JIMMA UNIVERSITY

COLLEGE OF SOCIAL SCIENCES AND LAW

DEPARTMENT OF OROMO FOLKLORE AND CULTURAL STUDIES

POST GRADUATE PROGRAM

INDIGENOUS FOREST CONSERVATION AMONG THE OROMO WITH REFERENCE TO '*KOBBOO*' UTILIZATION IN NONO SAL'E,ALE ANDDIDU DISTRICTS OF ILU ABBA BORA ZONE, SOUTHWESTERN ETHIOPA

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JIMMA, ETHIOPIA

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GLOSSARY OF LOCAL TERMS

Abba ulee	Name given to cattle herding institutions and its head
Adaadaa	Aunt
Afoosha	Self-help voluntary indigenous organization
Akaakayyuu	Grand father
Akka'oo	Grandmother
Ayyaana	Sprit/divine agent
Baataa	A person who Lead traditional cooperative work
Baddaa	Highland
Badda daree	Temperate
Bakkee/Lafa diriiraa	Leveled plain land
Bokkuu	A wood, a sign of authority kept by the Aba Bokku
Bosona	Forest
Cidha	Wedding
Cittuu bosonaa	Pitch forest
Dabboo	Traditional net
Daboo	Traditional cooperative work
Dachaa	A land that is drained by a river and its tributaries.
Diboo	Closed forest
Eessumaa	Uncle
Fira dhiyoo	Close relatives
Gadaa	Oromo institution that represents a type of social structure known as age-sets.
Gammoojii	Lowland
Ganda	Lowest administrative structures under the ruling of government
Irreessa	Moist grass used for different ritual purposes
Jaarsaa biyyaa	Local elders
Kattaa/lafa dhagaa	Land forms that are dominated by rocks
Kobboo	Large and dense forest where bee keeping and other forest resources are carried out
Lafa caffee	Wet land (swamp)
Muummee	A places under mountains where there are rivers
Qilee/hallayyaa	Gorges
Qirqiruu	Girdilng
Qoolloo/Abdaarii	Sacred sites
Safuu	Mutual relationship in the cosmic order
Shanachaa	Lineage leaders
Tabba	Small hill
Tulluu	Mountain
Waaqa	God
Wanjo, Gindo, babattee	Agricultural tools made up of wood and used for ploughing

ACRONYMS

EARO	Ethiopian Agricultural Research Organization
EPA	Environmental Protection Authority
FAO	Food and Agriculture Organization
FGD	Focus Group Discussion
GIS	Geographic Information System
NGOs	Non-Governmental Organizations
NTFP	Non Timber Forest Products
OARDB	Oromia Agricultural and Rural Development Bureau
PFM	Participatory Forest Management
SNNPR	South Nations, Nationalities and People Region
UNCED	United Nations Conference on Environmental and Development

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ABSTRACT

This study deals with indigenous forest conservation among the Oromo with reference to 'Kobboo' utilization in Nono Sal'e, Didu and Ale districts of Ilu Abba Bora zone, Southwestern Ethiopia. The objective of the study was to explore the contribution of Oromo indigenous forest conservation mechanisms with emphasis on 'Kobboo' utilization in the research area. The methods of data collection employed in the study were unstructured interview, in-depth interview and focus group discussion with local elders and leaders, districts and zonal level agricultural and rural development, Forest and Wild Life Enterprise experts. Field observation was also conducted in the study area ranging from 10 February, 2014 to 30 March, 2014. The qualitative analysis of the study revealed that communities in the study areas were well aware of ecological, economic and socio-cultural values of forest, and hence has developed their own conception of forest resource management. From the study, it was found out that there was high dependency of the local community on the forest. According to the results of the study, almost all plant species recorded in the area have one or more types of local uses. The major non-timber forest products (NTFPs) recorded in the area is fodder, local construction materials, medicine, spices, honey, household furniture and fuel wood. These NTFPs which are used locally and sold to generate income are honey, coffee and spices (ogiyoo and tunjoo). Bamboo tree is locally used for construction purposes. It is also used as a source of income. The study also indicated that the Oromo people of the research area have their own traditional ecological knowledge that has sustained the natural resources to present. The customary laws of Kobboo practices have played a great role in forest resource conservation. Traditional belief systems and work organizations such as Baataa, Jaarsa biyyaa and Abbaa Ulee were till widely practiced in the study area and greatly contribute in the rules of Kobboo customary laws by performing in the social functions that directly or indirectly contribute to forest resource conservation. It was also found out that many people in the research areas have attachments to cultural religious institutions like Qoolloo and Abdaari. Hence, the local people used and conserved forests and trees in and around these sacred sites to sustain the area of their cultural religious institutions. This study revealed that indigenous institutions and cultural understandings of the Kobboo forest system were still feasible in playing vital role in forest conservation. The research also indicated that the modern natural resources management institutions, particularly Participatory Forest Management (PFM) project considered the Kobboo customary laws of local people on forest resources management as an indispensable system of conserving natural resources.

CHAPTER ONE

INTRODUCTION

1.1. Background of the Study

Local communities are the primary stewards of forest resources. These resources are usually characterized by the local communities' culture and management system, where cultures are materially and spiritually built up on the physical world of the forests. Forest and culture therefore, have been intertwined throughout human history, and just as people have acted upon and altered forests throughout human history, so have forests profoundly influenced human consciousness and culture. Local communities' proper access to forest resources around them and respect to their traditional institution and systems of management of these resources provide the opportunity for safeguarding the resources sustainably (Regassa, 2001cited in Kitessa, 2007).

Disassa (2010) stated that local communities in Ethiopia in general and Oromo peoples in particular are dependent upon forest resources for their livelihoods. Hence, Oromo people have rooted in traditional institutions of utilizing and managing forests and forest resources to meet their needs for subsistence and income generations. This is obvious that conserving forest resources has a great role in the living conditions of local people residing in and around forests.

As Workineh (2001) explained the Oromo have a wide traditional knowledge of the nature and use of various trees. For example, big trees are the symbols of respect and happiness. Traditionally, people say so-and-so has big trees around his premises so that his homestead has *Ayyaana.* The Oromo believe that trees are the children of *Waaqa* and the earth can only be respected with its trees, because of this the Oromo people respect and conserve the trees in their traditional institution system.

Trees are conected to religious rituals in Oromo society. Accordingly, the Oromo religion provides many checks and balances on resource utilization. In addition, the followers of Oromo traditional religion have their own sacred trees. For example, the communities believe that *dakkii*

tree is the abode of spirits. It is a symbol of peace and stability and is thought to be a singn of link between *Waaqaa* and the people.

According to the Oromo tradition, various types of trees have various ritual values. For instance, the Oromo use *birbirsa* as a pillar, and put green leaves under it so as to appease or propitiate their *Ayyaana. Ejersa* is one of the respected *Bokkuu* trees. In addition, trees around the *Qaalluu* institutions, springs, and other ritual places are considered as sacred. Supporting this thought, Lemessa (2012) explained that the indigenous peoples of Oromo of Horo Guduru had been attaching cultural importance to *caatoo* natural forest as a sacred. The Oromo also respect *Bokkuu* (scepter) trees. No one is allowed to cut a single branch from these trees. Indicating the values given to these trees Workineh (2001) revealed that even the women cannot collect dry dung from the compounds of *Bokkuu* trees.

In the past the Oromo used to plant trees on graveyards. These trees are taboo for any use. The Oromo favor *Adaamii (Euphorbia candelabrum)* of all trees for the purpose of graveyards. For this reason, nobody wants to cut this tree. Peasants put beehives on these trees. It is believed that trees on a grave look like the flesh of the dead person and serve as statues (Tsehai, 1994 cited in workineh, 2001). Moreover, the Oromo people are also well aware of the fact that trees and rain are interconnected. They argue that cutting all available forests will not only deprive the future generation of rare plants and animals, but will also affect climatic conditions leading to drought, excessive wind storm and soil erosion.

Forest management planning is an essential tool in applying cultural and spiritual aspects in practical forestry operations. Therefore, all levels of forest management planning like national, regional forest management unit and forest stand level should be taken into account.The principles and goals for the management of forests will be set by national or regional level for a longer period of time.When applicable participatory planning methodologies should be preferred by goal setting and applications. Modern techniques, such as GIS and landscape ecological planning combined with culturally and spiritually valuable sites should also be used. Cultural and spiritual sites, as well as the identity, culture and rights of local and indigenous people should also be integrated in the forest management planning. Recognizing the cultural and spiritual

values shows that forest management is not only production or protection but also maintaining the relationship between people and forest (Ghai, 1995).

The International Union for the Conservation of Nature and Natural Resources, the International Biodiversity Convention, the World Commission on Environment and Development recognized the importance of indigenous knowledge as a significant variable and a critical factor in achieving sustainable development. The traditional communities are the repositories of vast accumulations of traditional knowledge and experience. Their disappearance is a loss for the larger society, which would learn a great deal from their traditional skills in sustainably managing very complex ecological systems (Davis, 1993 and WCED, 1987; cited in Workineh, 2001).

Due to the newly Ethiopia Proclamation (No. 542/2007) for Development, Conservation and Utilization of Forest resources the government has identified 58 most important high forest areas as national Forest Priority Areas. Most of these areas are found in Oromia Regional State (EFAP, 1994 cited in Disassa, 2010). Moreover, Participatory Forest Management system in which local people's knowledge, traditions and livilihoods are play vital role through this joint forest management has gained acceptance (OARDB 2007).

In addition (Agrawal and Yadama, 1997) indicate that local institutions of indigenous people play a great role in shaping the condition of natural resource in general and forest in particular. Hence, many researches have been carried out with a focus on Oromo traditional institutions of natural resource management in general and forest resource conservation in particular. These researches have come up with different findings. Customary institutions and forest conservation practices like *Tulla, Xuxe, Shane, Jiga, Reji, Abba Laga, Qoro and Shanacha* are the institutions behind the overall life of the Oromo community in and around forest areas as integral element in their cultural, spiritual and social system.These institutions can also contributed to the forest management in different senses. They organize, leads, controls and enforce the activities, rules and regulations of diverse local customary institutions. And these institutions are involved in a wide range of activities that include forest resources harvesting mechanisms, forest management and controlling violations of rules in forest management that can sustainably manage the forest

through the active participation of the local community (Disassa, 2010; Mekdes, 2005; Zewdie, 2010; Kitessa, 2007, Feyera and Demel, 2003).

This study, hence to assess the indigenous forest conservation with reference to *Kobboo* utilization practices. The study focused on three districts in Ilu Aba Bora Zone of the Oromia regional state, namely Nono Sal'e, Ale and Didu. Nine *gandaa*s were purposively selected: four from Nono Sal'e district (*Birbirsa, Onnoosee, Nono and Qawoo),* two from Ale district (*Jeto Koyami and Garba Dima)* and three from Didu district (*Gordomo, Gamachu and Kochi)*. These districts are located in the Western part of Oromia. Nono Sal'e district is found at 94kms, Ale district is found at 18kms and Didu district is found at 57kms from Metu town, which is the town of Ilu Abba Bora zone.

1.2. Statement of the Problem

Indigenous African societies apply traditional knowledge in their administration of natural environments (Kassahun, 1999). Accordingly, among the Oromo in general, there were and still are indigenous knowledge and practices of forest conservation. Lemessa has discussed that there are numerous respect for ritualized environments in the Oromo of Horro Guduru; such as *Caatoo* sacred forest, many sacred groves and trees. Therefore, because of this Oromo spiritual forest ecology, large forest area coverage has been protected for long centuries (Lemessa, 2012). In the Oromo of Nono Sal'e, Ale and Didu districts of Ilu Abba Bora Zone, indigenous forest conservation with reference to *Kobboo* utilization embedded in customary laws. Traditionally, customary law enabled people to develop indigenous management systems that acted as controls in the manipulation of natural resources. But now a days, these practices have been modifying by external and internal influences. Introduction of new religion, new belief systems, external cultural influences, and expansion of investment in plantations are intensively affecting the livelihood of the indigenous community through changing their land use and conservation culture.

Population increases are the major threat because people use any plant regardless of its cultural significance in order to meet their immediate needs. Pressure of urbanization and cash economies are also other reseaons that contributing to the erosion of indigenous knowledge towards forest

conservation. This encouraged some members of the local community to sell fuel wood and charcoal on local markets.

The study were identify the usage of forest and their traditional conservation practices of *Kobboo* utilization to enhance sustainability of forest biodiversity in the rural areas of Nono Sal'e, Ale and Didu districts of Ilu Abba Bora Zone. The majority of the people in the study area depend on forest for their daily survival either for medicines, firewood, construction purposes, honey extraction, spices, coffee plantation, musical instruments, rituals, closing, shelter and other purposes. The purpose of this research is to discover how the Oromo people, conserve the forest by using indigenous mechanisms and examined how effective these mechanisms are and how they work in Nono Sal'e, Ale and Didu districtss of Ilu Abba Bora Zone.

In addition, as far as the knowledge of the researcher is concerned, indigenous mechanisms of forest conservation in general are less studied, and *Kobboo* utilization practices in particular among the Oromo are not yet studied. Therefore, this study is an attempt to bridge these gaps.

1.3. Research Questions

The following questions were used as search light to explore indigenous mechanisms of forest management among Nono Sal'e, Didu and Ale districts:

- ⊕ What type(s) of Oromo indigenous knowledge for forest conservation do exist in Nono Sal'e, Didu and Ale districts?
- ⊕ What are the values of *'Kobboo'* for forest conservation?
- ⊕ What are the roles of *'Kobboo'* for the community as economic source and social value?
- ⊕ What are the major threats for '*Kobboo'* utilization?
- ⊕ What are the present situation of indigenous knowledge of forest conservation and the forest of the areas?

1.4. Objectives of the Study

1.4.1. General Objective

The main objective of the study was to explore the contribution of Oromo indigenous forest conservation mechanisms with emphasis on '*Kobboo*' utilization in Nono Sal'e, Ale and Didu districts of Ilu Abba Bora zone.

1.4.2. Specific Objectives

The study has concentrated on the following specific objectives:

- To identify Oromo indigenous knowledge which might contribute to forest conservation
- To describe the values of *Kobboo* in forest conservation and community,
- To assess the contribution of traditional plant utilization practices in forest management.
- To evaluate the current status of *Kobboo* utilization and indigenous forest conservation of the area.

1.5. Significance of the Study

The question of indigenous knowledge of natural resources management has occupied some degrees of significance in contemporary global political and socio-economic discourses. Thus, this study is expected to come up with new facts through detailed investigation of different patterns of changes in this regard. The study of indigenous knowledge of forest conservation practice among the research area has been important for the following perspectives:

- It will attempt to draw the attention of the governments of Ethiopia to scale-up and use these indigenous mechanisms to other parts.
- It will contribute to the department of Oromo Folklore and Literuture as a bit resource.
- It may use as a reference for those researchers are interested to carry out studies in a similar area.

1.6. Delimitations of the Study

The research has been done on the indigenous forest conservation system among the Oromo of Ilu Abba Bora zone, with reference to '*Kobboo*' utilization in Nono Sal'e, Ale and Didu districts. Study sites were selected purposively delimited to these areas because the preliminary survey shows that the districts are forested areas and '*Kobboo*' is also currently in practicing. On the other hand, the *'Kobboo'* practice is still not focused in other researches done regarding the indigenous forest conservation.

1.7. Limitations of the Study

There were some limitations in this thesis. The first problem was related to lack of materials. As it is known, such kinds of research should be supported by Geographic Information System (GIS) technology. However, because of inaccessibility of the resource, the researcher did not use it as desired. To come up with the problem, secondary data was used to identify forest coverage area and settlement area. Secondly, time, budget and transportation were other problems faced in this research. Time constraint was the major problem. The researcher had only one and half month field work, which is too short to conduct folkloric research of this nature. The researcher was not able to observe the whole site of the activities of local people in and around forests in this short period. In addition, inaccessibility of transportation was challenging in the study area. Budget was also the main problem. It is known that this kind of study needs more budget. Nevertheless, the allocated budget was not enough and every cost was a challenge for the researcher.

1.8. Methods of Data Collection

The indigenous knowledge of natural resources management practice of Oromo is a topic that lends itself to historical, folkloric and environmental approaches. This research has depended on a systematic collection of relevant data through the application of the approaches of the disciplines of historical, folkloric and environmental researches to identify the dynamics of change and continuity over time. In this study, both primary and secondary sources were employed. Findings are more related to primary data that were gathered by the researcher during stay in the field. The researcher has used techniques of primary data collecting methods such as unstructured-interview, in-depth interview, focus group discussion and field observation.

1.8.1. Primary Sources

1.8.1.1. Unstructured Interview

Since the research is exploratory in nature, this method is very appropriate to get relevant data. In this method the researcher has purposely selected individuals from the community and collected data about traditional forest management from informant's viewpoints. During interview the researcher has tended to allow informants more freedom in terms of their response to the topic of

the study. While using this method the researcher has been taking field note, record the sound of respondents and capture relevant photos.

1.8.1.2. In-depth Interview

By using this method the researcher has got relevant data on traditional knowledge of forest conservation with reference to *Kobboo* utilization. The researcher has selected key informants by using snowball method, especially those who know about forest resources in general and history and utilization of *Kobboo* forest in particular. The researcher has interviewed 19 key informants who were contacted through either guided interviews or informal discussion at different places, usually at home and in the field. Using these tools, the researcher attempted to understand the informants' thoughts, perceptions and values, religious and philosophical attitudes towards the traditional forest management.

On the other hand, interviews were conducted with government officials who were stakeholders and directly or indirectly affected forest management and its conservation. In this case, Agricultural and Rural Development Office (Rural Land Administration and Environmental Protection, Natural Resource Management and Extension Program departments) of the districts and Ilu Aba Bora Forest Enterprise offices both at district and zonal levels were consulted to generate data in relation to the situation of the areas' forests at present and its management practices.

1.8.1.3. Focus group discussion

As with other qualitative research approach data collection methods, focus group discussion can be used for exploratory, explanatory and evaluative research. Since the research is more of exploratory research, this method helped the researcher to get great range of view on the topic. The researcher formed four groups with 6-8 members in different local areas (locally called *gandaa*). The focus group discussion embraced elders, religious leaders, local institutions and representatives of traditional organizations. In addition, those who know well about traditional forest conservation of *Kobboo* utilization participated in the focus group discussions.

Issues under discussions were matched with traditional practices related to conservation of forest resources, perceptions about use of forest resources, observed changes in the forests before and the present situation, factors affecting traditional knowledge of the community in forest conservation and others. During this the researcher has conducted interactive discussions and got relevant data and took necessary data by using audio recorder, video recorder. Field notes were also taken.

1.8.1.4. Field Observation

This method is most appropriate to gather relevant data in folkloric research. So, the researcher has used this method in collecting data. During field work, the researcher has observed and recorded the livelihood of the community such as household tools, clothing, sacred groves, agricultural tools, cultural forests, wetlands, rivers, grazing and farm lands, rituals custom, habits, and practices, that reflect the knowledge and attitudes of local community towards the forest resources. Local name of plants were identified by the community.

Moreover, contacting different social groups made the researcher to understand the views of local people towards *Kobboo* forest resources conservation, *cittuu* forest in supporting their livelihood, and activities in natural forest in the study area. Hence, this method too added values to this research by providing more relevant information. Finally, parts of plants collected from the study areas were scientifically identified and botanical names were given in the herbarium room of Jimma University.

1.8.2. Secondary Sources

Some information on the issues of natural resource management in general and forest management in particular was obtained from secondary materials. Information related to this, institutions, guidelines, proclamations and policies were consulted from different offices and published or unpublished materials. Thus the researcher used this method to lay general background for the thesis. In addition, the researcher used the method to back up information obtained from primary sources. Hence, different electronic and written materials like official documents, archives, journals and articles were assessed.

1.9. Data Analysis

Data for the research was collected at different levels ranging from local community to different government officials, individuals and groups. In this research, qualitative data collection and analysis were conducted. Qualitative data is primarily based on ethnographic descriptions of the ideas of different informants. The analysis of this research is also extensively based on discourse analysis that leads to key points on different issues that the local community and people at different level raise.

1.10. Organization of the Study

This study is structured into five chapters. The first chapter deals with introduction of the research. This part comprises Background of the Study, Statements of the Study, Research Questions, Objectives of the Study, Significance of the Study, Delimitations of the Study, Limitations of the Study, Methods of data collection and organization of the study.

The second chapter deals with literature reviews and theoretical and conceptual framework. This part lays foundation of the study by framing the analysis of the research. The third chapter consist the background of the study area. Under this part, a Brief Historical of Oromo of Ilu Aba Bora Zone and Gada System of Saglan Ilu, Ilu Gada and its grade, some of Oromo leaders like Fatansa Ilu and dawn fall of Ilu kingdom is involved. Physical background of the study area and Socio-economic background of the study area are discussed.

