure sustainable environmental management is, therefore, the Role of Indigenous knowledge in Forest Management Practices among the Kaffecho ethnic group, the main focus of this research.

Objectives of the Study

The main objectives of the study are to investigate and reveal the indigenous knowledge of Kaffecho society in forest management practices and to propose ways for maintaining useful forest knowledge for sustainable development.

Study area

The study area located at Gimbo Woreda with three study sites selected purposely. These are: Wacha, Tulla and Agama. Wacha is selected because of the forest provisions of different services to the community. Tulla, is selected because of its significance for traditional institutions (*Dedebetato*) in forest management and lastly Agama selected because of its richness in biodiversity.

Methodology

In this study, both the primary and the secondary sources as method of data collection were used. This includes interviews, focus group discussions, observations, participant observations, document analysis and other data sources.

Results

The Various Forest Management Practices of the Community

Starting from the last decade, local communities through various customary forest usufruct and entitlements rights, together with the government bodies have become the main actors of forest management in the study area. Accordingly, the recently established PFM approach devised two mechanisms. The first one is advising the intruders by elders. If this is not successful, the forest user community would solve the problem at court level. In this regard, the government is backing up the final decision making process of the committers of the problem. This paper analyzes the whole process and implications of indigenous knowledge of forest management in the three study sites, Wacha, Agama and Tulla. It mainly focuses on analyzing the implications of religion, ecological knowledge and social organizations in forest management practices.

Traditional Religion

Though the majority of the Kaffecho are Christian, some people still practice traditional religion together with Orthodox Christian elements. The traditional religions of the area are highly valuable in making each parcel of forest become under the supervision of a specific clan and used only by that clan. Accordingly, the members of the clan are responsible for the management efforts of the forest. In other words, traditional religions in the study area enforce codes to protect the forest from destruction, i.e. from illegal logging, charcoal making or unwise use of the forest by its members and outsiders. The traditional religion of the study areas are *Kollo* and *Dedebetato*.

Kollo

Kollo is a general meaning to spirits in Kaffecho. But, findings from informants revealed that *Kollo* is one type of traditional spirit in Kaffecho. Informants further added that, there are two types of *Kollo* in the community.⁶

The first type of *Kollo*, which is the small one, resides in rocks, streams, rivers and hot springs. These spirits are known to be *Gori genci* (spirits of water bodies) or *Mot gario* (spirits of rocks). People communicate with this type of *Kollo* by scarifying a jug of local beer or a small amount of butter. The feast is held after new crops are harvested. The main purposes to provide sacrifice are: to thank god for surplus production, to maintain peace in the community and to avoid any catastrophes. The practice of scarification is held at regular and irregular manner based on the number of participants. For instance, in smaller *Kollo*, which is one division of *Kollo*, the participants are small and scarification is held at irregularly as opposed to big *Kollo* and *Dedebeteto*. The ritual site is highly protected. No one can enter and use the surrounding trees for his own purpose.

The second type of *Kollo*, the biggest feast ceremony, is believed to inhabit in the forests. In this case, people provide large scarifies in a more regular and organized manner. As in the case of the first *Kollo*, the trees in and around the sites of the ritual areas are highly protected. The bases for the conservation of these forests are taboos related to religious beliefs and societal values. Strict observance of beliefs can play a positive role for the healthy functioning of the forest ecosystem.

Anyways, for Kaffecho, everything in the forest belongs to *Kollo*. If any one wishes to harvest NTFP, non timber forest products such as coffee, long pepper and others, the person should scarify in kind to the forest. This prevents the community not only from cutting down big trees but also from using other forest products without acknowledging *Kollo*. Indirectly, it discourages over exploitation of the forest resources.

Dedebetato

The name *Dedebetato* comes from the hot spring Dadiben with little modification. The title of this ritual leaders are *Duberasha*. The role of the *Duberasha* as ritual expert is to announce the feast. A finding from *Dubersha* Haile Miheal Gane Gabeto stated that: “my father used to be *Duberasha*. He was chosen to act as *Dubersha* linked to him through his brothers”. This shows that spirit possession is inherited through the pat lineal line.