Chapter four deals with indigenous knowledge of landform classification in the study area, indigenous knowledge on forest concept, indigenous forest categorizations, and indigenous forest resources utilization in the Oromo of the study area were consisted. This part deals also iindigenous knowledge of forest conservation practices. Under this title *Kobboo* practices of forest conservation, threats of *Kobboo* practices, traditional work organizations on forest conservation, and traditional religious institutions on forest conservation was briefly discussed. Interrelation of indigenous knowledge and modern forest resources management, investment and tree plantation in the research area and deforestation has been also reported in the part. The last chapter is concerned with brief conclusion and recommendation of the study.

CHAPTER TWO

LITERATURE REVIEW

In this research, the written literatures that directly or indirectly related to indigenous forest conservation were discussed. The written resource materials related with cultural mechanism of forest conservation, indigenous knowledge, institutions and livelihoods of local people were assessed. The researcher also dealt with theoretical and conceptual framework that guides the study for analyzing the data obtained from informants and secondary sources.

2.1. Indigenous Knowledge and Practices in Natural Resource Conservation

The terms 'indigenous knowledge'(IK), 'local knowledge', 'folk knowledge', 'traditional knowledge' and 'traditional environmental or ecological knowledge (TEK)' are often used interchangeably (Ellen et al., 2000). The term 'indigenous knowledge' denotes the traditional understanding of a community which has originated, grown and lived in a specific area. Indigenous knowledge is therefore 'naturally possessed' by a particular community and its content may be as broad as human experience: from history, culture, astronomy, biology, health, agriculture, environment etc. The process of validation of this form of knowledge involves its use and usefulness in the real world (Bohl, 2002 cited in Dagnachew, 2012). This concept of a distinct indigenous world view recognizes the belief system inspired and protected by indigenous knowledge and value and the shared belief that indigenous societies are characteristic of the creative adaptation of the people to an ecological order (Ellen *et al*., 2000).

Indigenous knowledge and biodiversity are complementary phenomena essential to human development. Scientific and indigenous knowledge have in the process of modernization, often been progressively more separated each other. It has been widely assumed that there is a vast difference between these two types of knowledge. Indigenous knowledge has earlier been seen as retrograde, static and a hindrance to modernization (Appleton *et al*., 1995). Indigenous knowledge is now widely recognized to be an extensive, diverse, unique, complex and sophisticated body of knowledge that the people have gained over many generations. It is believed that incorporating the local people, by recognizing and embracing their knowledge in planning processes, will create a feeling of ownership and responsibility in development project

and there by create greater participation and better prospects for a successful project (Kristensen, 2004).Very little of the indigenous knowledge of natural resources management has been recorded, generally in the African context and particularly in the Oromo context.

Traditional ecological knowledge of different people around the world living in natural environments depend on the use of plants in all aspects of daily life, from food and shelter to medicines and for religious purposes (Case et al., 2005). People are culturally and historically attached to forests that are essentially important habitats for terrestrial biodiversity. This integrated concept of humans in nature has been referred to as a social-ecological system (Berkes, 2004). In their frequent use of wild plants, local people communicate and transfer profound ethno-botanical knowledge of plant resources from generation to generation in their local environments built around experiences and closely related to a way of life (Berkes, 2004). Therefore, local people harbor important information on valuable plants and vegetation dynamics. This knowledge base is recognized to be useful for the management strategies aimed at sustainable conservation of forest biodiversity (Case et al., 2005). Biodiversity conservation projects have been shown to be more successful when local knowledge has been incorporated and built into the planning and implementation of conservation activities (Berkes, 2004).

There are different types of natural resources that are managed by indigenous knowledge mechanisms. These are soil, water, forest, wildlife, land and etc. (Dagnachew, 2012). For generations, indigenous people have lived in natural resources in which they have developed and practiced life-styles and belief systems that draw upon their deep knowledge about local plants, wildlife, and ecology. Nevertheless, the local people with this knowledge are often unable to use it in a modern world in which state policy overrides local management. Increasingly, however, scientists and development planners are recognizing the importance of indigenous knowledge to biological resource management and the maintenance of biodiversity. When discussing cultural knowledge in this paper, which people interact among themselves and with nature to generate original livelihoods, such as hunting, cultivating, conserving. This variability in lifestyles encompasses their world views, religious beliefs, knowledge, customary organizations, norms, and rules (Thompson et al. 1990).

2.2. Indigenous Resource Management Practices

Culture forms the foundation in making decision on the use and conservation of natural resources. It is reflected through the social organizations, belief system, societal and means of subsistence. Forests, wetlands and rivers and waterfalls are the main natural resources communities manage through their ecological knowledge (Zewdie, 2005).

Zewdie has discussed, large areas of the forest may be described as cultural forests in Sheka of South Nation and Nationality of people. The base for the conservation of these cultural forests is the religious beliefs that impose resource and habitat taboos on forest covers. Taboos and social values also forbid people from cultivating wetlands and clearing forests in the surrounding and at the side of rivers. The Shakichos believe that people who violate these taboos will die or face evil things. He argues that there is a strong relation between the wetlands, rivers and forests in their environment.

According to Zewdie (2005) social organization, beliefs, values and customs of Sheka peoples has been mainly responsible for the conservation of natural resources. Related to this, the Oromo people provide many checks and balances on resource utilization. The followers of Oromo traditional religion have their own sacred trees. Workineh (2001) has discussed, every Oromo has his own *Dakkii*tree that is believed to be the abode of spirits. *Dakkii* tree is a symbol of peace and stability and is believed to be a link between *Waaqa* and the people. Not all trees are selected as *Dakkii*trees. *Birbirsa (Podocarpus graciliorlJalcatus), Laaftoo, Garbii (Acacia albida), Harbuu (Ficussur), Qilxuu The Oroma favor (Ficus vasta), Ejersa, Mi'eessaa (Prunus africana), Gaattiraa (Juniperus procera), Hoomii (Pygeum africanum), Somboo (Ekeberigia capensis),* as *Dakkii* trees. *Birbirsa* is associated with the Gadaa system. The Oromo use *Birbirsa* as a pillar and put green leaves under it so as to conciliate their *Ayyaana. Laaftoo* is not a callous tree; it is rather simple and soft. *Harbuu* is chosen for it has a kind of breast that produces milk, and has fruits. Similarly, *Qilxuu* has breast and capable of producing milk. *Ejersa* is one of the respected *Bokkuu* trees. It is forbidden to cut *Dakkii* trees. The inhabitants in any way could not utilize them. Moreover, trees around the *Qaalluu* institutions, springs, and other ritual places are considered sacred.

The Oromo also respect *Bokkuu* (scepter) trees. The *Gadaa* officials use these trees as traditional Oromo court. They discuss social, economic and religious problems under the shade of it. No one is allowed to cut a single branch from these trees. Even the women cannot collect dry dung from the compounds of *Bokkuu* trees. In addition Oromo used to plant trees on graveyards. These trees are taboo for any use. The Oromo favor *Adaami (Euphorbia candelabrum)* of all trees. For this reason, nobody wants to cut this tree. Peasants put beehives on these trees. It is believed that trees on a grave look like the flesh of the dead person and serve as statues. Traditionally this place is called *[IddooHammeenyaa* or *Tuujuba Warraa* (the grave of so and-so).

The Oromo peasants have a wide knowledge of the nature and use of various trees. *Ejersa (Oleaeuropaeasubsp/cuspidata), Agamsa (Carissa edulis), Gaattiraa (Juniperus procera*) and *Laaftoo (Acacia Albida)* are important to construct traditional houses and fences. Peasants use *Waddeessa (Cordia africana)* to make yoke. *Ejersa* is essential to make a beam for plough, wedges and flat wooden boards that support the handle of a plow and a plow snare. Peasants also know different trees resistant to the rotting effects of sun and rain, and trees that are termite proof. Peasants use *Laaftoo, Bakkanniisa* and others for charcoal burning. Peasants also plant trees for aesthetic reasons. Big trees are the symbols of respect and happiness. Traditionally, people say big trees around his premises so that his homestead has *Ayyaana.* The birds alight on these trees. The Oromo believe that trees are the children of *Waaqa* and the Earth can only be respected with its trees. Oromo people argue that cutting all available forests will not only deprive the future generation of rare plants and animals, but will also affect climatic conditions leading to drought, excessive wind storm and soil erosion. Workineh (2001) has confirmed that the rain starts on the forested lands.

2.3. Traditional Environmental Knowledge and Scientific Knowledge

Traditional environmental knowledge and scientific knowledge have many things in common. Both are attempts to make sense of the world, to render it comprehensible to the human mind. Both are based on observations and on generalizations deriving from those observations (Berkes, et *al.,* 1995, 282). Modern researchers can best understand the nature of local soils and plants with the rural people. Local knowledge may facilitate in a few days soil surveys and mapping that would otherwise take months (Howes, 1980). In this regard, (Abdelghaffar, 1994)

underscores that indigenous and scientific knowledge should not be over glorified. Instead, the right intermingling of the two knowledge systems can help in enhancing the prospects for sustainable food production in rural areas. It is thus suggested that transcending physical planning and assessment of carrying capacities in favor of local knowledge and institution can realize a bottom-up approach. A problem of resource management relate not only to physical planning and efficient deployment of modern input delivery systems, but also includes the local communities and their readiness to accommodate change (Salih, 1992). What is required is a two-way flow of information between modern technicians and ordinary peasant farmers. The least that can be said is an idea borrowed from the people, developed by the agronomist and returned to the people again is much more likely to be adopted than something totally alien to the culture (Richards, 1975).

A number of international bodies, such as the International Union for the Conservation of Nature and Natural Resources, the International Biodiversity Convention, Agenda of the UN Conference on Environment and Development have recognized the importance of indigenous knowledge (Davis 1993). The World Commission on Environment and Development regards indigenous knowledge as a significant variable and a critical factor in achieving sustainable development. The traditional communities are the repositories of vast accumulations of traditional knowledge and experience. Their disappearance is a loss for the larger society, which would learn a great deal from their traditional skills in sustain ably managing very complex ecological systems (WCED 1987). Linked to this, some indigenous organizations have endeavored to promote indigenous knowledge. For instance, Coordinating Body for the Indigenous People's Organizations of the Amazon Basin represents the interests of several regional and national indigenous organizations in the Amazon Basin of South America (COICA). COICA tries to both participate in local level development and conservation projects and influence the wider global dialogue about environment and development policies (Davis 1993).

Ethiopian and non-Ethiopian scholars have studied different aspects of peasant knowledge in different parts of Ethiopia. Ethiopian peasant farmers have used different conservation practices. They use different mechanisms against hard times. They prepare themselves to avoid unusual food crisis, drought and other problems on thebasis of early warning indicators, such as rainfall, area and yield, pasture and water, pest, livestock conditions, diseases, stock, market and market

information (Tahal and Shawel 1988; Alemneh, 1990; Dessalegn, 1991; Yeraswork, 1995; Workineh, 1991a, b; Belay, 1998: cited in Workineh, 2001).

In relation to this, some studies also show that the Oromo people give important value to the natural environment (Knutsson, 1967; Bartels, 1983; Workineh, 2001; Deressa, 2008) argue that the Oromo have some of the finest principles and codes of behavior towards nature. They underscore that the Oromo maintain a perfect balance between nature and culture. They further outlined how the Borana pastoralists protect the natural vegetation and manage pasturelands through a combination of different mechanisms. Feyera and Demel (2003) also reported the *Shenecha*; collective traditional management system of the Oromo people is responsible for regulating the forest use types over time and space. Kitessa (2007) has also discussed there are traditional leadership such as *Jiga* and *Shane* having the traditional authority *hayyu* and the leaders called *abbaa hayyuu* have major role on natural resources management in five Gibe state of Oromo people.

Safuu is an important concept in the beliefs and practices of the Oromo people (Lemessa, 2012). Workineh has discussed the Oromo believe that *Safuu* involves avoiding embarrassment, bad conversations, lying, stealing, and so forth. *Safuu* is respecting one another and respecting one's own *Ayyaana* and other's *Ayyaana.* The Oromo say *Safuu* is *ulfina* (respect). Knowing *Safuu* will help us to maintain our culture and revere *Waaqa*. *Safuu* also refers to the existence of an attitude compounded of both distance and respect between all things (Workineh, 2001). As Bartels reported, *Safuu* "implies that all things have a place of their own in the cosmic and social order, and that they should keep this place. Their place is conditioned by the specific *Ayyaana* each of them has received from *Waaqa ... Safuu* implies both rights and duties" (Bartels 1990).

2.4. Approaches of Forest Resources Conservation

Programs and projects concerned with conservation and sustainable development will only succeed on any scale when they address the social factors influencing the way people interact with environment. According to Ghai, these factors include access to essential resources such as land, water, trees and marine resources; gender relations, which often constrain women’s access to capital, labor power, knowledge and time; and the question of empowerment, or the level of

control people exert over resources and decision-making processes which affect the management of natural resources (Ghai, 1995).

Three different categories of conservation program in which two of them are usually undertaken by official programs were discussed by Ghai (1995). The two categories comprising official conservation programs are those which seek to preserve forests, parks and animals and plant species for the benefit of present and future generations and those which attempt to rehabilitate and improve degraded resources to meet the subsistence needs of farmers, herders and foragers. The other category consists of resource improvement efforts undertaken at the initiative of local communities and grass root organizations, with varying degrees of support from activists and voluntary bodies, state agencies and foreign donors. In addition Ghai indicated that the third category has a better record of success because participation by local communities ensures that the programs and projects address the real needs and priority concerns of the local people. Projects of conservation had to learn to respect local customs and beliefs and to engage in constant dialogue with community and residents in order to understand local needs and preferences and avoid misunderstandings.

2.5. Oromo Traditional Selection, Use and Conservation of Plants

According to Workineh (2001) food habits differ from one region to another and from one country to another. Human beings have involved in the selection, domestication and cultivation of wild plants. A wild plant in one country can be a domesticated crop in another country. For instance pigs and cattle in USA eat maize while it is a staple food in other countries. *Teff*, i.e., grass like crop (the grains of which are used for making local bread) is a staple food in Ethiopia; where as it is cultivated for high production in South Africa and Australia. In India, it serves as green fodder. Some ethnic groups if Metekel eat the leaves of various trees while others in central Ethiopia think that this habit is morally unjustifiable.

The Oromo use different wild plant species for dietary and other domestic purposes during normal period and in time of crop failure. The fruits of *Goraa (Rubusstevtineri), Angooxoo (Rosa abyssinica), Qilxuu (Ficus Vasta),* are widely eaten in highlands. Peasants and their children eat the fruits of *Harbuu (Ficusexasperata), Agamsa (Carrisaedulis), Mi'eessa (pygeaumafricanum), Angooxoo, Goraa, Koshommii (Dovyaliscaffra), Waddeessa (Cordiaafricana), Qilxuu and*

Adaamii (Euphorbia candelabrum). Several wild plants survive droughts where conventional crops perish. These trees are considered as a highly nutritious source of food. *Waddeessa* is considered as the important source of energy. *Hudhaa (Flacourtiaindica)* is as sweet as a candy. The rural Oromo prepare *booka* (mead) by mixing *eebicha* (Vernoniaamygdalina) and honey.

Kitessa (2007) has stated, plant species *schefflera, abyssinica, croton, macrostachyus, vernonia* are preferred by bees and protected by local people for the benefits derived from these species in bee keeping. Plants like *Albiza, gummifera, acecia abyssinica, and militia ferugnia* are the most preferred tree species as coffee shade trees. Because of the size of their leaves and their crown that obstruct direct rain splash and ice and allow light and rain water to reach the coffee plant without causing damage to the plant and the soil. They also have small leaves that can easily pass through coffee tree branches without causing damage fruits and flowers when they are shading.

In addition to this, non-timber plants like *afrarom korerima and timiz (wild pepper)* and other spices are obtained from the forest. Indigenous people know these products exit only when the forest is kept intact. Forest is as shelter for cattle during dry season and balancing of the weather conditions. Protections of *horaa's* (springs) used for cattle's drinking and the local communities know that if these forests are removed these importance sources of water will also get dry.

Moreover, Kitessa (2007) has stated, indigenous forest conservation existed for generations in the Oromo society and anyone who fails to fulfill the obligation of traditional authority *hayyu* and the leaders called *abbaa hayyuu* will suffer from social sanctions. Feyera and Demel (2003) also reported that the *shenecha*, collective traditional management system of the Oromo people is responsible for regulating the forest use types over time and space. They also everybody used to respect this traditional institution and anybody of the community who did not obey the regulation of *shenecha* were punished.

2.6. Management of Forest Resources in Oromia National Regional State

The moist evergreen forest is widely distributed in Oromiya. The forest occurs in West Wellega and Illubabor, South Bale, Jimma, Borena, West Shewa and Arsi-East Shewa. It is found at altitudes between 1,500 to 2,500m with an average annual temperature of 18-200C and an annual rainfall of 1,500-2,400mm. In Bale and Borena, the forest occurs up to 2,800m. At higher

altitudes (above 2000m), the forest is increasingly dominated by *Podocarpusfalcata*which forms a closed forest canopy of 30-40m high. Examples of this forest are Belete-Gera, Harenna, TiroBoterBecho, Chilimo-Gaji, Jibat, Mena-Angetu, Megada, Anferara and Munessa-Shashemene. Characteristic species include *Aningeriaadolfi-friedericii*, *Podocarpusfalcata*, *Trilepisium madegascariense*, *Albeziagummifera*, *Celtisafricana*, *Polysciasfulva*, *Schefflera-Abysinica*, *Bersama-Abyssinica*, etc. These include the largest and commercially most important trees found in Oromia's high forests. In West Wellega and Illubabor, the understory often includes *Arabica coffee*. This forest formation has been known to have a high potential for timber production (Tesfaye, 1998).

The history and state of forest management in Oromiya are resultant effects of the overall forestry situation in Ethiopia. Some researcher's show that modern forest management practice began in Ethiopia, at the time of Emperor Menilik-II, by demarcating and describing the Menagesha, Chillimo, Gaji, and Jibat forests. The first saw mills were established in, or near some of these forests. Pere-urban plantations were also established in Jimma, Harar and Nekemte in the early 1900s. An old charcoal production control record shows that between 1927 and 1933, a total of 20.7 million quintals of charcoal was supplied to the residents of Addis Ababa by the Ministry of Agriculture. The charcoal was primarily produced from the forests of Dukem, [Adama], Modjo, Wolencheti, [Bishoftu], which today are devoid of their original vegetation cover (Gebremarkos, 1994).

In the late 1940s, forest development activities which focused on the production and distribution of tree seedlings began in Holeta, Sebeta and Akaki. This occurred following the introduction of modern forest administration with the establishment of the Forestry Division of the Ministry of Agriculture. In the middle of the 1950s, the Ambo Forestry Training School was established and forestry development offices were opened in Jibat, Munessa, Arbagugu, Dindin and Chercher. At about the same time, the first forest management working plans were also prepared for the Menagesha, Suba, and Dindin and Jibat forests. Since the early 1960s, efforts have been made to establish forest management practices in collaboration with various donors, with the aim of assessing the forestry situation in the country. In 1971, the State Forest Development Agency (SFODA) was created, in order to develop and manage State forests and government owned forest industries. In 1975, the Public Ownership of Rural Land Proclamation (No 31/1975) was

issued, making all rural lands the collective property of the Ethiopian people. Consequently, the share of private ownership of forests was reduced from 75 percent to almost none. In 1977, the Wildlife Development Authority was formed by merging the Wildlife Conservation Organization with State Forest Development Agency. The Forestry and Wildlife Conservation Development Authority was established in 1980 under Proclamation No 192/1980, (Forest and Wildlife Conservation and Development). In the late 1970s, the forests in Arsi, Bale, Illubabor, Jimma, West Shewa, Wellega and Hararge were inventoried as part of the South-west forest inventory project implemented in co-operation with the then British Overseas Development Administration. At about the same time, the first Forest Pilot Projects (Shashemene-Arsi Negele, Dindin, Tiro, Folla, Mengasha and Munessa) were started by State Forest Development Agency. The objectives of the pilot forest projects were to implement integrated forest management systems such as inventory, improved logging and road building as well as testing various silver cultural systems. Apparently, the objectives were biased in favor of forest exploitation.

In 1982, the pilot forest projects were upgraded to Priority Forest Areas (PFAs) by adding Belete-Gera, Sigmo-Geba, ArbaGugu and BoterBecho forests to the original list of pilot projects. Hence, attention mainly focused on the PFAs. Forests outside the PFAs system were neglected, and deforestation and unsustainable use continued unabated. In 1985, the Ministry of Agriculture was reorganized, and the Natural Resources Conservation and Development Main Department was formed, along with other four departments (OFAP, 1998).

In the late 1980s, management plans were prepared for Tiro-BotterBecho, Munessa-Shashemene and Menagesha-Suba natural forests. The first two were selected as model forest development projects. The objective of these projects is to ensure the development, conservation and utilization of forest resources. Preparations have been underway over the past few years to change their status to self-financing public enterprises. Pre-urban fuel wood plantations were also established in [Adama], Addis Ababa and Assela. In the 1994s, the management of forest resources is the responsibility of the Forestry and Wildlife Conservation and Development Department (FWCDD) within the Regional Bureau of Agriculture.

Oromia Regional State Forest Enterprises Supervising Agency was established based on Proclamation 84/1999. The agency stands for Oromia Regional State Forest Enterprises

Supervising. The authority and accountabilities of the agency was supporting, organizing and monitoring government forest enterprises. Even if the organizational structure of the agency were decentralized with branches at all levels, it lacks the real decentralization of budget and community participation in planning and implementation as it can be observed from their described activities (Zewdie, 2010).

Currently, the management of Forest is according to proclamation (No. 542/2007) Forest Development, Conservation and utilization has two forest ownership types in the Ethiopia: state and private. Forest management activities in state forests are limited to by government organizations or persons who are given concessions; private forests are managed by their respective owners, presumably with technical assistance from the government. The conservation of forest biodiversity is important and directly relevant to local people, for whom biological resources often represent their primary sources of livelihood, medicines, and spiritual values. The use of vegetation and other non-forest products by the local communities, and their conservation is a subject of interest in management of forest biodiversity. In the past, conservation efforts in Africa, among Oromo people have tended to emphasize the scientific values of biological diversity and focused on areas of endemism and protected areas. As (Ellen, 2000) these values have largely dictated what, where, and how conservation efforts have taken place.

For as long as people have thought about the future, they have managed forests in their cultural knowledge of conservation practice. Forest resource management is, therefore, thinking about the well-being of present and future generations. Ethiopia Proclamation No. 542/2007 recognizes on forest technology packages that community people enabled to properly use of indigenous knowledge, practices and technologies on the development, conservation and utilization of forest were prepared and disseminated to enhance the knowledge and skill of forest developers.

2.7. Factors/Threats of Indigenous Knowledge Practices in Forest Resource Management

According to Siangulube (2007) in Zambia, among Lozi community traditional forest conservation practices are steadily declining, especially among the young people. The main reasons are complex. Population increases in the areas as a major threat because people use any plant regardless of its cultural significance in order to meet their immediate needs. Other reasons

he has mentioned that the rate at which acculturation is gaining influence among the young generations. It is apparent that commercialization of fruits and timber trade is also contributing to the erosion of indigenous knowledge towards conservation. In relation to this, Kitessaa has raised that traditional practices of forest conservation are being eroded due to pressure of urbanization, cash economies and other socio-economic, political and cultural changes has resulted in the loss of forests and valuable species (Cotton, 1996 cited in Kitessa, 2007)

In addition to this, Zewudie (2005) has discussed that in the South West Ethiopia, deforestation have been aggravated since 1997 as result of demarcation of forests, including cultural forests, as state forests. Large forest areas, cultural forests, burial places, wetlands and forests of Sheka riverine forests along the Baro River have also been given for investment of tea and coffee plantations. Such tabooed and respected sites were bulldozed and cleared, which has degraded cultural values, belief systems and feelings of responsibility. Cultural changes due to immigrant workers have also brought several social and economic crises. Theft, murder and related crimes have become common, as there are people with unknown background coming to the plantation area. Transmission of various epidemics, marriage dissolution and family disintegration are highly increasing. In the area forest management role of clan leaders have gradually decreased due to conversion of the majority of the people into new religions. Cultural forests, wetlands, and riverine forests that were conserved through the traditional beliefs for centuries are endangered due to the new belief systems.

He has also argued previously, both customary and government forest management was in the hands of clan leaders in the area. Clan leaders had the right to enforce compliance to taboos and restrictions related to the cultural forest. Clan leaders also imposed punishment on people involved in cutting trees. Cultural changes have come as a result of conversion of the local community to new belief systems and increase in the number of urban dwellers, members of immigrant workers on the project. A change in the belief system has changed people's perceptions and respect to taboos regarding cultural forests, sacred sites and sensitive habitats. Increase in population has also created market for fuel wood, charcoal which has encouraged some members of the local community to sell fuel wood and charcoal on local markets (Zewudie, 2005).

CHAPTER THREE

BACKGROUND OF THE STUDY AREA

3.1. Brief Historical Overview of the Oromo of Ilu Aba Bora

The Oromo people who settled in Ilu Abba Bora belong to the *Macha* clan. Alemayehu, et al., (2006) discusses that among the *Macha* tribes that settled in Ilu Abba Bora, *Tummee* is found at the extreme Western part of the region and one of its sub-tribes is known as *Nonno*. According to the authors *Nonno* is known as *Ilu*. The secondary data from Culture and Tourism Office of Ilu Aba Bora Zone also stated that the *Saglan Ilu* clans (Nine Ilu clans) were the first settlers who occupied the place. Since then, *Tumme* clan was *Abba Biyyaa* who was in charge of the country.

The eldest child of *Ilu* known as *Hadhesso* was *Abba Medhicha* (a prior founder) assumed the suprime leadership over the *Saglan Ilu*. The families known by tha name *Ilu* are three *Ilus*: *Illu Gichinay, Ilu Abba Dinka and Ilu Abba Sambi*. The origion of Ilu Abba Bora is from *Gichinay-Gomboch.* The above families of *Ilu*s are known by the collective name of the three *Ilu*. Zewudie (2010) has discussed that *Hadheesso* clan developed into seven clans. One of these clans was known as *Hadheesso* itself that incorporated *Caalii Shonno's* family whose other name was *Abba Bora* that became the name of the zone. *Lagoo, Bachoo, Sarsaroo, Dongoro, Yakunoo, Bodee, Binooraal and Tuulamas* were the other clans that formed *Torban Hadheessoo*.

3.1.1. Gada System of Saglan Ilu

At times the Oromos of Ilu Abba Bora were under one administration of Geda system; they make *Odaa Doggii* as their center. The Saglan Ilu classes of tribes used to come together at *Odaa Doggii* and solve their political and economic affairs in line with the *Geda* system. The Saglan Ilu clans are listed in the following table.

Table -1.Members of the Saglan Ilu Gada

S/N	*Name of clan*	*Numbers of delegates who participated on Legislation*
1	Noonnoo	6
2	Iluu	9
3	Hurrumuu	5
4	Mattuu	4
5	Doorannii	3
6	Suphee	2
7	Cooraa	8
8	Guduruu	7
9	Buree	1
Total members		**45**

Saglan Ilu Assembly

As the name indicates, the Saglan Ilu assembly was a conference on which the delegates of Saglan Ilu discuss different issues. The Gadaa center of *Saglan Ilu* was *Odaa Dooggii*. The issue they discussed on the assembly was Conflict between clans, level of economic growth, the condition of peace of *Saglan Iluu* and others.

According to Ilu Abba Bora zone Culture and Tourism Office the assembly is rounded at every six month. The created problem got possible solution after house of council discussion. Like different Oromo clans, Ilu Aba Bora Oromo also came together at their respective *Odaa Doggii* and make legislations on different rules and regulations.

***Hadheessoo clan*:** Within Oromo *Gadaa* system generally and *Ilu Gadaa* particularly, ones who selected for blessing is depend on clan seniority. As earlier Oromo cultures and customs reveal, blessing done on every stage is by focusing on who the elder and young is. Macca never blesses before Tulama. This hierarchical order still exists. *Hadhesso* clan is senior to all the *Saglan Ilu*. According to the Oromo elders in the area, *Qilxuu* is the *Abba Gadaa (leader of Gada system)* of *Hadheesso* clan. In accordance with the rule, someone needs to be 40 years of age to be elected

as *Abba Gadaa.* The person who is elected as *Abba Gadaa* makes a ritual ceremony to receive a power. This ritual is known as '*Buttaa*' Ceremony. On the day of his election, *Abba Gadaa* slaughters an ox/a bull and blesses *Abba Bokku* (father of scepter). In the process of becoming a candidate to be elected as a leader (Abba Gada), maturity of age is or being 40 years is not the only criterion. The ethics of the person and the heroic deeds that he has shown in different *Gadaa* grades like *Foollee, Dabballee, Doorii, and Qondaalaa* are the most things to be considered.

Ilu Gada and its Grade (Age set): Based on age *Gadaa* system is classified in different stages. Here the list below is classification with age.

S/N	Gada Grade	Years
1	*Roggee*	0 – 8
2	*Dardara*	8 – 16
3	*Guula*	16 – 24
4	*Birmajjii*	24 – 32
5	*Luba/Gadaa*	32 – 40

Roggee: is named based on style of shaving hair. The stage of childhood that is ritually protected and they practice looking after calves and playing different games.

***Dardara*:** During the years of *Dardara* the boys are ready for adolescence, no role in political life. They are obliged to looking after cattle and singing especially romantic ones.

Guula: *Gula* can be a member of *Abba Gadaa*. They can participate on stage of lawmaking. But their voice is not countable and has no right to decide. The responsibilities expected from them are: train a horse for galloping, hunting for wild animals, learns how to fight by using wooden spear and shield and ready themselves for war.

Birmajjii: is also one way of *Gadaa* grades them making matured enough and try to know what is expected from one individual to turn to the next stage. They begin to take part informal military campaigns. But they do not lead the campaigns.

Luba/Gadaa: by *Gadaa* system this stage has a great role. Before handling the power they perform a *Buttaa* ceremony. After this ritual, they got full responsibilities of leading society. The responsibility that expected from *Luba* is making law, teach the society about Oromo religion, council *Abba Qoroo* for peace, present the people who done crime for *Abba Bokkuu*, Organize and lead the assembly for eight years by explaining the law.

The *Luba* of Ilu Abba Bora teach the law for society at a place is called *"Saglan Yaa'ii Iluu*" means Ninth Assembly of Ilu at *Odaa Doggii*. As a document from Office of Culture and Tourism of the zone stated that an individual who is in *Luba* grade must be celebrate *Buttaa* ceremony by slaughtering an Ox. An ox is used for *Buttaa* ceremony that of which not broken or cut its teeth. Because the ox which cut or broken its teeth is not considered as full or normal. The other thing that is done on the day of *Buttaa* ceremony is circumcision of *Aba Gada*.

In Ilu gada system there were different higher officials of power. The major officials are:

1. Abbaa Bokkuu(Aba Boku)	Abba Miillaa (president of parliament)
2. Abbaa Bokkuu 1^{ffaa} (1st Aba Boku)	Vice Abba Milla
3. Abba Bokkuu 2^{ffaa} (2nd Aba Boku)	Vice Abba Milla
4. Abbaa Caffee	Abba Miillaa of meadow assembly
5. Abbaa Dubbii (Father of speech)	Abbaa Miillaa of judicial
6. Abbaa Seeraa (Father of law)	Abbaa Miillaa of Legislative
7. Abbaa Alangaa	Decision maker
8. Abbaa Duulaa	Abba Miillaa Raayyaa (Leader of army force)
9. Abbaa Sa'aa	Abba Miillaa Diinagdee (chief of public finances)

Ilu Gada Official System

Raabaa: solving dispute and conflict occurred between clan is his role. For example, if one clan closed the road on which the society move their livestock *Raabaa* warn them as they open it. Raabaa can take a measure on individuals or groups who violate law.

Odaa (Qilxuu or Harbuu) **sycamore tree:** *Odaa* is a plant which is evergreen and a place where Oromo people legislate and amend their law. As it is discussed earlier the well-known *Odaa* (sycamore tree) which serves as socio-political center and a place which law is made for *Saglan*

Ilu in OdaDogi. Even if *Oda Dogi* is the general center, particularly the ninth Ilu clan has their own*Odaa*.

***Bokkuu* (scepter)**: *Bokkuu* is the respective and sacred stick of *Abba Gadaa*. It is made from a plant known as *Ulaagaa* (*Ehretiacymosa*) and *Ejersaa* (*Oleaeuropaea*). The reason why those plants are selected as better is they are possessed with ayana. These trees are more likely strong and used for blessing.

3.1.2. Fatansa Ilu

After the death of Aba Bora his son Dima Chali (Abba Raagoo) took power. He starts leading society by inheriting his father's position. But Dima Chali couldn't continue successfully. Because he was captured by Abyssinians army which came through Wollega direction and they put him in prison. Then after, the communities' elders forced to stand by the son of Dima Chali, Garisa to lead the community. Garisa strongly begged Ilu elders in order fot them to help his father to be release from prison. This situation became very difficult for elders. The reason was that when Dima Chali is captured by Abyssinians Ilu army also captured a lot of weapons in their direction. The Abyssinians decided to not to free Dima Chali from prison unless the Ilu army returned their weapons. The Ilu army was not interested in returning their weapons as another alien army came to them through Shewa. They wanted to use these weapons for defending themselves rather than returning the weapons to the Abyssinian army. Garisa the son of Dima Chali repeatedly asked the elders to make his father free from jail. But the situation was not suitable as they wanted. Finally he went to jungle to struggle against Abyssinians.

At this complex situation, one person who was called Fatansa Ilu and far from decent of Chali Shono came to elders and asked them to be their king. The elders strictly ignored his idea and told him that he couldn't be their king. Despite their refusal, Fatansa Ilu came to power by force. When he came to power, Fatansa Ilu assassinated Dima Chali's brother who was called Wachila Chali. One woman from Ilu Aba Bora revealed this history in oral tradition by saying *"Namni sanyii miite maal moora tola!"* means,a person who harms his clans is not accepted in the community.

Since Fatansa Ilu killed Wachila Chali, Wachila's son, Bungul Wachila, assisted the army of Ras Tesemma who fought via Leka (East Wollega) to retaliate the killer of his father. To save Fatansa from being killed, a woman from Mettu informed him that Bungul wants to kill him using an oral poetry by saying:

Of-gattee hin ciisin
Fardi Bungul boora magaala harkisaa
Amantee hin rafin waan nu tolu miti
Amaara harkisaa.

This means: Don't be forgetful and never sleep deeply
Bungu's horse is brown
Don't trust him and don't sleep as he is not good to us
He is bringing our enemies to harm us.

The oral poetry shows that Bungul betrayed the the king and stood on the side of the army of enemy of the clan.

3.1.3. The War of Qarsa Gogila and down fall of Ilu Kingdom

The harmful war Menelik imposed on Oromo people also faced Oromo of Ilu Aba Bora. The strategy that Menelik planned to make Ilu Abba Bora people under his control is making Christianization and affinity. Minilik first identified the technique how he can make Fatansa Ilu under his influence. In 1875 the Minilik armies led by Ras Tesemma Nadew start their journey from Shewa to Ilu Aba Bora.

At the time a man known by Dejazmach Beshi Aboye who led the army of Menelik entered Jimma and pass through Gumay with his soldier. Then after, they send the king of Gumay, Abba Jobir daughter to Shewa and baptized (Christianized) by Minilik wife Tayitu. They change her name to *'Beletshachew'*. Literally which mean '*you win them'*. Not only baptized and changed her name, Tayitu also gives her for marriage to Ras Tesemma Nadew. Ras Tesemma diverts his army settle from Jiren to Beddele. In addition, they baptized the leader of Beddele, Shuramu Abba Wagga and changed his name to Hailemariam. Also they increase his power position and gave a title named *Fitawurari.* This all tip trick is done to widen the invaded land and fail

Fatansa Ilu on their hand by surrounding him. Moreover, they anoint Fitawurari Hailemaram and send him to govern "Gurra Farda".

Then Ras Tesemma empowered his force and move to Mettu and settled at a place called Qarsa Gogilla. Fatansa Ilu noticed what is going by Abyssinias to weaken his power and colonized his people. Then he decides not to give a hand and open battle by organizing his people and Ras Tesemma force on March, 1875. Unfortunately, while they were fighting each other, Fatansa's horse which he used for defense and attack fell into a hole and was broken. This resulted in Fatansa's failure in the hands of his enemy, Ras Tesema. Having defeated Fatansa, Ras Tesemma left Mettu and moved to Gore (the town of Ale district). After they were defeated and scattered, Fatansa's military forces were fighting in groups in some places of Gore. Even though they were fighting in group, they could not win Tesema's force as he strengthened his force and got superiority.

Fatansa who had been ijured during the war with Tesema was taken to a man who was the leader of a district called 'Baroyi', Fayissa. Fatansa Ilu died in Baroyi while he was being treated by Mr. Fayisa. He was barried in the same local area and his tomb still exists in '*Barrooyii'*. Fatansa's grave yard was named 'Kaabii *Fatansaa Iluu /Abbaa Ayyaansoo*/'. It is safe guarded and treated as a historical heritage by the people (Ilu Aba Bora zone Culture and Tourism Office, 2006 E.C).

3.2. Physical Background of the Study Area

Location and Climate: Ilu Abba Bora zone is situated in Southwestern part of Ethiopia. It is bounded by East Wellega and Jimma zones in the East. The zone also shares a border with West and East Wellega in the North; SNNPR in the South, and with Gambella Regional State in the West. The total area of the zone is 1,633,156.6 hectares divided into twenty two districts including the research sites NonoSal'e, Didu and Ale districts.

Nono Sal'e, Didu and Ale districts are the districts in the Oromia Regional state of Ethiopia, parts of the Ilu Aba Bora Zone. According to Finance and Economic Development Office (FEDO, 2005) of these districts, Ale is bordered (*on the South by the SNNP Region, on the West by Nono Sal'e district, on the Northwest by Bure district, and on the Northeast by Metu district*).

Nono Sal'e is bordered (*on the Southwest by the Gambela Regional State, on the North by Bure district, on the Northeast by Didu district, and on the Southeast by the SNNP Region*). Didu is bordered (*on the East by SNNP Region, on the North by Ale district, on the West by Nono Sal'e distrct and on the South by SNNP Region).*

The areas of these districts are *Didu* 37,871 hectares*, Nono Sal'e* 266,689.4 hectares and *Ale* 57,030.01 hectares. The mean altitude range of the areas is between 1300m to 2522m above sea level**.** The mean annual rainfall of the sites is between 1800 to 2200mm with maximum rainfall between months of June to October. According to the Finance and Economic Development Office of these districts Agro-Climatic or Traditional Thermal Zones *Baddaa* (NonoSal'e 50%, Didu 35%), *BaddaDaree* (NonoSal'e 32%, Didu 65%, Ale 98.6%) *Gammoojjii* (NonoSal'e 18%, Ale 1.4%).The annual average temperature of the areas is between 12^{o}c and 29^{o}c (FEDO, 2005).

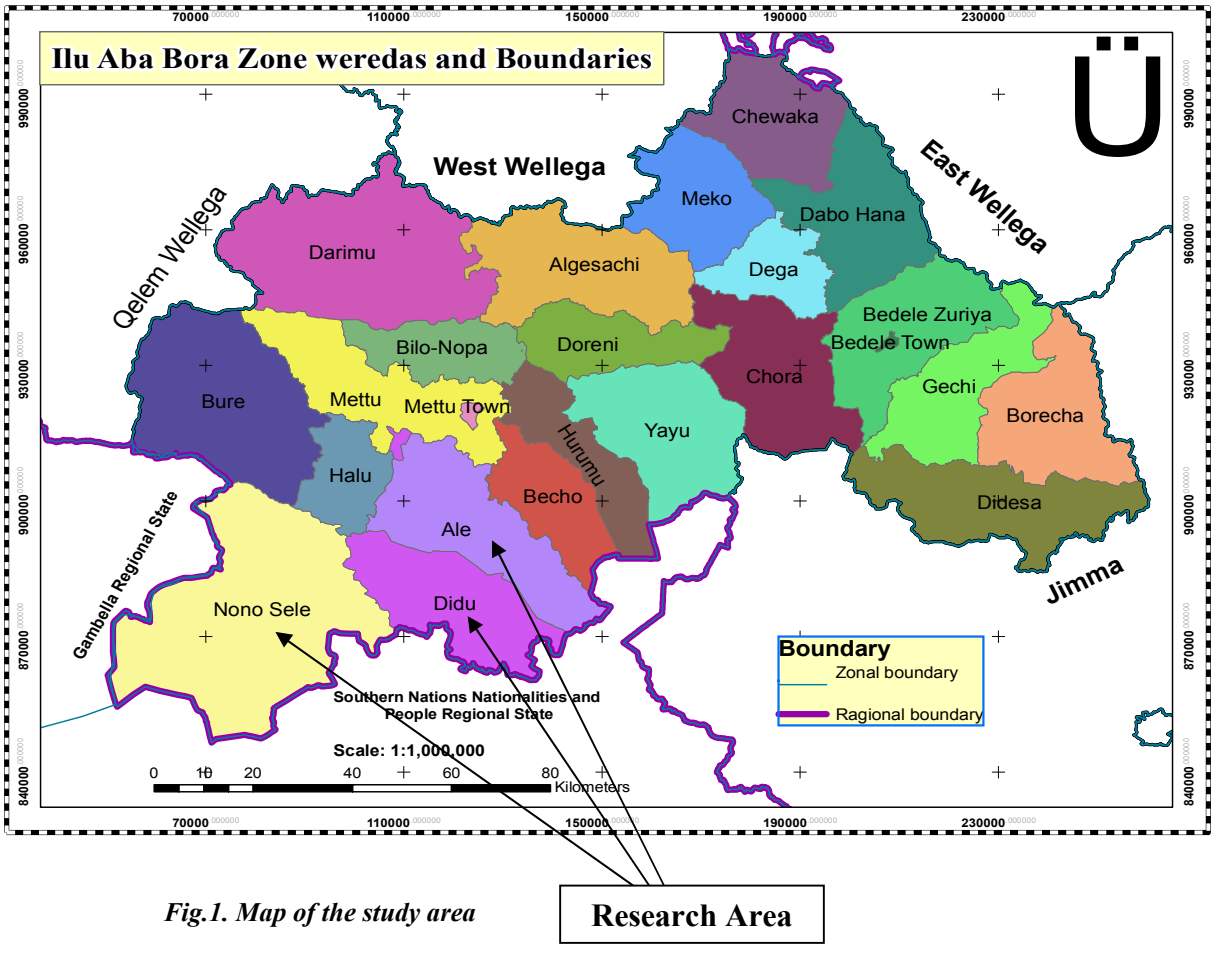

Fig.1. Map of the study area

Research Area

Forest, Wildlife and Water Resources

The zone is one of the areas with high natural dense forest in the country. The dominant vegetation type in the study area is the moist Afromontane forests which is traditionally conserved by indigenous knowledge of the people mostly *Kobboo* practice is used in the area. According to the Agriculture and Rural Development Office & Forest and Wild Life Enterprise Sector of these districts the area coverage of Natural Dense Forest in Nono Sal'e 251,218.4hec, in Ale 6433.4hec and in Didu13781hec. The remaining of land area is occupied by *cittuu bosonaa* (homestead forest), *lafa qonnaa* (farmland) and *dheedicha horii* (grazing).