In Shekecho, “only the ritual leader knows the worship site”. Similarly, in Kaffecho only *Duberasha* knows where the worship site is located. People who enter in to the ceremonial site should be pure. Women during menstruation, people infected with parasitic diseases and anyone who has eaten mutton and cabbages are prohibited from entering in to the ritual site.⁷

The ritual ceremony takes place once in a year. This is held in the mid of Easter fasting months according to Orthodox Christian calendar (religiously known as *Debrzit* day). The attendants carry leaves of *Ventricosum enset*, breads prepared from the new harvested *Eragtutus teff*, money, bull, *Boreda*, hen and other items to the feast. The attendants bow at the entrance and kiss the door steps and posts of *Dubersha* house as a sign of respect for the spirit.

Worship place in the middle of the forest is central to forest management. It is prohibited hunting practice and clearing such forests for different purpose i.e., for construction, hanging beehives on it and others. There is also a good understanding and belief among the community that protection of such forests ensures or brings rainfall. This helped to protect the genetic erosion of plant and animal.

In short, this experience shows that members of the local community proudly uphold traditional values and remain strongly rooted in natural and spiritual worlds such as ancestors, spirits and sacred sites. These practices undoubtedly contribute to the management of forests. The practices of the community can serve as a model for further management efforts. Therefore, for forest management to succeed and its use to be sustainable; traditional religious practices have to be considered at all levels.

Ecological Knowledge

In the past living and survival was an art that required skills and values to integrate many spheres. Some spheres are timeless, such as the knowledge that gives value and role for worthy behavior to the community. These values are caring for and interdependence between fellow human being and the environment. Along with this, the ecological value of the forest to the community is one issue.

Throughout the focus group discussions and literature reviews, the ecological knowledge of the forest by the community is the other aspects of management strategies. These includes : the uses of forests to prevent soil erosion, surface mulching, regulating water flow and riverbank stabilization, recharging of groundwater, maintaining water quality; and minimizing global warming and desertification.

For example, at national level, soil erosion due to deforestation is forty two tone / ha / cropland.⁸ Similar studies reveal that the mean annual rate of erosion at Kaffa zone is about twelve to thirteen tones/ha/cropland.⁹ Here, soil erosion is the removal of the fertile part of the soil either by water or/and wind. This shows that the rate of soil erosion in Kaffa zone is by far less than the national level due to the prevalence of forests. One can imagine what would happen if there is no forest in an area having the prevalence of rugged terrain such as Kaffa zone. This shows that the community is viewing the dense forest of the area for ecological balance benefit. In other words, the forests managed by the community is, part of its role, for ecological balance.

Clan Leaders

Social organization and stratification plays tremendous role in the management of the forest in the study area. Though the Kafficho social organization had been affected by the past regimes, however, it continues to play a pivotal role in natural resource management currently.

At the top of social organization there was a king (*Tato*). Under the king, there are advisories (*Mikercho*), clan leaders (*Gepetato*) and individuals appointed under them. This social organization maintains systematic relation among members.

According to informants, as the case with *Mikercho*, the *Gepetato* has a double role i.e. politics and religion. The role of *Gepetato* in religion is organizing and leading annual feast ceremony for blessing the local environment and the people. The Imperial regime also utilized the *Gepetato* to administer the community. By then, the *Gepetatos* had the responsibility to purify the land and the people, and allocate it for the new settlers. Furthermore, in that period the *Gepetato*

had been a responsible person to manage the forest and water bodies since it has religious significance.

During the military regime (1974-1991), however, the positions of the *Gepetato* were taken away. But, in the current regime though the political role has taken away, they continue to play ritual leadership. Now, the *Gepetato* have responsibilities on the issue of administrating the forest, disputing resolution, and imposing sanctions on the individual who violate rules. The *Gepetato* protect it from destruction for agricultural purpose and overuse by the local community. In this forest, where ritual ceremony is practiced, *Gepetato* prohibits people from cutting down trees, collecting firewood and keeping beehives. All these show that the *Gepetato* has a responsibility to manage the forest sustainability.

There were also causes such as inappropriate investment projects, such as tea plantation, and population pressure as well as vilgization program that contributed to forest degradation in the study area.