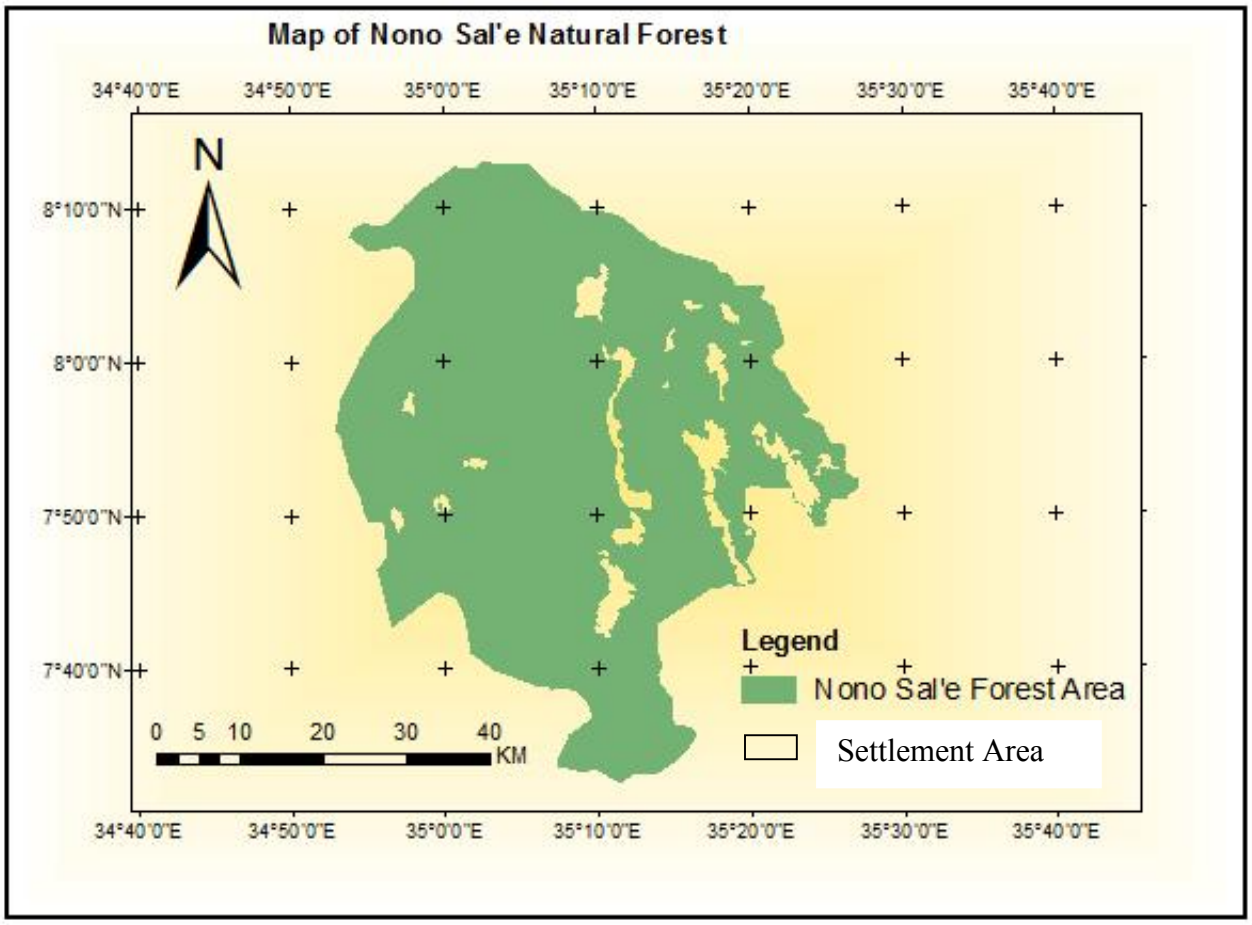

Fig.2. Map of Nono Sal'e district, Natural Forest Area (One of the research site). Adapted from Forest and Wild life Agency of Ilu Abba Bora Zone Branch Office

As can be observed from the map, Nono Sal'e district except the settlement areas, forest represents the largest (251,218.4 hec.) undisturbed forest fragment.

There are large and small rivers and streams following across the hills towards the adjacent drawing basins or strips in the sites. Large revers like *Dibo, Baro, Gesso, Dale, and Yubi* are found in Didu district. *Genji, Guracha, Senja, Wesa and Barasha* Rivers are found in Nono Sal'e district and *Qabar, Baaqqii and Waangas*are the rivers found in Ale district. These rivers flow ever the year, which means, they are perennial rivers. There are no more manmade and natural lakes found in these districts.

Within the dense natural forest, there are some wild animals that are most probably under threat by different human activities carried out either in or near the forest and absence of parks and sanctuaries in these districts. The major wild lives in the study areas include: *Leenca (*lion), *Gafarsa* (Buffalo), *Weennii* (Columbus monkey), *Qamalee* (Vervet monkey), *Qeeransa* (leopard), *Karkarroo* (Warthogs*)*, *Booyyee* (Bush pigs), *Xaddee* (Porcupine), *Xirinyii* (Civet Cat), *Sardiida* (Fox), *Kuruphee* (Antelopes), *bosonuu* (bush buck), *warabeessa/arrittaa* (hyena), *jaldeessa* (anubus baboon), *Awwaldiigessa* (ant-eater) and different types of birds.

3.3. Socio-Economic Background of the Study Area

3.3.1. The people

The Finance and Economic Development Office of the study area reported that the total populations of the districts (Nono Sal'e, Didu and Ale) are 145,283, of whom 72,173 were men and 73,110 were women; 91.14% were rural dwellers and 8.86% of the populations were urban dwellers. The three largest ethnic groups in the study areas were the Oromo (84.7%), Shekicho (9.44%), Amhara (4.51%) and other ethnic groups made up 1.35% of the population (FEDO, 2005).

A sample survey of household religious composition were compiled by FEDO of the districts are indicates that the majority of the inhabitants professed Ethiopian Orthodox Christianity (33.11%), while 32.67% of the populations were Muslim and 32.20% Protestant and the rest are followers of indigenous belief system.

The Oromo of the study area share cultural heritages and speak in the same language. Afan Oromoo (Oromo language) is a widely spoken language with little variation in dialect. It belongs to Cushitic language family, which extends over most parts of East Africa. Moreover, Afan

Oromo has been used as an official language of administration since 1991, after the collapse of Derg regime. This is, of course, true in every parts of Oromia Regional Administrative State.

3.3.2. Kinship System

Zewdie (2010) stated that kinship is important in natural resource management as it enhances the role of institutions. For this reason, it is a social organization that strengthens societal bonds contributing to various socio-economic development activities. Kin groups, for instance, sometimes force compliance with the rules of some institutions.

Both blood relatives (*cosanguineal*) and relatives by marriage (*affinal*) kinship are widely observed among the Oromo of Ilu Abba Bora. Since marriage relationship is socially the most important bond between the peoples, it is given a good value by the people in the area (Johnson 2007 cited in Disassa, 2010). Hence, kinship system is fundamental for the social organizations of Oromo people in Ilu Abba Bora like other areas of the region. Like other Oromo groups, Oromo of the study area trace their descent through father's line. In patrilineal descent, each individual automatically becomes the member of any cosanguineal kin group to which his father belongs, but not of those to which his mother belongs. In matrilineal descent, an individual joins the consanguineal group kin group/groups of his mother.

The people in the study area count their kinship descent mostly from five to thirteen generations back through patrilineal. Peoples form special relations with their close and distant relatives. It starts from family (*warra*) which mostly includes parents and siblings that are more often grouped in first degree kin groups followed by *akaakayyuu* (grandfather), *akkawoo* (grandmother), *eessuma* (uncle), and *adaadaa* (aunt*)*, which are grouped under second degree kinships. Dejene (2002) raises that among the Oromo, *eessuma (uncle)* is the most liked of maternal kin. To emphasize this, the elders of the study areas use an Oromo proverb *"Ilmi eessuma hin hanqatu*" means *'A son often takes after his uncle'*.

They further trace distant relatives with whom they have blood relatives as well as the clans they believe to have blood relation after some generations. Lineages are mostly referred to relevant family (*fira dhiyoo*). They also trace their distant common ancestors with a large group of people known as *gosa (clan)*.

According to Culture and Tourism Office of the districts and local elders the Oromo settled in the study areas has been from different clans. In Nono Sal'e district the six major clans are *Salale, Borana, Janjaro, Siba, Mucuco and Badi;* In Didu district *Gode-Didu, Aso-Didu, Urji-Didu, Faxo-Didu, Yabat-Didu, Marach-Didu, Chiri-Didu, Osole-Didu and Sago-Didu* and other clans are there. In Ale district, *Ale* itself*, Chari, Magela, Gera, Lafto, Agalo*, *Yayya* and others are the major clans which are settled in the area. For individuals who are knowing their kin groups in the line of their father-hood is very important for various reasons. Disassa (2010) discussed that at first and for most, property right is claimed through patrilineal descent. In the study area also inheritance of farmland and *Kobboo* forest is inherit through father's line. Disassa raises intra-clan marriage is exclusively impermissible; they clearly identify their cosanguineal kin groups of their father. Hence, the marriage type of this society is exclusively exogamous.

The other traditional social group's kin are *Tumtuu* (blacksmith), *Aaddoo* (pottery) and *Faaqii* (tanners) who were culturally despised as a result of their daily activities. In these kin groups, endogamous marriage was common although this trend has been subject to change in recent time. Last but not least, persons to whom they relate by kinship system may normally look for emotional support and various kinds of help in case of need. Thus, kinship system plays important role in rights of access to resources, formation of marriage and other social organization among the Oromo of the study area.

3.3.3. Marriage

Five types of marriage are commonly practiced among the study areas. These marriage types are *Naqata/Kaadhimmachuu, Ol-naqii/Sabbat Marii, Aseennaa, Hawwii and Dhaala* are the major types of marriages or mechanisms through which marriage contract is established. Marriages in the vicinity are mainly exogamous, patrilocal and monogamous.

A. *Naqata/Kaadhimmachuu* (Betrothal)

Lemessa (2012) has stated that *naqataa* is the most desirable marriage type in Oromo marriage custom. Others researchers has also discussed that it is a form marriage arranged by the parents of the bride and groom with a great deal of negotiation (Zewudie, 2010; Gemechu and Asefa, 2006). Hence, as elders have explained that the process of *naqata* marriage practice, particularly in the first marriage, the decisive figure is the father. This type of marriage is commonly known

cidha (wedding). This is also a word used to describe the wedding day itself in most Oromo communities. *Naqataa* is conducted with little or no knowledge of the two partners. It is organized by parents or close relatives. Parents of the twopartners make cautious mate selection sometimes in cooperation with close relatives who share common destiny because of socio-economic ties. Key informants have reported that currently, the frequency of *naqata* marriage practice is at less degree and the performing process is also changed.

B. *Ol-Naqii/SabbatMarii*

Ol-naqii is asking a girl for marriage which is done by breaching appointment arrangements or it is asking a girl for marriage without prior arrangement. In the research area it was the most common next to the *Naqataa* forms of marriage at old-time. The process is that the groom's parents go to the bride family's home during the evening to pass the night on the outlet of the brides' compound (Zewudie, 2010; Gemechu and Asefa 2002). The groom's parents and they carry different materials to perform some rituals.They take a horse to tie on the outside gate and carry a moist grass (*irreessa*) and *Ulmaayii* plant to place on the gate as a ritual. The groom's parents also include individuals from some special clans for example in Nono Sal'e, *Badi* clans who are resolved not return without getting the bride.

Refusal to accept the marriage request, they will risk being cursed and social out casted from the local community. In such cases the bridge's parents does not refuse their daughter in marriage to the groom's parent.This type of marriage is not practiced, however.

C. Aseennaa

This kind of marriage is mostly arranged by a girl. The girl decides to go for aseennaa (elopement) based on various reasons. The first reason is that when she thinks that she is not so much attractive/ beautiful to be loved and asked for marriage by a man. The other reason for a girl to decide to elope is told by a witch doctor that she is unlucky or has a bad luck. The witch doctor may tell her that she is not destined to get married. In addition, the background of her parents may force the girl to elope. This means if her parents have chronic or hereditary disease, men may not ask the girl for marriage. This forces her to decide to elope. Furthermore, the girl decides to go for such kind of marriage when her parents force her to get married to some one whom she does not love or know very well.

When she arrives at the house of the man she wants to live with, she enters the room and throws away or scatters a large number of solanaceous fruit (*ija iddii),* then she hags the pillar of the house *(utubaa manaa),* and stands. She does this mostly while the boy's parents are not at home. The thrown away/scattered *iddii* implies that she wishes more wealth to the family she has joined in marriage/elopement. Hagging or embracing the pillar of the house is an expression of her decision to become a wife to the son of the parents whose house she has entered. The young man whose house the girl has entered to marry him cannot reject the marriage she has proposed whether he likes it or not.

D. Hawwii (Secret selection)

Hawwii is the form of marriage which is arranged by the couple. It is motivated by mutual interests of marital partners. It ignores the primary consent of the parents. It is used, if the boy does not have much money or if his father's choice is different from his choice. Usually, not always, there is a go-between a young man wishing to marry and the girl. The young man often approaches one of the girl's close friends, her *sayyu*. In other words, he sends someone whom he trusts can keep the secret and asks him/her to act as go-between. This person is supposed to tell the girl of the young man's intention, and if the girl agrees to accept the marriage proposal, a secret place is fixed for the couple to meet. On the fixed date, the boy arrives with some of his friends to find the girl and the go-between will be waiting in the forest or by a river. Later she is taken to the home of one of the groom's friend or relative's home until the young man's parents prepare feast for marriage (Holcombe, 1973 and Gemechuu and Aseffa, 2002).

In the next day elders are sent from the boy's parents to the girl's parents to make the reconciliation. The girl's parents are easily convinced by the elders and they accept the marriage relationship to be created and they receive money. Since they know that their daughter was not kidinapped (taken for marriage by force) and there is no way for them to get her back, the girl's parents usually accept the marriage proposal. In the past, this form of marriage was common among poor people but, nowadays it is popular among many people more than all the other forms of marriage in the research areas. This type of marriage is preferred as it requires small amount of money to accomplish the whole process.

E. Dhaala (Inheritance)

It is a type of marriage in which the wife of a deceased husband is inherited by one of his brothers. This practice is mainly intended to maintain the deceased man's lineage. According to Holcomb (1973), in case the deceased husband does not have brother, the chance goes to classificatory. In the research areas this kind of marriage is practiced among the Muslim community. When someone dies, a brother of the deceased man inherits the wife. This arrangement is done in an informal manner and the whole purpose is to ensure the social and economic security of the family. Informants also reported that *dhaala* marriage forms were preserving the children of the deceased man within the family and save them from mistreatment by the stepfather to whom the widow may be married.

Polygamous marriage (the institution of marriage that allows a man to have two or more wives at the same time) is also rarely observed in the areas. Currently, this trend has been discouraged by the government and by new generation. Almost all the marriages practiced in the research areas are patrilocal bearing (when a newly married couple establishes their home near or in the house of the groom's father) and this has a great impact on the exercise of property rights and the participation of women in resource management.

3.3.4. Livelihood Strategies

Livelihood strategy refers to the way people generate their income for the purpose of subsistence. Different social groups may have different kinds of subsistence strategies that may be emanated from cultural, social, political, or environmental conditions. Ellis defines livelihood as comprising "the assets (natural, physical, human, financial and social capital), the activities, and the access to these (mediated by institutions and social relations) that together determine the living gained by the individual or household" (Ellis, 2000 cited in Disassa, 2010).

The socio-economic profile of NonoSal'e, Didu and Ale districts Finance and Economic Development Office (FEDO) shows that agriculture is the major economic activity of the local people from which they make their living. Both crop production and animal rearing is the major means of subsistence for the society in the study area. Their economic subsistence can be categorized into crop production and animal rearing. These can be depicted as cereal crops, oil seeds, Pulses, Coffee production, use of NTFPs, and animal production including cattle rearing

and beekeeping from which benefits are obtained. The main crops produced in the research areas are: cereals (*teff,* maize, sorghum, barley, wheat, and others), oil seeds (*nuugii* /Niger seed/, *talbaa and suufii* /safflower), Pulses (*baaqilaa* /beans/, *aatoo* /field peas/, *dafee/boloqqee* /haricot beans/, Soya beans and other) and the others. Fruits and vegetables are also cultivated in these districts. Moreover, the cereals production is the dominant and the most participated crop production in the districts. As most of them own farming land, they cultivate various crops such as, twice a year (FEDO, 2005).

Livestock is another livelihood supporting economic activity in the study area. The communities of the study area are using the animals as traction power, transportation, source of manure, which is the main source of energy and fertilizer for the farmers, as the source of nutrition (milk, butter, meat and egg) and the like. Animals like cattle, goat, sheep, donkey, mule, horse and poultry are indispensable for subsistence. Cows help by giving milk and milk by-products which can be sold in the local market in the study areas. This helps, especially women to get income with which they buy some household items. On the other hand, oxen support the economy because local people use oxen for farming. Besides, oxen can be fatten and sold in the market for large amount of money.

Forest and forest resource production systems are the other means of subsistence for the society in the three districts. *Wild Coffee Arabica, Ogiyoo and Tunjoo* are foundations for the economic subsistence that grow under *Kobboo* forest. In addition to this, people plant coffee seedlings in their homestead or *Cittuu* forest, which serves them as cash crops. In the study area, these social groups are wealthier than those who rely only on cultivating crops. Beekeeping is the other source of income generation. The local people hang traditional beehives on the trees of their *Kobboo* and obtain honey produce in the natural forest.

CHAPTER FOUR

RESULTS AND DISCUSSIONS

4.1. RESULTS

4.1.1. Indigenous Land Classification and Uses

The local people of the study area were determined and adopted the parts of the land scape most capable of supports to various land uses. Such land uses like; housing, agricultural fields, water areas, forest areas, recreation areas and others. Waldron and Sui (1999) indicated that existing natural and cultural landscape features are determined; land uses can be better managed. Such traditional land plotting sytem has its own role in local forest conservation. For instance, most of the farmers are traditionally decide the suitability of land for crops and other purposes based on the soil types. This enables the local people not to clear every section of the existing forests.

Due to this, the Oromo of the research area categorize the land in their area into different categories culturally. These are: *Muummee, Tabba, lafa diriiraa, Tulluu, Qilee/Hallayyaa, Lafa Dalgaa/Lafa Ciisaa, lafa caffee and lafa dhagaa/Qarsaa.*

a) ***Muummee***- refers places under mountains where there are rivers. You find herbs and shrubs in this olaces.
b) ***Dachaa*** - refers to land that is drained by a river and its tributaries. This land category is mainly used to cultivate various crops and vegetables.
c) ***Tabba***- refers to small hill. This land category is occupied by small trees, grasses and bushes.
d) ***Tulluu***- refers to relatively high hill that is rarely visited by humans and wild animals dueto its topography. This landform is covered by grasses with trees and shrubs.
e) ***Qilee/hallayyaa*** - refers to gorges. This landform is mostly covered, shrubs and herbs, and rarely trees and climbers. It is used neither for agriculture nor for grazing.
f) ***Bakkee/Lafa diriiraa*** - refers to leveled plain land that is suitable for both agriculture and grazing.
g) ***Lafa caffee***– refers to wet land and small stream areas. In these areas we find wet herbs, muds and shrubs.

h) ***Kattaa/lafa dhagaa***- refers to land forms that are dominated by different size of rocks. It is mostly usedfor grazing. Tall trees are randomly found in this land.

According to elders in the surrounding and practical observation of the researcher, the classification of the lands is based on the culture of the society and nature of the lands. This trend (the category) has been passing from generation to generation. One of the criteria they use is to depend on the topography of the land to categorize it. For example, they call *Qilee/Hallayyaa, Muummee)* to refer to caves (hole), and places under big mountains respectively to signify that these places are places where human beings cannot live. They call *Lafa ciisaa/ Lafa diriiraa* to refer to plain lands which are used for crop productions. Places where water dwells in, they call *Lafa Caffee* as it is always wet**.** When the land has many stones, they call it *Kattaa/Qarsaa*, and high topography land is called *Tulluu*, and the like.

4.1.2. Indigenous Knowledge about Forest

The entire life and working culture of Oromo of the study area depends on forest. Most farmers express their love for forests by saying forest is their life, flesh, clothing and food. For example, farmers who say *forests are their flesh, they say their bones cannot work and function without flesh; like wise, they say they cannot survive without forest.* Similarly, others also express their feeling saying forest is their life and they cannot work and live a happy life without forest as it is source of life. They also say forest is their home to show that they used to escape from dangers during wars by hiding themselves in the forest. During hunger, the Oromos eat from the fruits of trees. When there is drought, the Oromo's use the sheds of trees as a mechanism to cool them. These all are indications for the fact that the working culture as well as the life of an Oromo depends on forest. Others still say, forest is the source of all natural resources. For example, rain, water, wet land, different wild animals, soil and favorable weather condition are results of forest. Hence, forest is the life of our society.

In the focus group discussion the researcher had with the society, the Oromos express the value of forest using proverbs.

"Mukaa fi haadhatti boqotu" meaning "You trust /relax on a tree and mother".

"Muka itti hirkatanu qoree itti hin hirkisanu" meaning "On a tree you back, you do not put it sharp things."

"Muka gaaddisa qabu jala taa'u" meaning "You sits under a tree which has shadow"

Oromo of the study area is transmitting their traditional methods of forest protection and use of forest resources in their forest based proverbs. This wisdom transmitted cultural forest conservation to generation, aims at representing a segment of the social order, and conveys a part of the customs of the local people of forest values. The local elders have also accomplished the command, the individual attention on forest resources management through proverbs.

4.1.3. Indigenous Forest Categorizations

In Oromo culture trees, grass, herbs, and root of trees are generally called *"forest",* but they have specifically different names. The society in the surrounding gives each different terminology based on the cultural values and the puroses of each plant in the forest. From that the common names given to these plants in the study area were discussed in the following table.

Local Name	English equivalent	Description
Bosona	Forest	Dense or sparse stands of trees and other plants endowed with biodiversity.
Diboo	Closed forest	Highly dense forest and it is shrubs
Bosona Cittuu	Forest patch	Small and widely uneven (Lemessa, 2012)
Daggala	Savanna	Large area covered by long grasses and climbers
Bosona Kobboo	Large and dense forest	Ever green throughout the year; possessed by different wild animals, rivers, plants etc.

The above table shows that *Bosona* is the common name of forests. According to *(Lemessa, 2012) Cittu bosonaa* is called forest patch*,* which is small and widely uneven*.* It is surrounded by farmland and commonly possesses by few tree species and not as such conserved. In the study area, some people have this forest individually. In some other cases, there are people who have *cittuu* forest in common. Small wild animals like antelope, monkey, and others lives in this kind of forest. Both animals and human beings can easily get into and out of this forest. Human

beings cut trees that can help them for building houses and its land is convenient for agriculture as well. This forest is most often covered by agricultural lands. *Diboo* (closed forest) is denser than c*ittuu* forest. It is the hedge of a highly dense forest and it is short trees (shrubs) .The Oromo of the study area say *Diboo* is protector of forests as it is dark and dense, hence not convenient for human beings and other domestic animals to move inside freely. The other *Daggala* (Savanna) is a large area which is covered by long grasses. It is sheltered by climber, herbs and shrubs. It is a cover for reptiles. The cattle graze these forests especially during winter season. *Bosona Kobboo* (closed forest) is large and dense forest. It is ever green throughout the year. In this forest we find indigenous trees, different wild animals, reptiles and insects, grasses, climbers, herbs, trailing, flora, different trees and rivers. In most cases this forest is far from residences, hence, free from reach of domestic animals.

4.1.4. Oromo Indigenous Forest Resources Utilization

The living condition of the Oromo society in the study area is Non-Timber Forest Products (NTFPs) oriented. According to key informants said most people forest for food, fodder, construction, medicine, agricultural and home tools, foods and spices, fuel wood, aesthetic, utensil wash, spiritual role and others. The society thinks every thing is the result of forest. They use forest for income. For example, honey is the major NTFP for income generation. This fact is observed from the researcher's personal observation as well. Generally, the advantage the society gets from forest is divided into different categories like

Knowledge of conservation and forest usage depends on their culture and it passes from generation to generation. This cultural knowledge is still functional. On the other hand, the society conserves the forests for the abundant purpose the forests have. This is emphasized in the FGD the researcher has with the society. The result of FGD and semi-structured interview further indicates the customs and values of the society forces them to preserve forests especially sacred trees. They know which plant species to cut for what purposes.

4.1.4.1. Plant Species Used for Local Constructions

Oromo society uses different trees for different purposes culturally. For example, for constructing houses and fences, they use wood and other forest products, bamboo tree and climbers in a similar way. According to informants (JS, TY and MG) *Baddeessaa (Syzygium guineense), Oomii (Prunus africana), Giixoo/siinsinoo (cyathea manniana)* are strong trees for construction. Their strength is tested not only in their ages, but also in their ability to with stand pests. Though these trees are preferred ones for construction, the custom and value in the society forbids them to cut down trees at atime.

Table-2.The most common Plant Species used for cultural house and fence construction

Local Name	*Scientific Name*	Life form	Part used	Utlization
Adaamii	*Euphorbia candelabrum*	tree	stem/leaf	fence
Ambabbeessa-korma/ambaltaa	*Albizia schimperiana*	tree	stem	wall
Baddeessa	*Syzygium guineense*	tree	stem	pillar
Bahaa	*Olea welwetschii*	tree	stem	pillar and wall
Birbirsa	*Podocarpus falcatus*	tree	stem	door/window
Bottoo	*unfound*	tree	stem	door/window, wall
Caffee	*Cyperus digitatus*	Herb	whole part except root	roof
Dhummuugaa	*Justicia schimperiana*	shrub	stem	roof holder/crown structure
Giixoo/sinsinoo	*cyathea manniana*	shrub	stem	wall
Harangamaa Gurraacha	*Pterrolobium stellatum*	climber	alive	fence
Leemman	*Bamboo tree*	tree-grass	stem/culm	house roof holder or crown structure and fence
Liqixii	*Scientfic name is not found*	climber	stem	to link wood
Lookoo	*Diospyrios abyssinica*	tree	stem	pillar
Oomii	*Prunus africana*	tree	stem	pillar
Qararoo	*Akacaathera schimperi*	tree	stem	door/window
Qollaachoo	*Scientfic name is not found*	shrub	stem	fence
Rigaa Raabaa	*Scientfic name is not found*	Tree	stem	pillar/wall
Urgeessaa	*Premna Shimperi*	shrub	stem	pillar
Waasoo	*cassipourea malosana*	tree	stem	wall
Waddessa	*Cordia africana*	tree	stem	door/window
Xiwoo	*Jasmium abyssinica*	climber	stem	to link wood

The above table shows that in the area the Oromo society use forest and forest products to local constraction of house and fence. However, in some cases the rural Oromo communities began to bulid their using steel roof, cement and nails. Although it is evident that they use some modern resources, they still mix them with woods. They choose to use trees based on the purpose they use them for.

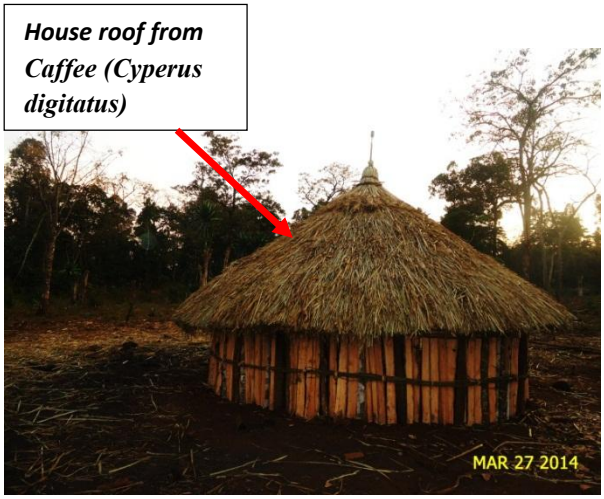

Fig.3.Traditional house (Source: Field work 2014)

Fig.4. Traditional door from huge Waddessa (Cordia africana) tree (with out nail)

As to the informants/elders, the Oromos make fences in two different ways. The first type is the most common type of fence. They cut or take plants alive and plant it in a row where they are going to stand alive being green. It is made out of shrubs surrounding crops planted or area of land to be harvested. Plant species used to make this fence are *Adaamii (Euphorbia candelabrum), Qollaachoo (scientific name is not found), and Kombolcha (scientific name is not found), Harangamaa gurraacha (Scientfic name is not found)*. These trees grow alive naturally when they are cut and planted in different places. The second type of fence is the one we use for making compound. Strong trees like *Syzygium guineense, cyatheamanniana and* others are cut and placed in holes prepared to guard the compound. These trees are not easily attacked by pests.

Fig.5. Traditonal Fence used in the house area

Fig.6.Sinsino (cyathea manniana) herb

Fig.7. Ttraditional fence mostly used in the grazing and harvesting field areas

4.1.4.2. Plant Species Used for Traditional Medicines

Information from interview with key informants reveals that most plants and leaves serving for medicinal values are harvested from the wild. Very few of them can be found from the surrounding. In addition to their medicinal values, these plants serve for the purpose of food, construction, sheds during sunny season and sources of income.

Trees that serve for medicinal values are shrubs and herbs. Researchers (Etana Tolesa, 2007; Debela Hundie, 2001) expressed this fact in their research findings. According to Oromo culture, cultural medicine takes into consideration the preparation, dosage, application and administration of medicine.This wisdom is considered by few selected individuals called traditional healers.

Before this modern medicine came into being, the Oromos have been using different medicines for both human beings and domesticated animals. This indigenous knowledge has been passing from generation to generation. Above all, indigenous knowledge has had its share for preservation of natural resources and forests. When they use shrubs and herbs for medicinal value, they only cut part of the tree or leaves of it only.

Table-3 Some of Common Indigenous Medicinal Plants

Local Name	**Scientific Name**	**Life Form**	**Part used**	**Aliment Type**
Adaamii	*Euphorbia condelabrum*	Tree	latex	Ascarias
Andoodee	*Phytolacca dodecandra*	Shrub	root/seed	Fishing purpose Rabies
Baggee	*Combretum paniculatum*	Climber	stem sap	eye infection
Daamakasee	*Ocimum lamiifolim*	shrub	leaf	head ache
Dhummuugaa	*Justicia schimperiana*	shrub	leaf	Snake bite, Rabies
Doqqoo	scientific name is not found	shrub	leaf	swelling
Goofichoo	*Nicotiana tabacum*	Herb	leaf	Snake bite
Karasoo	Polyscias flelva	Tree	bark	horse disease
Lolchiisaa	*Bersama abyssinica*	shrub	stem/leaf	Rheumatic and Ascariasis
Makkanniisa	*Croton macrostachyus*	Tree	stem/leaf	cattle disease Tinea corporis (*roobbii*)
Oomii	*Pygevm africanum*	Tree	bark	cattle infection
Qarabichoo	*Echinops kebericho*	Herb	root	Hook worm/ Snake bite
Qomonyoo	*Brucea antidysenterica*	Shrub	Root/Leaf	Malaria and Rheumatic
Somboo	*Ekebergia capensis*	Tree	Bark	Trypsis
Sootalloo	*Millettia ferruginea*	Tree	seed	Fishing purpose
Tunjoo	scientific name is not found	climber	baala	stomach ache
Umbaawoo	Scientfic name is not found	climber	root/ leaf	Menstruation dis-orderity

Source: Field Research 2014

NB. System of preparations, dosage and applications are not discussed because of the traditional healers are not interested to disclose their knowledge on medicinal plants and thus the knowledge and skill concerning these plants are individual secrets and not available to the public. The intention to generate an income from the practice could be the big factor taken into consideration.

The above table shows some plants that are used to make some cultural medicines. In the FGD held at different *gandaa*s with the society, the elders assured that the knowledge of making medicine is not of all individuals in the society. Only few individuals have that knowledge, but there is at least one or more traditional healer in a *gandaa*. The traditional healer makes the medicine carefully and nobody knows where he cuts and how he makes it. It is given to the

concerned body in the form of powder or liquid so that nobody guesses which plant spcies is used to make it.

4.1.4.3. Plant Species Used for Traditional Agricultural Materials and Home Tools

The Oromo society in Ilu Abba Bora knows the conservation of natural resources and how to use forest for different purposes. They know which trees to cut to make house hold furnitures and agricultural tools. According to the FGD with elders indigenous trees like *Doqqoo (scientific name is not found), Simararuu (Galineriasaxifraga), Dambii (Ficus ovata), Se'oo (Scientific name is not found), Oomii (Prunus africana), and Qararoo (Akacaathera schimperi)* are used to make agricultural tools like *qambarrii* (yoke), *gindoo* (beam), *hordaa* (share holder), *babattee* (side wing) and others.

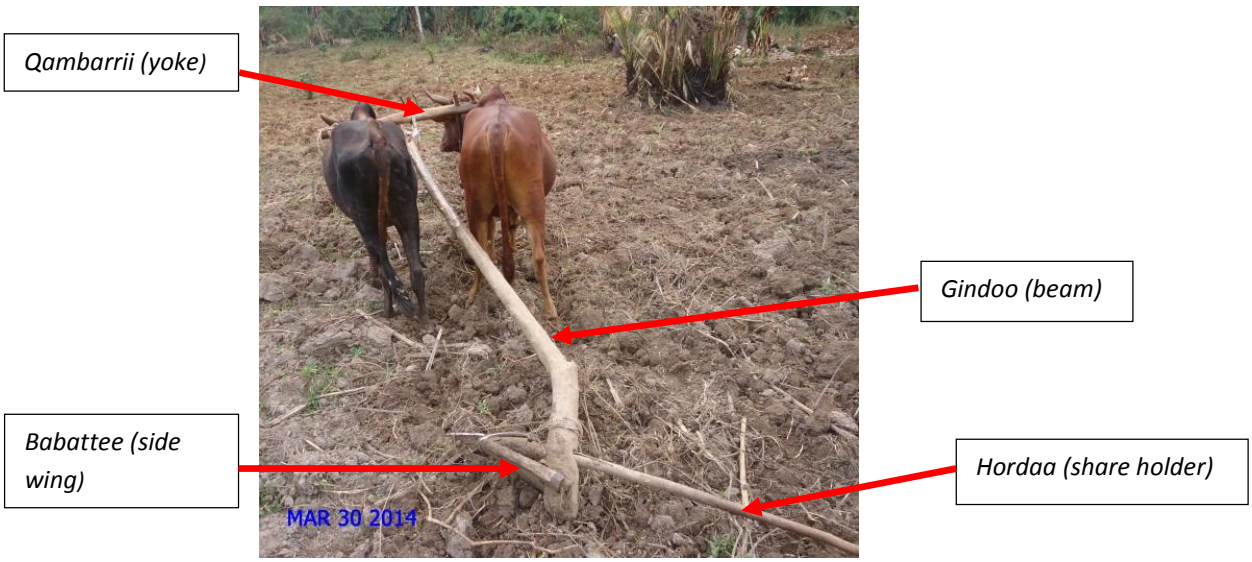

Fig.8.Traditional Agricultural Tools

In addition, trees like *Gagamaa (Olea capensis), Bahaa (Olea welwetschii), Lookoo (Diospyrios abyssinica), Oongoo (Scientfic name is not found), Kombolcha (scientific name is not found),* are used to make the handle of every traditional agricultural and home tools like hoe, axe, knife, sickle and others. Moreover, *Waddeessa (Cordia Africana), Doqqoo (scientific name is not found) and Lolchiisaa (Bersema abyssinica)* are trees to make mortar and pestle. There are two types of mortar: big and small mortar. The big mortar is about 70cm tall and used to grind crops

by standing alongside of the mortar. Whereas, the small mortar is about 20cm on average and used to grind coffee or other spices by sitting down.

Fig.9.Forest determined cultural agricultural and home tools

Xiwoo (Jasmium abyssinica) climber is wonderful plant species to make *guuboo* (traditional henhives) and baskets. Generally, there is different plant species used to make different agricultural and home tools. What is important is the trees should be aged to make sure that they are strong and the tools are durable.

Trees like *Waddeessaa (Cordia Africana), Qararoo (Akacaathera schimperi), Bottoo (Scientific name is not found), Karasoo (Polyscias flelva)* and *Leemman (bamboo)* are preferable to make bed, bench, chair, table, shelf and other furnitures. Dinning tools like food serving, fork, spoon, and others are made out of the above trees.The society in the study area makes use of tools made out of bamboo trees as well. The researcher also saw bamboo tree and home tools made out of the tree during his field observation. The society further use bamboo trees to make beehive, floor mat, chairs, to dry coffee beans on, baskets, water container, cups, traditional tobacco pipe, bed and the like.Moreover, they plant bamboo tree on hills to protect soil erosion.

Meexxii (Phoenix reclinata) is used among the Oromos to make home tools. It is used to make traditional foam, basket, beehive, brush and others. Its leaf as well as its stem is used to make house furnitures. Its seed is edible.

Fig.10. Guuboo lukkuu (Traditional henhives)

Fig.11.Gabatee (Traditional wooden food servers)

Fig.12.Yagilloo (Traditional cattle feeding log made from Wadessa tree stem)

Fig.13. Barcuma (Traditional seat

Fig. 14.The elder making traditional foam

Fig.15.Traditional foam

Fig. 16.Traditional brush from Meexxii (Phoenix reclinata)

Fig. 17.Traditional basket from Meexxii (Phoenix reclinata)

Fig. 18.Traditional buddena servers from Meexxii (Phoenix reclinata)

Fig. 19.Traditional basket from bamboo tree

4.1.4.4. Plant Species used for Traditional Foods and Spices

On the other hand, before modern technologies that brought packed foods and spices into our market, the Oromos use their cultural knowledge and wisdom they acquired from their fathers to make foods and spices from forest products. They are still using these wisdom and knowledge to make foods. As to key informants, the types of trees and leafes they use to make foods and spices are summarized in the following table.

Table 4. Some of the major Wild Plant Species used for foods and spices

Local name	Scientific name	life form	Part used	Utilization
Adaamii	*Euphorbia candelabrum*	Tree	seed	fruit
Baddeessa	*Syzygium guineense*	Tree	seed	fruit
Buna	*Coffee Arabica*	Shrub	seed	mild stimulant
Caggoo	*Maesa Lanceolata*	Tree	seed	Used for clean and illuminate the flat pan to make injera.
Dhangaggoo	*Rumex abyssinicus*	Herb	seed/root	spice
Geeshoo	*Rhamnus prinordes*	shrub	leaf	Used for making *daadhii* /local beer/
Goofaa	*psidium guajava*	shrub	seed	fruit
Goraa	*Rubus apetalus*	shrub	seed	fruit
Harangamaa	*unfound (Fabaceae family)*	shrub	seed	fruit
Harbuu	*Ficus sur*	Tree	seed	fruit
Liimmaa	*Scientific name is not found*	herb	leaf	vegetable
Liqixii	*unfound*	climber	seed	fruit
Meexxii	*Phoenix reclinata*	shrub	seed/latex	fruit
Ogiyo	*Aframomum corrorima*	herb	root	spice
Tujjoo	*piper capense*	shrub	seed	spice
Tunjoo	*scientific name is not found*	climber	seed	fruit
Ulmaayii	*Clausena anisata*	shrub	seed	fruit
Uukkoo	Mushroom	shrub	stem/leaf	vegetable
Waddessa	*Cordia africana*	Tree	seed	fruit

Source: Field research 2014

Trees like *Baddeessaa (Syzygium guineense), Harbuu (Ficus sur), Waddeessaa (Cordia africana), Meexxii (Phoenix reclinata), and Goraa (Rubus apetalus)* trees that grow on hills and their seeds are edible. Natural resources like *Caggoo (Maesa Lanceolata*), *Ogiyoo (Aframomum corrorima*), and *Tunjoo (Piper capense)* are trees from which spices are made. In Oromo culture, women are responsible to make injera. They make injera on a flat pan made out of clay soil. They use the seeds of C*aggoo* tree as oil that illuminates the pan to facilitate making of injera. They fry seeds of C*aggoo* tree on a pan, grind it and use the powder to clean and illuminate the flat pan to make injera.

Ogiyoo (Aframomum corrorima) and *Tunjoo (Piper capense)* are known all over the world as spice. Key informants and FG Discussants say *Ogiyoo and Tunjoo* are used in the study area as a spice and a means of earning money.