Moreover, the assessment which was made in line with the approach of PFM has manifested that most of the indigenous forest management practices in the study area are adaptable, sustainable to the environment, have multiple benefits, compatible and need little/no cost for implementation. This shows that there is a good store of indigenous forest management practices in the community that have developed over generations through observation and experiences. However, the study revealed that some of the indigenous practices of forest management have problems in their function, implementation and effectiveness. For instance, in some cases the problem of forest is given religious interpretation as curse of god. This shows that some elements of indigenous practices of the area cannot provide effective solution for the problem of the forest. Participatory Forest Management, thus, was designed to develop the forest management program for sustainable development. This was done by one international NGO, FARM Africa. The result facilitated the establishment of Participatory Forest Management program in the study area. In this program, both the government and communities are represented equally, participated to design sustainable forest management program in the study area. To achieve

this goal, FARM Africa designed a mechanism on the way to integrate indigenous knowledge with scientific forest management knowledge. Basically, the community knowledge considered.

Limitations of Indigenous Forests Management Practices in the Study Area

Though not all of them, some of the indigenous forest management practices in the study area have limitations. The limitations of indigenous forest management practices are revealed in their functions, implementations and effectiveness. The limitations of indigenous knowledge are basically forest benefit sharing problem among user groups and the impact of globalization in the study area. During the Imperial regime, forest use right was derived from inheritance. By then, for instance, some patches of forest had fallen under the control of few landlord groups, who have exclusive use right to benefit from it. The rest of the community did not have any right to use the forest unless they were given permission from those few landlords or extract some products of the forest under night cover. In other words, the landlord class had been the sole beneficiaries of the major benefits of the forest such as coffee and honey, whereas benefits allowed for the rest of the community were confined to household consumption and to pay for the landlord. This shows that the forest lost a sense of belongingness to the whole community. This hampered the management strategies of forests in indigenous sense.

The Integrated Effects of Indigenous and Scientific Forest Management Knowledge's

At it has been discussed so far, the study area has experienced both indigenous and scientific forest management practices. These knowledge's have strengths and limitations. This has been evident in the discussions. Thus, we can say that either scientific or indigenous knowledge cannot be relied upon in its own to bring rapid development in face of present challenge in the study area. Several literatures also substantiated these findings. Accordingly, a combination of indigenous and scientific knowledge is being implemented in the area, by taking the positive side of the two practices so as to deal with the challenging problems.

The process described below involves the information flow which took place when the

community's knowledge was confronted with new information. This happened when communities, Development Agents (DAs) and experts exchanged information in a number of training activities related with forest management. According to FARM Africa experts, four main interaction processes occurred between indigenous and scientific knowledge before arriving at the present PFM. Each of them is described here under.

Formative Interaction

Formative interaction occurs when a new knowledge is introduced and is allowed to replace the previous one held by the community. This happened when communities are given access to scientific information about the ecosystem of the forest. As usual, most community members believe that environmental problems, particularly forest problem, are sent from the sky by god for punishment. But, once community members had access to scientific knowledge the problem is purely man made and the situation will change for the better. They are, thus, able to understand how the forest ecosystem can best function.

Modifying Interactions

Modifying interaction occurs when the community's knowledge is slightly adjusted (modified) to conventional knowledge so that they can better understand what they do not previously know. For instance, knowledge modifications occurred on the way to make money on NTFP. In this way, the traditional practice of processing NTFP was slightly modified as a result of the interaction between indigenous and scientific knowledge. The implication is that their similarity paved the ground for modification though they have differences in technical aspects.

Reinforced Interactions

Reinforced interaction occurs when the conventional knowledge accepts the community's knowledge of the forest as it is. This helps the community to feel confident about their knowledge. Here, certain practices, such as ritual of the community, are included to the PFM practices. These practices are better implemented in the study area after the communities understand the overwhelming quality of their knowledge over the conventional one. Finding from the study revealed that there is an increase in number of participants in ritual practices.

Confusing Interactions

This occurs when there is a conflict of knowledge between indigenous and scientific information. The conflict of interactions is the result of limitations and inappropriateness of the knowledge's in the study area. Therefore, this knowledge's are discarded from both sides.

In fact, the importance of integrating the two knowledge systems are not only confined to the local community but also helped the government to acquire large sums of money in the form of tax, and foreign currency. This is done by organizing the different community union to sell NTFP. In such instance, coffee is the leading one, followed by spices and honey.