Fig.20.Wild Tunjoo (Piper capense)

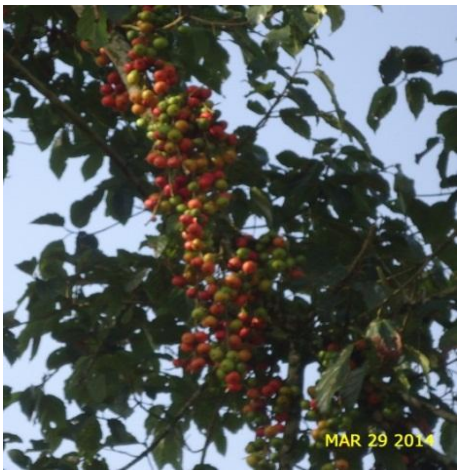

Fig.21. Harbuu (Ficus sur) fruit

Fig.22.The leafs of Ogiyoo (Aframomum corrorima)

Fig.23.The seed of Caggoo (Maesa Lanceolata)

4.1.4.5. Plant Species Used for Traditional Aesthetics and Musical Instruments

Plant species like *Bahaa (Olea welwetschii), Somboo (Ekebergia capensis), Qunnii (Cyperus longus), Urgeessaa/Qoraasuma (Premna Shimperi), Eebicha (Vernonia amygdalina), Ulmaayyii (Clausena anisata)* and others are used among the society for their odor and aesthetic values. In the study area, bee keeping is traditional one. According to modern bee keeping, bees are taken from certain places and put into modern bee hives to make honey. But, according to traditional practices, the person with traditional hive look for barks of *Somboo (Ekebergia capensis) and Ba'aa (Olea welwetschii)* are collected from the forst and put into fire. Then the hive is brought into the fire so that the inside of the hive is odored with the odor trees so that it attracts bees to get into the hive.

During rituals the root of *Qunni (Cyperus longus)* is put into fire so that its smoke gives odor like incene. The smoke from *Qunni* makes the festive admirable and attractive. Most Oromos of the study area food is milk and the product of milk. They bring dry trees of *Urgeessaa (Premna Shimperi)* home cut into pieces and put into fire. The smoke from such dry and aged odor trees keep tools they use to put milk in clean and tidy. In addition to that they bring *Kusaaye (Lippia javanica*) bush into house to wash milk tools with. They do not wash milk tools with soup the way we do it now.

Oromo of the study area believed trees like *Ulmaayyii (Clausena anisata)* is the abode of *Ayyaanaa* and other spiritual forces. Lemessa (2012) has discussed that *Ulmaayyii* plant is one of the most respected and popular plant species pervading the *Oda Bulluq* forest. Hence, the local communities of the study area used *Ulmaayyii* plant on wedding and religious ceremonies as well as they used to an aesthetic values. It is fragrant plant which purifies and offsets mental dipressions. And also it has nice odor and it is used in different rituals. For example, they brush teeth with it. In addition, when a woman gives birth, leafs of *Ulmaayyii* and different leaf of tree is boiled to wash the woman. She has to smell it as well. An adolescent also cut stems of *Ulmaayyi* and give it to an adolescent girl to show that he loves her. So *Ulmaayyii* is used for many purposes among the Oromos.

The local peoples of the study areas are made traditional musical tools from forest resources. *Ulullee* (flute) is the known musical tool in the area made from bamboo tree. *Ulullee* has a four to six holes finger, these holes to order the melody of sound. The other traditional musical tool is drum. Drum is made from *Waddeessaa (cordia Africana)* tree; the two ends of large hole of *Waddessa* are covered by leather to give rhythm**.** The local people used drums during different ceremonies to support the folk songs and dancing.

Kiraara (lyre) and *Ximboo/masiinqoo (harp)* traditional musical instruments are also the product of woods. Most of the time the local people used *Wadeessaa (Cordia Africana)* and *Birbirsa (Podocarpus falcatus)* to make these musical instruments. *Kiraara* is a five- or six-string lyre that is either plucked with the fingers or strummed with a plectrum.The harp is made of wood, covered by leather and contains one sound hole; consists of strings from horse tail on the pillar and arch bow that run from the neck of the instrument to the sound box. Both lyre and harp is the instruments of the *Azmari* people. Culturally, it is playing by wandering poet/musicians who performed at wedding and other ceremonies.

The other traditional musical instrument found among the Oromo of research area is *Faaggaa (traditional saxophone);* it is a single-reed mouth piece, traditionally made from *Gindiraaroo (Discopodium peninervum)* herbs. My informants explained that *Faaggaa* is played by men to accompany singing and dancing during folk songs by Oromo girls in former time.

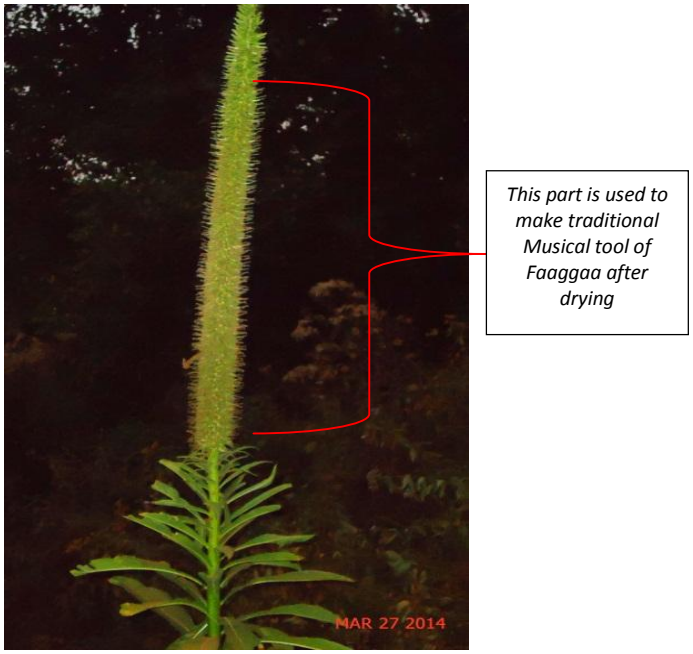

Fig.24.Gindiraaroo (Discopodium peninervum) shrub

Fig. 25.Masiinqoo (harp)

4.1.4.6. Plant Species used for Traditional Utensil Wash and Fuelwood

The informants reported that on FG Discussion plants like *Andoodee (Phytolacca dodecandra), Baalaan-soofii (Ficus exasperata), Eebicha (Vernonia amygdalina)* and others are used to wash and clean home tools and clothes. Formerly, when the today technologies like soap and machineries was not exsisted, the local people of the study area used the red *Andode* seeds as soap by mixing with water and simply disappear dirtiness from clothes. The leaf of *Baalaan-soofii (Ficus exasperata)* tree is used for washing or clearing home tools. The leaf of *Eebicha (Vernonia amygdalina)* tree has pleasant Oder and the traditional women used to wash the pot of local beer. The local beer has also pleasant smell. As informants mentioned on FGD the trees which are available around the settlers areas like *Caggoo (Maesa Lanceolata), Reejjii (Vernonia auriculifera), Eebicha (Vernonia amygdalina), Sooyyama (Vernonia adoensis), Bakkanniisa*

(Croton macrostachyus), Sootalloo (Millettia ferruginea), Qobboo (Ricinus communis), Oongoo (Scientfic name is not found) and others are widely used for fire wood purposes.

4.1.5. Indigenous Knowledge of Forest Conservation Practices

Forest resource conservation practices of Oromo people are based on the people's indigenous knowledge. The Oromo of Ilu Abba Bora conserve their local forest resources for they earn livelihood from such forests. The conservation practices are being done on multitude ways that are greatly based on the relationships of indigenous events. In most cases peoples in and around forests base their protection on religious concern, ritual and customary laws and its attachment with social norms. Furthermore, the protection and or conservation practices have been carried by mechanism of catagorizing forest lands around them.

The main divisions are *cittu* forest land and *Kobboo* forest land which are conserved and administered in various ways. The *cittuu* forests are found nearer to the local and non-local dwellers whereas the *Kobboo* forest land is relatively located far from settlement areas. The conservation practices and beliefs of the local communities toward the two main types of forest lands are very different. The management of the so called *cittuu* forest land is based on the resource and special taboos but, the protection of *Kobboo* forest is based on the rights and obligations of the individual who inherited this forest land from their ancestors.

4.1.5.1. *Kobboo* Practices of Forest Conservation

Kobboo is one of the indigenous forest conservation systems which are still actively practiced in the study areas. *Kobboo* forest entitled with various Afan Oromo names for management by the local people, the *Kobboo*, the *Goppoo* and *Daga* are some of the common names provided to such forested land. As key informants has explained (MG,MT) the naming '*Kobboo*' is the place in the forest where bee keeping and productions of honey carried out, so in these people's looking it means that *Kobboo* is like a farm yard. Many informants also agree that *'Goppoo'*is the source of the bee hiving practices. Nevertheless, these key informants (TL) explain that the '*Daga*' as '*dagachisuu'* which means 'to make forget; be late''.They further stated the reason why such a naming this forest type. In the past people accidently used to fight each other on their

forest land territories. This time they make an ambush in that forest area to attack their enemies after a long time that is after the people or the man had forgotten the enemity.

Daga remained as the name given to such forest by customary laws because those local ambushes were resolved by community elders. The community elders made block/ boundaries of the forests to these tribes not to fight again. Therefore, *Daga* frost area is being protected conserved till now by such community customary laws.

Kobboo is a dense evergreen large forest composed of indigenous trees, wild animals (herbivores and carnivores) such as baboon, ape, lion, hyena, gazelle, pigs, buffaloes etc. It also encompasses shrubs, herbs, vines, climbers, rivers, and streams that became part of food and shelter for the wild animals and local communities. This forest land is therefore free from the distraction of human and domestic animals. The forest is far on average from 7km to 15km from settlement areas. One farmer on average has about 30 hectares to 70 hectares of the *Kobboo* forest.

Even though, there is no adopted law for the protection and conservation of the *Kobboo* forest till now, the local communities who make their living out of these forests inherit their families with rules and regulating them had been making on the protection and conservation of such forests. One of the community elders has stated this as: *"Ani abbaa koo irraa bosona Kobboo qofa miti kanan dhaale. Seera bosonni kun ittiin bulu tumaa aadaa waliin abbaan koo natti dabarsani. Anis bifuma kanaanan bosona Kobboo kana tumaa isaa waliin ilma koo dabarsee dhaalchisa.* This means*"I didn't inherits only the Kobboo forest from my father, but the rules and regulations, the social customs to manage this forest. Therefore, I inherit it to my son in the same way".* This reflects that the aforementioned forest land is being conserved and protected by traditional laws, customs and rules etc. Furthermore, many informants' who are living around *Kobboo* forest lands tell that they have been administering their forest lands in the same manner.

Kobboo forest boundary is also well known among the communities especially *jaarsa biyyaa* (local elders). This is also based on their indigenous knowledge. Because these tribes use for demarcating permanent objects such as rivers, big trees and stones, gorges and water falls, soil types, hills in the forests etc. Thus, every inherited and their community elders can easily identity one's occupation there. Moreover, the fathers show their sons such bounders of occupation

before their death. These fathers also communicate their traditional forest managing to their children to practice them so that the practices stand by their generations.

The tribal elders also explain that non-family members (outsiders) may inherit the *Kobboo* forest. For instance, when a family head who has no any child to inherit his *Kobboo* forest because of his death, the community elders gather for decision to make non-family members to over take the use and conservation of the *Kobboo* forest as to their customs and laws. Therefore, the new inheritants follow the same tradition; identifying their forest occupation conserves and protects it in order to pass on to the next generation (their sons).

One may have a question about "why only the sons inherit the family?" The informants put the following reasons for this:

a) Daily routines to the *Kobboo* forest area takes minimum of half a day walk before the work begins. Therefore, most family members perceive and believe that females cannot carry out these duties easily. This is also inconvenient in the district where there is no access to modern transportation.
b) The people believe that women are rearing and looking after children better than the men do, and hence better for them to stay at home. Concerning this, interviews were made by the researcher from local mothers or maids. These mothers agree that they have to facilitate the work in the *Kobboo* forest. They said, "The justice is that we women share all the incomes from the *Kobboo* forest equally and has no any in justices on us."
c) As it was mentioned earlier *Kobboo* forests very far, so that men are forced to stay there one to three weeks for generating foods or income, so females, as they can't carry heavy packs, shall work at homerather. Hartmann (2004) had also noted that working in forest is men's chores, especially beekeeping practices in Ethiopia.

Each block of *Kobboo* forest is under possession and supervision of specific clan and only by these groups or individual mostly by keeping beehives. Moreover, the *Kobboo* owner is also responsible for what ever happens in his forest boundaries. He has also a duty to attend his neighbouring *Kobboo* forest land and report to the local elders. This duty is given based on their

indigenous knowledge passed on from castors. It is in such a way that the society strengthen the conservation practices.

If a person has attempted to destroy other occupants (*Kobboo* resources) such as bee hiving, cutting woods, collecting coffee beans and spices etc, the *Kobboo* occupant would report these bad practices to the *baataa*. The owner of *Kobboo* forest may sometimes catch the thief man and bring them in front of the *baataa,* so that they receive a punishment according to the norm. Furthermore, the occupant can appeal to the *baataa* that the neighbouring *Kobboo* occupants have to help him (be responsible) and identify the resource destroyers.

In Oromo tradition farmers work in groups called *Daboo.* These may consist of 50 to 80 men as a member of one *daboo*. *Baataa* is an elder who organize traditional work in corporation is called *Daboo*. Baataa is elected by the members of *Daboo*. During election the members are considered different criterion. In the first, the elected person have to marry and have to have child. Because, the people perceive that the married person is guaranteed to be *baataa*. The second criterion is that he has to know and honor the culture and history of the society and be accepted by them. The other criterion is that the person should have good outlook for others and believes in the equalities of the individuals and the people. He should be honest and truthful and respect the values and norms of the society. So the elected person must fulfill the above criteria to lead *daboo*.

The *daboo* practices is not only working cooperatively but also to communicate about the well being of the local *Kobboo* forest lands, the welfare of the society, boundaries, sorrows and joys etc. For example, an excuse to the poacher or wood cutter attempted any of such acts, the owner may forgive him because these men could be one member of the *daboo*, and this is often carried out before accusing him in front of the *baataa*. This means that forest land distraction can be easily cached up within such traditional bonding of society. Therefore, the *baataa* can easily access to information to take punishment on the destroyers or looters of the *Kobboo* resources. If the decisions are difficult to the *baataa*, then the *baataa* transfers it to the *jaarsa biyyaa* (community elders) who are locally appointed from the community itself.

One example is discussed in the following how the community elders' settle the case of destroyer/looter of *Kobboo* Forest resource in Nono Sal'e district. After the elders in the community have identified the mischief person, they pass on punishment which could be also a curse and swear that the villagers afraid of its consequences. At first, the community elders let the looter man to return the proper tips to the *Kobboo* owner. Then the man receives the right kind of punishment that justifies the level of his action, very often to let the man to cut S*arxee* tree which doesn't easily release an axe and or pay in cash or in kind (sheep, an ox etc.) to the occupant.

Formerly if someone cut a wood or damage resources from one's *Kobboo*, he would be physically punished by juvenile with a perch (inf. KM). Two juvenile used to tie his hands and legs to hit with the perches until the man bleeds. But now, the community elders contact the suspected or accused person in order to confirm the accusation from him. If the man didn't tell out the truth or if he has lied to these community elders, then they order swear and curse up on him. This practice is meant to protect deforestation with their indigenous knowledge.

On the punishment day, all the elected *jaarsa biyya*, the mischievers, the villagers and the *Kobboo* occupant's particularly who accused the men with bad practices will gather around *odaa* (under a shade of big tree). Then the elders bring those spears that serve for their curses to frighten those who destroy and loot one's forest resources. These spears for the curse have meaning to these local tribes. The most common tools are stone, *buddeena*, seedlings, knife, javelin, fire, grass and axe etc.

According to Oromo culture '*buddeena*' food represents joy and life. Spiritually it means that prosperity. If someone, lied to the community elders, they let that person to hold half (loafs) *buddeena* and say "*Waaqani jireenya koo hanga buddeena cabduu kanaatti haa galchu"*. Means "*Waaqaa* make me (my life) half like this *buddeenaa*" which is mean to comes poverty. In the same way, a spear symbolizes sudden death or an attack by enemy with fighting tools. So he says "*Yoon dhuguma badii kana rawwadhe sobe eeboon kun na hindhabin; aalbeen kun ana haa waraanu.*" he say the God my death with this javelin among these tools by holding them. A seedling also represents a growing up child or blossom. He then holds of and say the swear as*"Akka biqiltuu kanaa tasa hiryoota koo keessaa Waaqni ana haa buqqisu."* Let the God

uproot or cut me like this seedling (holding). Therefore, the swear practices has great impact up on the psychology of the society. The practices let them to take care of their *Kobboo* forest lands at all. These swear is very trouble and no one takes it on him/herself by denying the truth.

The people believe that the remit of the curse pass to his child and kinship etc. If this person doesn't tell the truth, there is also social abuse waiting to him. He will be changed out of the *daboo* or alienated and neglected with his family. This causes mental illness to the man and even the family began to hate him for they are alienated from society. Like or not the mischievers will tell the truth if any destroying acts were performed by them for the above reasons.

After the suspected person passed on swears to himself, there is also popular curse led by *jaarsolii biyyaa* (community elders) with one sound with the following statements.

Gaagurri kee hindammeessin……God let your beehive infertile
Hiriyyaa kee keessaa ol gali…… Inter to your bed from your collogue;
Mucaa deessee hin ergatin ……..Do not get rest on your son;
Sanyiin kee haa mujuju……Your clan might be docile;
Daldaltee hinbuufatin……Might your trade be without profit;
Xiqqaa fi guddaarraa kabaja dhabi……Don't get respect within elders and youngest
Joortuu ta'ii hafi……Be restless
Ayyaanni kee si haajibbu……Might your Ayyana (sprit) hate yourself
Doomi ……Be dull

By saying all this and other words, they curse the suspected person from the society.

4.1.5.2. Permission to Utilize Kobboo Forest Resources

The regulation of *Kobboo* system clearly put that the owners can hung their beehives in their *Kobboo*; they can collect various spices and wild coffee; they can use trees in *Kobboo* to build house. This rule has been in use for a long time. According to the key informants participated in FGD, currently hunting wild animals and cutting trees for timber without permission of the government are legally prohibited.

i. Traditional Bee Keeping

Bee keeping is considered as one of the oldest professions of human kind (Tadesse, 2011). According to information given by the elders who participated in FGD, the service of the culture for forest conservation called *Kobboo* has a direct relation to traditional beehive. As the bees

need flowering plants, clean water and favourable weather; take their beehives in to distant *Kobboo* forest. Among the districts of Ilu Abba Bora the study area is known for its good weather, trees and plants which produce flowers for making honey comb. Since, the districts are full of varieties of diverse honey bee flora, it is known in the production of organic honey comb.

Since, the community in the area live in and around forests they produce traditional beehive from unchopped stems of big trees. This traditional beehive is made from hollowed out logs closed at each end and with just a hole for the bees to enter. Sometimes, the traditional beehives are produced from bamboo trees covered with long grass. This is covered with animals' dung. An individual prepares a traditional beehive from hollowed out logs in his own Kobboo. Beehives from hollowed logs are made from trees known as *Qararoo, Karasoo and Waddeessaa* in local names. These trees are chosen as they are thought to be strong and straight in their shape. The trees which are used for making this kind of traditional beehive are cut down in to 60cm. The big tree trunk which has been cut in to 60cms will be divided in to two equal parts. Then the center of each part will be hollowed down and the edges of the trees will be left without being hollowed. Small opening will be prepared for the bees to enter when the two hollowed parts of the divided found is put togather or closed, the central part will be open for bees to live and produce to honey. Since, ten traditional beehives can be prepared from one tree on average; the farmers do not need to cut down many trees. Therefore, they do not destroy many trees. In addition a beehive which is once prepared can be reused for about five years. Accordingly, the farmers do not destroy forests to prepare beehives annually.

As had been understood from the field observation, the farmer covers their beehives with long grass or *meexxii* barks to protect them from wet or rain. When they take the beehives down from the tree to collect the honeycomb, they carefully put the beehives in *gooroo dammaa* (small hats) to protect them from sun light and rain. The beehives will be kept in dry place until the time they will be aired for honey production. In order to protect their bee hives from sunlight and rain, all farmers have *gooroo dammaa* (beehive hat) in their *Kobboo* forest.

Fig.26. Traditional Beehives

Since, going to distant places to work on the beehives all farmers stay in the small hat in their *Kobboo* were they put their beehives and the materials needed. In order to avoid distraction with fire, the farmers carefully extinguish the fire which they use for cooking their food or for other purposes. This saves their forest from being destroyed by fire. Avoiding fire dangers is one of the rules of *Kobboo* and everybody acts on this carefully. This indicates how careful the local peoples are about forest conservation.

According to Oromo culture bee hives are smoked with the burnt bark of sweet scented trees (*Bahaa (Olea welwitsehii)* and *Somboo (Ekebergia capensis*) before hanging them. This is often done to make the hives have good smell to so that they could attract the bees. In addition, the local people culturally stated that in the seasons of smoking or hanging beehives a man cannot sleep with a women. In other words sexual intercourse is culturally prohibited during smoking beehives. The reason for this, according to the Oromo of the study area as there were no cosmetics as today, indigenous women in country side are usually anointed with a burnt trees and herbs such as *Bahaa (Olea welwitsehii), Somboo (Ekebergia capensis), the root of Qunnii (Cyperus rigidijolius), Baddeessa (Syzygium quineense)* which have smell of perfume. Since, they are smoked with such trees, if the women come to where beehives are prepared, the bees do not enter hives.

In the study area the beehives are usually put on trees in December to January. These months are chosen as many trees produce their flower this time. The farmers use a long rope about 60 meters long to take the hives up to the trees and bring take them down later. According to the Oromo culture, the day of removing or taking down beehives from trees is highly celebrated. Delicious traditional foods and drinks will be prepared. The informants pointed out that the communities can discern what kind of honey will be produced based on the smell of the flowering plants.

In relation to honeycomb production, the informants explained that there are enemies which affect the bees. The main enemies of the bees are ants, monkey, and vulture. In order to protect these enemies, the farmers use indigenous protection methods (Inf. MT and TD). In order to protect ants, putting ash all around the stem of the tree on which the beehives are put and tying grain residues (broken piece of grass) around the trunk using plastic materials to protect the bees from climbing the trees.

In order to protect vultures, thorny bushes or sharp metals will be tied around the beehives. To protect the monkey, the farmers used to keep it in turn. Currently, the government has allowed the farmers to kill the monkeys by using various mechanisms. The farmers prepare a *dabboo* (wider net) and circle it around the forest where the monkeys are found in large number. Then they chase the monkeys to the net and kill them when they could not escape.

Fig-27.Honey from Traditional Beehives

On the whole the informants made clear that honey is useful to them in many ways. They stated that it is used as food, as a source of income and a remedy. In addition to this, Workineh (2001)

has stated that beekeeping is an environmental friendly activity and renewable resources. Hence, in the study area, every beekeeping activity of farmers has a great role in conservation of *Kobboo* forests. The previous discussion thus suggests that the farmers of the study area should be encouraged to improve beekeeping and manage their bees in a more efficient way on the basis of materials, production techniques, productivity, product quality and others.

During his field observation the researcher understood that few farmers were trying to replace their beehives with the modern beehives. They were buying a modern beehive for about 1200.00 birr per each in their union. The farmers informed the researcher that they are thinking of replacing traditional beehive with the modern one in their settlement areas. When the researcher observed, there were no bees in some of the hives and the farmer stated they had to scope the bees by force and put in to the modern beehives. The bees do not enter the modern hives on their own as they do with the cultural beehives. The farmers also raised the bees are did not like the smokes in the area. To overcome such kinds of problems, the farmers should be supported by NGO or GO to improve beekeeping and manage their bees in a more efficient way on the basis of modern beehives.

Fig.28. Modern Beehives

ii. Wild Coffee

Arabica coffee (Coffee Arabica) originates from the Ethiopian highlands, which are its centers of diversity. Wild populations of Coffee Arabica grow naturally in the under growth of the montane

rainforests in Southwest Ethiopia. The total land area used to produce coffee in Ethiopia is estimated about 400,000 hectare. Currently forest coffee represents about 9% of the total land covered by coffee and contributes about 5-6% of the total production (Demel *et al.*, 2003). The existence of the wild coffee populations of *Coffee Arabica* in the montane rainforests of Ethiopia is highly threatened. Mekdes (2005) has discussed, wherever accessible, coffee is harvested directly from naturally regenerating and unmanaged wild coffee trees.

In the area where this research was conducted coffee grows at 1300 – 2000 meters above sea level. The coffee in the area is divided in to two types. These are forest coffee and modern coffee plants. The forest coffee plants are naturally found in the *Kobboo* forests. They grow naturally as their seeds are distributed by birds and other coffee eating wild life (example: Apes, monkeys and others). As these types of coffee are found growing in the *Kobboo* forest, the farmers collect it with no much hard work. The informants explained that farmers use wild coffee besides beehives in their *Kobboo* forest. The informants explained one problem with wild coffee is that it is very big and harvesting needs tie the coffee tree to other tree.

As (inf. TL and TD) reported that wild coffee is organic and it has a good taste rather than the modern one. (Mekdes, 2005) also discussed that the genetic wealth of wild coffee maintained in Ethiopian montane rainforests at present is of great importance for breeding work, to improve quality and quantity of coffee, to develop desirable morphology and to develop varieties resistant to disease, pests and abiotic stresses.

The second type of coffee plant is the projectile coffee plantation which is found around the dwelling areas of the farmers. In this area farmers grow semi-forest plantation by conserving and planting trees which can bring shadow to their coffee plants. After developing or planting trees like *Qobboo (Ricinus communis), Eebicha (Vernonia amygdalina) fi Bakkanniisa (Croton macrostachyus)* in their farm yard, they plant coffee seedlings under them around their living areas. These plant species are preferred since they grow fast, have moderate shade density, and can produce some biomass for fuelwood.

Formerly, farmers used to take seedlings from the wild coffee to plant around their house. Since 20 years, as the government has been producing projectile coffee, the farmers have started to

plant these modern seedlings around their houses. The informants stated that projectile coffee requires hard work and expense to develop likewise; it produces good harvest (inf. MT, TD and JS). They indicated that they harvest 15 to 20 quintals of dry cherry on average from a plot of land. In addition the informants said that the price of a kilogram of dry cherry is 25 birr and they benefit a lot. In general, *Kobboo* practices deal with all activities carried out in the *Kobboo* forest, because of this it contributes to the wild coffee management by controlling and enforcing traditional rules of *Kobboo* forest plot system, mainly with the control of access and withdrawal as well as entitlements.

Fig.29. Projectile Coffee in Cittuu forest

iii. Ogiyoo (Aframomum corrorima) and Tunjoo (Piper capense)

According to the informants people in the area collect *Ogiyoo* without any effort the people go to their *Kobboo* forest once in a year and collect aframomum corrorima and piper capense and use as spices. *Ogiyoo* is harvested from *October to December* once a year. It is ripe and ready for harvest when the fruit has become red, but people usually start collecting when it is still green to get it prior to damage by monkey (*jaldeessa*) and distance in case of *Kobbo* forest.

The informants stated that *Ogiyoo* is collected from the around and it is of high quality. They stated that this spice is collected from *Kobboo* and farm yard. The one which is collected from farm yard is used for home consumptions because of it is minimum quantity. The one which is collected from *Kobboo* forest is used for market and it is a source of income. *Pipe capense* is

also gathered from the *Kobboo* forest and farm yard. It is used for consumption and as source of income.

iv. *Leemman* (Bamboo)

Bamboos are undying woody grasses, belonging to the Poaceae family and Bambuseae subfamily (Ohrnberger 1999). Since most of them have tree morphology and attain tree size at maturity, they are often called tree-grasses (Woldemichael 1980 cited in Tadesse, 2011). The main stem of the above ground part is called culm, while the underground constitutes the rhizome and root system. The culm of the Ethiopian highland bamboo is hollow. Bamboo is the fastest growing permanent plant. Once the rhizome and root system is well established, new bamboo shoots attain full height and diameter growth within 2–3 months. They mature and attain full strength, becoming ready for utilization after 2–3 years (Tadesse, 2011). Ethiopia has about one million hectare of land covered with bamboo, out of which 850,000 ha is covered with low land bamboo (*Oxytenanthera abyssinica*) and the remaining 150,000 ha by alpine bamboo (*Arundinaria alpina*) (Kassahun, 1999).

The communities in the research areas are heavily dependent on bamboo for their livelihood. Every farmer has bamboo tree in their *Kobboo* forest. They are using the plant for several things: construction (fence and house), beehive (both culm and sheath are used), floor mat, chairs, baskets, pipe used for traditional smoking tobacco, bed, food, *etc*. It is also sharpened like a knife and used to separate eatable parts of *Qoccoo* from the fiber. The bamboo forest ecosystem has also several other services like habitat for wildlife and watershed protection. According to the indigenous people knowledge, bamboo finishes height and diameter growth in three months. It can be harvested for any use after the age of three to four years. Materials made of bamboo tree become stronger if the tree is not cut down before 5 years after it has been proned. The newly grown bamboo should grow for five years before it is cut down for use. Finally, the informants explained that bamboo tree is used for production of different materials and as a source of income.

Fig.30. Bamboo plant

v. Wood for Construction

According to the informants the local people get trees like *Baddeessa (Syzygium guineense), Rigaa Raaba (sientfic name is not found) and Giixoo/Sinsino (cyathea manniana* for construction from the *Kobboo* forest. They explained that they take old trees which fell down, chop it and use it for the construction of traditional houses and fences. They stated that these trees are strong for construction and dependable.

4.1.5.3. Threats of Kobboo Practices in Forest Resource Conservation

One of the major factors influencing Kobboo practice is that some people have to plant projectile coffee in their *Kobboo* forest. According to the discussion the researcher made with informants the communities, Agricultural and rural development experts, workers of Forest Agency agree on this issue. *Kobboo* is thought to be used for beehive production. In *Kobboo* forest*,* farmers can use only the wild coffee. They are not supposed to plant coffee according to the rule. The informants stated that some people have violated the rule and have started to plant coffee. As their reason they stated that they seek for additional income as depending only on beehive, spices and other forest resources could not help them and cash economic pressure is the major reasons that influencing them to plant the coffee in their *Kobboo* forest.

The other factor affecting *Kobboo* is that daily labourers who migrate from other regions and came to the areas in search of work to make their livelihood started to become dependent on the *Kobboo* owners. Having started to live with the *Kobboo* owners as dependents to work on the farm lands, the new comers often became permanent settlers. Gradually, they began to ask the *Kobboo* owner to share them pieces of farm land which was occupied by the *Kobboo* forest. Once they were given a piece of land by the owners, the settlers clear the forest and change the area to farm land. This is causing problems to the *Kobboo* practices and is leading to deforestation. For instance, in Didu district around the *Kochi gandaa* (local area), eleven household from *Menjo* people migrated from SNNP and settled in *Kobboo* forest. The people who migrated to Didu district became dependent on *Kobboo* owners and shared everything from them.

The *Menjo* people often lived on hunting and selling firewood. In order to get the animals they need for food, they had to kill wild animals. Likewise, to get firewood to sell, they had to cut down trees and destroy the forests. This has seriously affected *Kobboo* forest. According to the interview the researcher made with key informant, it had been understood that the settlers live with *Kobboo* owners. They keep the *Kobboo* areas and work on beehive production. The interviewee explained that he works for the owner of *Kobboo* (AK) and he equally shares the product with the owner. In addition to producing beehives and to preparing farm land, the informant stated that he cut down many trees the researcher have been also observed this situation during his research.

The informants stated that all *Menjo* people in the area, burn forests, clean it, cut down trees, and use the land for farming. These activities of the settlers are affecting the *Kobboo* conservation practice at large. In other words, the sharing of *Kobboo* by the owners to the settlers is causing a serious impact on the *Kobboo* practice which had existed for a long time in the area.

Fig.31. One of the settlers' house in the boundary of Kobboo Forest

The other threat to *Kobboo* practice in the area is the increase in the member of population. For instance, according to the 1994 and 2007 Population and Housing Census of Ethiopia reported that the total population size of the study areas (Nono Sal'e, Ale and Didu districts) in 1994 91,561 and in 2007 the total populations of the study area was 119,798. These figures are shown that the alarming increase in the member of population. Since, the population is increasing faster; the land and the member of dwellers do not match. The former farm land could not suffice for the increased population. In order to solve the shortage of farm land, young people in the area have built houses around *Kobboo*. They bare clearing forests, burning it and preparing farm land. This action is destroying the *Kobboo* forest. The naturally existed dense forests in *Kobboo* are causing to exist. The interviewed elders stated that unless a measure is taken by the local people and government, the existing situation may result in a complete disappearance of the *Kobboo* practice.

Generally, in the research area under normal local land management, currently large-scale forest clearing is not practiced.The main reason for slowing diforestation is planting coffee in *Kobboo* forest as well as in *cittuu* forest land. Shifting cultivation is also other minner factor. In the name of shifting cultivation farmers are clearing forest to get new farm land or to wide the plough land illegally. As mentioned above the market of coffee is increasing from time to time and the farmers are earning good income from it within short period of time. According to the informants, in most areas even individual female childrens are participating in to planting the

projectile coffee. Since, the seedlings of newly invented projectile coffees are not need big trees shade the owner of the coffee plantation projects are systematically illuminating big trees to minimize closed forest canopy of their land by putting to fire and *qirqiruu* (girdling) large trees like *gatamaa, qararoo, bahaa, waddeessaa* etc are indanger.

Following the population growth in the area the speed of diforestation increased. Too wide plough land especially young people are clearing forests around *Kobboo* and *cittuu* forest. Formerly, making charcoal was considered as taboo, but recently some poor farmers in the research sites and some individuals making charcoal for commercial purposes. This action is accelerating pace of diforestation in the area.

4.1.6. Traditional Self-help Work Organizations on Forest Conservation

Afooshaa (Idir) and *Abba Ulee* institutions are self-help work organization based on the group of voluntary organizations. *Afooshaa* is adversity-based organizations that focus on provision of labour, financial and other support to the people exposed to different forms of hardship. This may be death of relatives and other man-made and natural disasters. The role of voluntary work organization is very crucial in the sense that it is responsible for organizing the occasion and maintaining the necessary rules and regulation. As a result, it has an impact in the use and conservation of natural resources in general and forest conservation in particular. This is mainly through participating directly in forest conservation activities such as by collecting fire wood, on different ceremonies by making hat and others.

Abba Ulee: *Abba ulee* is the name of the cattle herding institution as well as the name of the head of the institution (Zewudie, 2010). It is also true that in the research area *Abbaa Ulee* is one of the voluntary self-help customary institutions. The role of the *Abbaa Ulee* institution in forest resources conservation is both direct and indirect. It directly contributes to forest and managed forest resources such as *wild coffee, ogiyoo and tunjoo* as well as seedlings that are very essential for regeneration of plants, conservation through keeping forest from damages resulting from cattle. The way cattle are herded in a common grazing land also indirectly contributes to sustaining cattle in a single plot. This also helps to reduce the expansion of grazing land at the *Kobboo and Cittuu* forests. More specifically, if cattle were not kept through the *Abbaa ulee* institution, at least each household needs a separate and a number of fragmented grazing areas.

4.1.7. Traditional Religious Institutions on Forest Conservation

The role of religious beliefs or institutions in enforcing compliance to the rules of indigenous institutions or in contributing to natural resource management may be grouped into two, i.e., through the activities of traditional religious institutions and belief systems (Zewudie, 2010). The religious institutions include *Qollo and Abdari* with which many people of the research areas have attachments.

Abdari is one of the indigenous institutions that inherently promote forest protection and mobilize a society for natural forest conservation through the common religious (belief) identity and common understandings it develops among the society. Informants in the research area setting are called *Abdaarii Tulluu* (sprit of the mountain). As explained by the elders, the people in that come together once in a year and celebrate the ritual of *Abdari* under the big mountain. The people contribute money, buy a bull or an ox and slaughter under mountain. The bull which will be slaghter should have normal teeth or not broken. If its teeth are broken the bull is culturally considered as an incomplete sacrify. One of the characterstics by which this ceremony is known is that the people bring with them wet grass when they come to the ritual. The sacrified bull will be cooked on the mountain and eaten there. On the day the communities pray about good harvest, for rain, children, healthy life and prosperity for the country and themselves. The people believe that prayer has to be made by clan whose prayer is heard to the sprit.

Sacred trees are widespread throughout India, Africa, and Europe (Frazer 1922 cited in Colding and Folk 1997). Workineh (2001) has also discussed that every Oromo has his own *Dakkii* tree that is believed to be the abode of spirits. *Dakkii* tree is a symbol of peace and stability and is believed to be a link between *Waaqa* and the people. Hence, in the study area, as my informant (MT) pointed out, formerly every Oromo has their own *Qoolloo*. The interviwed stated "*Qoolloo* is a way of worship. It means the community in the surrounding individually or by gathering under a sacred tree once a year prepares foods, slaughter an ox or sheep, traditional foods and drinks, and addresses their prayer to *Waaqaa*. Preferable trees for *Qolloo* in all places include *Bahaa (Olea welwetschii), Birbirsa (Podocarpus Falcatus), Harbuu (Ficus sur), Qilxuu (Ficus vasta), Hoomii (Pygeum africanum), Gatamaa (Schefflera abyssinica) Somboo (Ekeberigia capensis), and Agamsa (Carissa spinarum).* The elders in the community say the sacred trees are

respected and seen as sacred. Hence, they plant trees like *Sarxee and Adaamii (Euphorbia candelabrum)* surrounding it for protection.

However, the informants also revealed that in the present day, ritual ceremonies or worshiping of both of *Qolloo* and *Abdaari* were not practiced in most parts of the study area. Zewudie (2010) has also pointed out that the role of these institutions in resources management is relatively minimal as compared to the other belief systems. In addition, from the researcher's practical observation as well, the sacred trees for *Qolloo* practice are there in the community. But, the ceremony is no more practiced among the community. In some parts of the community *Qoolloo* trees are cut down and the placed are reserved for other purposes.

Traditional belief systems on the other hand include swearing and cursing that are widely practiced in the study area and greatly contribute in the rules of *Kobboo* customary laws. Both have importance in obeying the rules and regulations of various indigenous institutions in various mechanisms that substantially contribute to natural resource management. The role of traditional beliefs in natural resource management has been significant for the past many years. Both swearing and cursing forums are organized through the *Kobboo* rules and it works in many aspect of societal life that shows its potential for forest resource conservation. Moreover, cursing and swearing, are followed by social ostracism if the public directly or indirectly knows an offender. Therefore, both cursing and swearing practices can play a significant role in forest resources conservation. They are believed to discourage illegal use of *Kobboo* forest and theft, while enforcing compliance with the rules of other indigenous institutions.

Workineh (2001) has discussed that in the past the Oromo used to plant trees on graveyards. These trees are taboo for any use. The Oromo favor *Adaamii (Euphorbia candelabrum)* of all trees. Now days, Oromo of the study areas are using to plant trees on graveyards. Trees planted in the graveyards are *Adaamii (Euphorbia candelabrum), Qilxuu (Ficus vasta), Harbuu (Ficus sur)* and other sacred trees. It is impossible to cut down these trees.

4.1.8. The Interrelation of Indigenous Knowledge of Kobboo Forest Conservation Practices and Modern Forest Resource Management

Institutions of government are usually considered as formal organizations. In other words, whether government organizations are established at local, regional or federal level, the rules

created for natural resources management remain formal. Under this topic the researcher confine his discussion to local government institutions as stakeholders in forest management in the study areas.

Nono Sal'e District Office and Gabra-Dima District Office are situated in the research areas and managing the forest resources in the area. Local people of the study area have been dependent on forest for their livelihoods, and therefore they have strong historical and cultural attachment with forest. As elders said that, both *Kobboo* and *cittuu* forests are conserved and managed by traditional laws. Formerly, the local people catagorised *cittuu* forest as mountain and sacred trees and they performed different festivity by slaughtering a bull, reveal respect (irreeffannaa) and pray *Waaqaa*. However, in the present day because of the reasons were discussed in the above *cittuu* forest is managing by individual persons. Hence, *Kobboo* forest is widely managed and protected by local leaders with the cooperation of tillers and government program, which is participatory forest management.

Changeability of people's livelihood and pressure of different religion toward natural resource weaken the motivation of society to preserve as it's earlier. Respect, fear and taboo of society toward environmental resources are goes up to vanish as elders told to the researcher. As my informants told me the situation that was done in 1997 E.C is the best example to ensure the above manner. Thus, when government measure the rural area land to give the land ownership certificate, most of people destroy the hills that found in *Cittuu* forest and established a coffee project by receiving a land ownership memo. They also sold to resident of town.

Concerning with preservation of forest, government took measure by demarcating boundary to forest area in 1989 and 2004 E.C for the second time. Today, wide area of *Kobboo's* forest exists under government forest site. As informants suggested even if *Kobboo* owners abandoned to get the right of ownership they uses the resource found in the forest and preserve it as earlier. Agriculture and Rural Development and Forest Agency Office experts of the districts are said that till now there is no difficult problem faces them.

4.1.9. Investment and Tree Plantation in the Research Areas

In the research areas currently on forest resources only two investments are going on. According to experts from Forset and Wild Life Office of the zone this investment projects are started five years ago and they are working on coffee plantations. One of the investment sites is in Didu district on 500 hectares forest and the second investment site is in Ale district on 325 hectares forest and both are planting projectile coffee.

Until know, the officials of Nono Sal'e district are not allowed the investors to plant coffee in forest. Because this when compared to other districts the diforestation in this district is no as such sever, there fore, in Nono Sal'e currenly there is no investment which is taking place in forest. Throuh personal communication with the zone and district officers the researcher assured that the coffee investment project in Didu district is going beyond the permited forest land area. This shown that it is the weakness of controls and follow-up of government body on the investment around the forest of the area.