Conclusions

To conclude, the finding of the study revealed that they have a positive attitude towards the sustainability of participatory forest management program. This is attributed to the beginning of improvement on forest resource conditions, empowerment and accountability of users, and devaluing of powers.

Furthermore, this is becoming stimulating factor for the improvement in quality and quantity of trees, increasing the availability of non timber forest products such as coffee, spices and other food items. Thus, the collaborative effects of the community and the government are remedy for the problems of forest management. Participatory Forest Management is, therefore, found to be relatively more effective for sustainable forest management in the study area.

References

1. Atteh, O. Indigenous Local Knowledge as a key to Local Level Development: Possibilities, Constraints and Planning Issues in the Context of Africa. Netherlands: Iowa State University, 1992.
2. Grenier, L. Working with Indigenous Knowledge: A Guide for Researchers. Ottawa: National Library of Canada, 1998.
3. Howes, M and Chambers, R. "Indigenous Technical Knowledge: Analysis, Implications and Issues." In Indigenous Knowledge Systems and Development. Brokensha, D. et.al, (Eds). New York: University Press of America, 1980.
4. Muchena, O and Vanek, E. "From Ecology through Economics to Ethno Science: Changing Perceptions on Natural Resource Management." In The Cultural Dimension of Development: Indigenous Knowledge Systems. Warren, D et.al, (Eds) London: Intermediate Technology Publication Ltd, 1995.
5. Steiner, A and Oviedo, G. "Indigenous Knowledge and Natural Resource Management." In Indigenous Knowledge a path way to Global Development. Toronto: World Bank Institute, 1997.
6. Orent, A . "Linage Structure and the Supernatural: the Kaffa of South West Ethiopia. " Ph. D. Dissertation. Boston University: Boston Mass, 1969.
7. Zewdie Jotte. "The Impact of Cultural Changes on the Peoples of Sheka and Their Traditional Resource Management Practices: The Case of Four Kebeles in Masha Woreda." In Forests of Sheka: Multi Disciplinary Case Studies on Impacts of Land Use/Land Cover Change, South Western Ethiopia. Masresha Fetene. (Ed). Addis Ababa: Melca Mahiber, 2007.
8. Zemenfes Tsighe. "The Political Economy of Land Degradation in Ethiopia." In North East African Studies . USA: Michigan State University Press, 1995, Volume 2, Number 2, pp.71-98.
9. Assefa Seyoum . "Economic Value of Afro Mountain Natural Forest in Sheka Zone, South West Ethiopia." In Forest of Sheka: Multidisciplinary Case Studies on Impacts of Land use / Land Cover Change, South West Ethiopia. Masresha Fetene. (Ed). Addis Ababa: Melca Mahiber, 2007.
10. Bekele WoldeMariam. A Short History of the People and Rulers of Kaffa. Addis Ababa: Mega Printing Press, 2004.
11. Dawit Abebe and Ahadu Ayahu. Medicinal Plants and Enigmatic Health Practices of Northern Ethiopia. Addis Ababa : Berhan ena Selam Printing Press ,1993.
12. Desta Hamito .Research Methods in Forestry: Principles and Practices with Particular Reference to Ethiopia. The Netherlands: Deventer , 2001.
13. Lange, W. History of Southern Gonga (South Western Ethiopia). California : African Studies Center , 1982.

14. Ortiz, O. "Understanding Interactions between Indigenous Knowledge and Scientific Information." In *Indigenous Knowledge and Development Monitor*. Volume 7, Special Issue, pp.7-10, 1999.
15. Tadesse Berisso. "Deforestation and Environmental Degradation in Ethiopia: The Case of Jam Jam Province." In *North East African Studies*. USA: Michigan State University Press, 1995, Volume 2, Number 2, pp.139-155.
16. Wossenu Yimam. "The Need for Transferring Useful Indigenous Knowledge System and Practices in Ethiopia." In *Indigenous Knowledge System in Ethiopia: Proceedings of the First National Workshop of the Ethiopia Chapter of Ossrea*. Dejene Aredo. Comp. Addis Ababa: Commercial Printing Press, 2000.