In the study area planting seedling is taking place only by government body. The seedlings are planting in Didu district at the *Taggeta, Gossi and Kochi* sites. *Gattiraa, bargamo and Gravelia* are the widely available seedlings at the areas. According to informant eventhough this projects are creating job opportunities for unemployed uses, the selected site was not hardely deforastsed or bare land areas. Taking *Gossi* site as an example the informant said, about fifteen years ago the site was full of indigenous trees. But, the indigenious one are cleared and replaced by the forign one. Recently, on these sites there is no plantation activity, but the experts told me that protection and conservation are on hand. In the future when the tree become productive they will cut down and replace by the new one.

4.2. DISCUSSIONS

4.2.1. Oromo Indigenous Knowledge of Forest Resources Utilization

Sustainable natural resource management, particularly forest management depends upon clear understandings of local people's interaction with their immediate forest (Disassa, 2010). The perceptions of the local people in the study area also require about the values of natural resources, in this case *Kobboo* forest resources around them. In this research context, *indigenous knowledge* refers to knowledge naturally possessed by a particular community and generated through observation of local environment, and held by specific groups of people.

Zewudie (2010) and Disassa (2010) have refused the findings of different scholars that wrong conclusion of local people's contributions in conserving their environment blurred other stakeholders to ignore local people from the responsibility of protecting their own natural resources, especially common resources like forest. This study has also shown that there is an understanding that natural resources and local people have been inter linked. The long history of relations between the local people and their surrounding natural resources particularly forests, made them to know more about the effects of forest resources in their area and conserve their forests by using indigenous knowledge mechanisms like *Kobboo* practice. The Oromo of the research area are managing the natural resources of their surrounding by categorizing the land in into different categories culturally like *Muummee, Tabba, lafa diriiraa, Tulluu, Qilee/Hallayyaa, Lafa Ciisaa, Harawwa, lafa caffee and lafa dhagaa/Qarsaa.*

The local people are conserving and utilizing the natural resources of these lands for different purposes. For example, the local people conserve plants around *Mummee* and *lafa caffee*. They perceive that forest is a source of rivers, small streams and wet lands. They do not cut plants from around these areas. If the plants are cleared from the areas those rivers or streams will be dry. The other is the forest resources of these lands have a great role in the livelihoods of the local people. Key informants have reported that most of the time traditional healers have collect medicinal plants from *Mummee* and *Qilee/Halayya* lands. Because of the topography of these lands are not suitable for grazing; medicinal plants are not damaged by cattle. Most of the local people are using *tabba* (small hill) for agriculture. In order to have conserve soil and water they grow herbs and grasses for ground cover.

The socio-cultural of the local people in the study area is forest resource dependent. Many researchers also approved that forest have endured important part of the resources that nature provides to human beings (Lemessa, 2012; Zewudie, 2005; Workineh, 2001). Hence, the importance of forest resource for ecology, economy, religious, cultural aspects are discussed from the perspective of local people's perceptions. Key informants has pointed out that forest has great contribution in maintaining the stability of weather conditions. They know that the existence of forest made them enjoy abundant rain fall almost throughout the year. The sufficient availability of rain in turn provides the opportunity to harvest their crop at least twice a year. Moreover, they know the fact that streams of waterfall are the direct and indirect consequences of existence of forest resources in their locality.

In relation to this Lemessa and Disassa have correctly discussed that forest is a major source of livelihoods. Different NTFPs are collected and consumed both for subsistence and commercial use. Hence, this study confirm that local people of the research area is depend on forest resources. The communities have relied on forest resources not only for their livelihoods, but also as integral element in their cultural, spiritual and social system. Hence, a greater understanding of the local people-forest interaction from local knowledge and livelihood perspectives is crucial for sustainable conservation of forest resources.

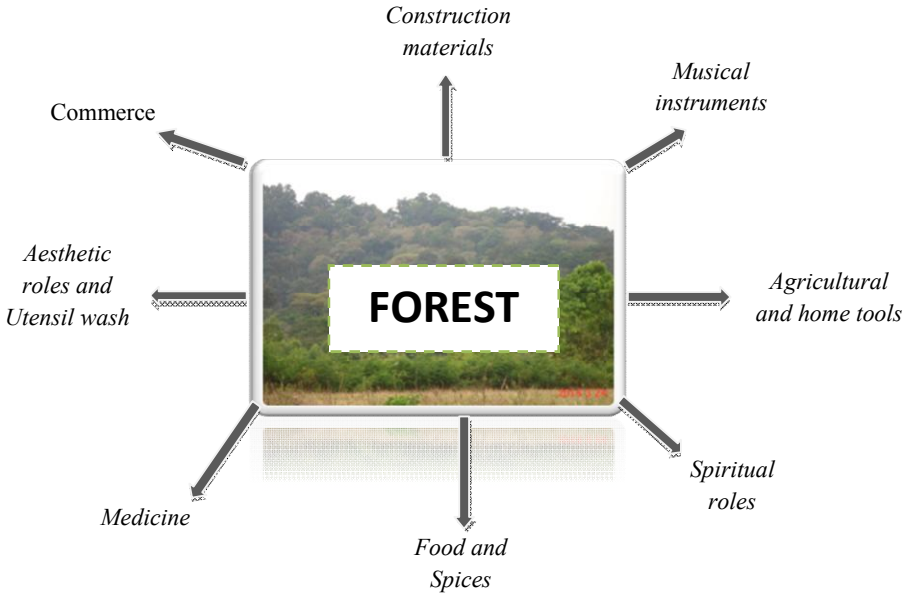

Fig.32.Use of Forest Resources

This model reflects use of forest resources which contributes the understanding of the livelihoods of the local people. The Oromo of the study area have a comprehensive indigenous knowledge of plants and their utilization. The local people traditionally used wild plants for different purposes. Many forest plants have a significant cultural and spiritual value, e.g. in case of *Qoolloo and Abdari* rituals, the local people used sacred trees like *Bahaa, Birbirsa, Harbuu, Qilxuu, Hoomii, Gatamaa* and others. Workineh (2001) has discussed that sacred tree is a symbol of peace and stability and is believed to be a link between *Waaqa* and the people. In addition, Lemessa (2012) also confirms that trees help to sustain traditional religious systems and aesthetic role. The other uses of forest are for construction purpose. The People of the area use tree like *Baddeessaa (Syzygium guineense), Oomii (Prunus africana),Giixoo/siinsinoo (cyathea manniana)* for traditional house construction as well as fence. These trees are strong and their ability to withstand pests is tested by local peoples.

Forest resources have also been serving for medicinal purposes. The traditional healers of the research areas have used plant species listed on Table-3 for healing different diseases of both humans and domestic animals. Traditional healers of the study area know these medicinal plants, their location, the proper season of collection, the part to be used (bark, leaf, root, latex, stem, seed) how to prepare it (fresh, dried, powder, smashed), the solvent to be used (cold, warm, or boiling water, alcohol, the addition of salt, etc), the way to prepare it, and the effects of medicine. According to Workineh (2001) the problems about appropriate dosage and diagnosis requires systematic analysis of cause and effect, an approach which would not be fully exploited in a traditional medicine is also the problems which is existed in the research area. This discussion also reveals that in the present day, the newly religions and life styles of the people have ignoring the significance of traditional medicine and they have favored modem medicine.

Generally, on the basis of the analysis of knowledge about the use and processing of wild plants, the botanical inventory, and analysis of traditional forest land use systems, which existing indigenous knowledge about natural forest resources can be made available for a sustainable resource management.

4.2.2. Oromo Indigenous Knowledge of Forest Conservation

Dagnachew (2012) has briefly discussed that natural resources like soil, water, forest, wildlife and lands are managed by indigenous knowledge mechanisms. He has also argued that for generations, indigenous people have lived in natural resources in which they have developed and practiced life-styles and belief systems that draw upon their deep knowledge about local plants, wildlife, and ecology. Nevertheless, the local people with this knowledge are often unable to use it in a modern world in which state policy overrides local management.

Nono Sal'e, Ale and Didu in Ilu Abba Bora Zone of Oromia Regional State are the districts that have been endowed with large and rich forests in Ethiopia. This dense natural forest has existed until now customary laws have been functioning in some respects in spite of state interventions that are not unfriendly to customary laws. This does not mean that state project and modernization interventions are not imperative in resources conservation, but considering the existing customary laws which are socially and historically embedded in natural forest conservations is also crucial in sustainable forest management. The way in which this customary law is fixed in the 'shared memory of local people' (Watson, 2003 cited in Disassa, 2010) is believed to make local people relevant in sustainable forest conservation. Thus, in the study area, there are customary laws that are still powerful in addressing societal issues in general and conservations of natural resources including forest in particular. Hence, customary laws setups such as *Kobboo* and *Abbaa Ulee* have still been serving the local people of the study areas.

Customary laws of natural resource management throughout all Oromo in general and particularly the study area are practicing. However, the researcher focused on customary laws of *Kobboo* practices in forest conservation among the Oromo people of Nono Sal'e, Didu and Ale districts. They are known locally by variety of names; *Kobboo, Goppoo* and *Daga*. These names are the place in the forest where bee keeping and productions of honey carried out, so in the area local people's looking it means that *Kobboo or Goppoo or Daga* are like a farm yard. *Kobboo* is a dense evergreen large forest composed of indigenous trees, wild animals, shrubs, herbs, vines, climbers, rivers, and streams that became part of food and shelter for the wild animals and local communities. This forested land is far from dwellers area; therefore it is free from the distraction of human and domestic animals. The local communities make their living out of *Kobboo* forests

inherit their families with rules and regulating them had been making on the conservation of these forests. Each block of *Kobboo* forest is under possession and supervision of specific clan and only by these groups of clans mostly by keeping beehives.

The rule of *Kobboo* practice clearly put that the owners can hung beehives in their *Kobboo*; also they can harvest spices (*ogiyoo* and *tunjoo),* wild coffee and use selected wood and bamboo to construct traditional houses. *Kobboo* rules do not permit to cut any tree unless to produce traditional beehive and to build house even if it is selective tree. As a result vast *Kobboo* forest areas have been in very good canopy coverage. And also huge and aged indigenous trees like *Qararoo, Gatamaa, Bahaa, Waddeessaa, Karasoo* and other different plant species are still alive. Because of no entrance of domestic animals in *Kobboo* forest, the regeneration of different plant species are consistency.

Traditional belief systems and work organizations on the other hand that are widely practiced in the study area and greatly contribute in the rules of *Kobboo* customary laws. Both have importance in obeying the rules and regulations of various indigenous institutions in various mechanisms that substantially contribute to natural resource management in general and forest resource conservation in particular. *Baataa, Jaarsa biyyaa and Abbaa Ulee* had played a great role by performs the following social functions that directly and indirectly contribute in the *Kobboo* rules of forest conservation. *Baataa* is the local elders, who is elected by the local people and organize traditional farmers work in cooperation called *Daboo* and resolving conflicts among individual or groups. Because of his social capital and capacity to persuade people, local people respect any order that comes from the *Baataa*. The *Baataa* can easily access to information to take on punishment on the destroyers or looters of the *Kobboo* forest resources. If the decisions are difficult to the *Baataa*, then the *Baataa* transfers it to the *Jaarsa biyyaa* (community elders) who are locally appointed from the community itself.

Jaarsa biyya is consists of people who are entitled to be involved in various societal activities such as conflict resolution and decision making in critical societal issues. A person is entitled to become a member of *Jaarsa biyya* only if he is recognized as one possessing full knowledge about the culture of the people. Nevertheless, clan origin (usually from senior clan) also enables them to perform certain rituals such as leading the *Abdarii* and *Qoolloo* rituals. Ayittey stated

that the authority held by elders is derived from their position in society. They control natural resources, marital relations, and networks that go beyond clan boundaries, ethnic identity and generations (Ayittey, 2003 cited in Zewudie, 2010). In all the studied *gandaa*s, *Jaarsa biyya* have a higher status than *Baataa*.

Jaarsa biyyaa by identifying the cases sent from *Baataa* or the mischief person on *Kobboo* forest resources, they pass on punishment which could be also a curse and swear that the villagers afraid of its consequences. At first, the *Jaarsa biyyaa* let the looter person to return the proper tips to the *Kobboo* owner. Then the person receives the right kinds of punishment that justifies the level of his action. The penalty usually imposed is physical or in terms of cash and in kind. Moreover, cursing and swearing, are followed by social isolation if the public directly or indirectly knows an offender. Therefore, both cursing and swearing practices can play a significant role in forest resources conservation. They are believed to discourage illegal use of *Kobboo* forest and theft, while enforcing compliance with the rules of other indigenous institutions.

Abbaa Ulee is the Afan Oromo name of the cattle herding institution as well as the name of the head of the institution. It is also true that in the research area *Abba ulee* is one of the voluntary self-help customary laws which in *Kobboo* forest resource conservation is directly contributes to managed forest resources such as *wild coffee,* spices and other various seedlings of plant species which are basic for regeneration purpose, conservation through keeping forest from damages resulting from cattle.

4.2.3. Oromo Traditional Religious Institutions on Forest Conservation

Traditional religious role in natural resource management is mainly indirect (Pankhurst, 2003). Watson, et al. also discussed that religious institutions can contribute positively or negatively to different societal activities. They are very powerful in shaping human action, but in keeping with recent conceptualizations of power, they are both constraining and enabling structures (Watson, et al. 1999). Hence, there were sacred and ritualized mountains, groves and trees in the research area. The religious institutions include *Qoolloo and Abdari* with which many people of the research areas have attachments. *Abdari* is one of the Oromo indigenous institutions that the local people come together once in a year and also in special case when drought, epidemic

disease and famine faces the local people celebrate under the mountain. The forests in and around the mountains has been protected for centuries by sacrificing bulls through local people contributions of money for purchase of bull. Buying a bull is not must because some times an individual can willingly give as generosity.

Qoolloo is the other of Oromo religious practice through sacred trees. Indigenous people in the surrounding individually have *muka Qoolloo* (sacred tree) and sacrificing under a tree annually by slaughtering an ox or sheep and address their prayer to *Waaqaa*. *Waaqaa* is believed to give and help them good harvest, for rain, fertility, healthy life and prosperity for the country. Preferable trees for *Muka Qolloo* (sacred tree) in all studied areas include *Bahaa, Birbirsa, Harbuu, Qilxuu, Hoomii, Gatamaa, Somboo and Agamsa.* The local people have conserved these trees because of as they play a great role in their belief systems. The Oromo of the study area used to conserve not only sacred trees but also sacred groves. Workineh (2001) has discussed that in the former the Oromo people used to plant trees on graveyards. These trees are taboo for any use. Hence, the local people of the study area are using to plant trees like *Adaamii, Qilxuu and Harbuu* on grave yards and conserve it. But, in the present day cultural changes have come as a result of conversion of the local community to new belief systems like Protestantism. Lemessa (2012) has discussed that Protestants describe the rituals to sacred sites as evil spirit. Hence, the local people of the area have been questioning the sacredness of trees and it has got impact on their belief systems and perceptions regarding *Abdari and Qollo*. This has been forcing them to neglect the sacred trees and disregard their traditional belief systems.

4.2.4. Threats of Indigenous Knowledge of *Kobboo* Practice in Forest Conservation

Cash economic pressure is the major factors influencing *Kobboo* practices of the research area. Kitessa has support this idea that he has raised traditional practices of forest conservation are being eroded due to the pressure of cash economies and other socio-economic, political and cultural changes has resulted in the loss of forest and valuable species (Kitessa, 2007). Hence, most of the farmers have practicing to plant coffee in their *Kobboo* forest. Formerly in *Kobboo* forest, farmers can use only the wild coffee. They are not supposed to plant projectile coffee according to their *Kobboo* rule. The informants has stated on FGD and field observation as it is stated in the above discussion, formerly the local people has been depended on the resource of

Kobboo forest like honey, wild coffee and spices for livelihoods as well as for income generation. Recently, the radical increasing of the value of coffee in the worldwide, the farmers were starting to develop coffee production and they have starting to plant projectile coffee in their *Kobboo* forest.

While doing this because of the projectile coffee is not needed more shade, the farmers are clearing huge trees like *Gatamaa, Qararoo, Bottoo, Somboo, Bahaa, Waddeessa* and others which are vital in the environmental ecology. For the sake of gaining more production farmers avoids the weeds and additional plant grow under coffee plant. This facilitates conditions for dis appearance and hinders regeneration of plants. More over, the land covered by forest can also changed to farm land in short period. So, from this idea it is possible to conclude that coffee production can harm forest resource. Furthermore, up to now coffee plant is suitable at the level of altitude 1300 - 2000m. However, agricultural experts of the study areas are pointed out that the National Agricultural Research Center is finding coffee seed cultivate on the land elevated from 2000 to 5000m above sea level. Therefore, it is hazard that this practice, which is will be increase coffee farm land in the *Kobboo* forests.

The other factor affecting *Kobboo* practice is that some *Kobboo* owners are giving or permitting to dwelling around their *Kobboo* forest for illegal settlers who were migrates from different places and they were made to sharing the income of beehive production. This has affecting *Kobboo* forest that the settlers are cutting down many trees without selection to producing beehives and to constructing the house and fence. They also burn forests, clean it cut down trees and use the land for farming. By doing these things they are affecting the *Kobboo* conservation practice at large.

The other factor of Kobboo practices in the research areas is increasing of the population size. Mainly in Ale district as the member of population is high the desire of dwellers and farm land also high. In relation to this, Siangulube (2007) has reported that due to population increase, people use any plant regardless of its cultural significance in order to meet their immediate needs especially among the young generations. Hence, in order to overcome the shortage, young people in the area have built houses around *Kobboo* forests. Even if most of them were dwelling in their ancestor *Kobboo* forest, they bare clearing forests, burning it and preparing farm land. This

action is destroying the *Kobboo* forest. Increment of population has also exposed some local people for economic problems. This situation has been also encouraged them to sell fuel wood and charcoal on local markets.

4.2.5. The Interrelation of Indigenous Knowledge and Modern Forest Resource Management

Under this topic the researcher used local government institutions in the research area as stakeholders in forest management. According to FAO stakeholders in forestry are all those who depend on, or benefit from, the use of forest resources, or who decide on, control or regulate access to forest. Stakeholders may participate in forest management in various ways: directly, or indirectly, actively or passively, in supporting or opposing roles. They may be involved in forest management either as laborers', as recognized users of defined forest products, as managers or as forest owners (FAO, 2006).

Oromia Regional State Forest and Wild life Enterprise Agency is one of the stakeholders responsible for forest resources management in Oromia Regional State after it was launched in 2007 based on proclamation 84/1999 article 3(1). Hence, Ilu Aba Bora zone is one of the national priorities forest areas found in Oromia Regional State being governed under Oromia Forest and Wild Life Agency.

Ilu Abba Bora Forest and Wild Life Enterprise is situated in Metu town as a Branch Office and managing four district Offices and one satellite Office. Those are Nono Sal'e District Office, Gebredima District Office, Yayo District Office, Gebba-Dhidhessa District Office and Yayo Satellite Office. Hence, *Nono Sal'e District Office and Gabra-Dima District Office* are situated in the research areas. These all forest areas and district Offices are accountable to Ilu Aba Bora Forest Enterprise Manager. The major objective of the enterprise is to ensure protection, development and sustainable use of natural resources in the forest lands governed under the enterprise. It also ensures sustainable conservation and administration of wildlife in the forest. Besides, making substantial contribution in the livelihood development of the local community in and around the forest is also one of the objectives of the enterprise.

Moreover, the Federal government Proclamation on development, preservation and use of forest on number 542/99 stated that:

- Article 9(3) says "development, preservation and use of forest is realized on the will/permission and value peoples got from it",
- Article 10(3) says, "society can use government forest for different purpose like mow a grass, collect firewood and use folk medicine as it is not violate the forest management and conservation law being with state government body",
- Article 18(3) proclaimed that with participatory of agrarian and pastoralist state government encourage and give technical support for them.

Proclamation of Oromia Regional State on forest number 72/1995 declares that:

- Article 4(3) says, "participation of society must be empowered for development and conservation of forest",
- Article 4(6) says, "Agreement would be made between non-government organization, institutions, individual person as well as responsible bodies to strengthen forest development and protection",
- Article 9(5) clarify that, the declare permits the residents who reside around government forest can use for firewood, construction, for medicine purpose and grass.
- Article 12(1) justifies that the authoritative man (responsible body) can permit as society use the profit gained from it.

The proclamation number 130/99 of the Oromia Regional State on Management and Use of Rural land validate:

- Article 22(3) says, "demarcating, constructing, investing, protecting, reconstruction and conserving of land is done by people's participation reside around there",
- Article 22(4) says that, "the condition can be facilitated for peoples live around protected area as they get advantage from it.

The Principle number 122/2001 asserted for foundation of Oromia Forest and Wild Life Agency describes:

- Article 6 on mission of enterprise, by participating the local community protecting and safe guarding forest resources and wild life; to widen the forest coverage in Oromia foresting society and give necessary support for people.

- Article 7(10) described and proclaimed under authority and job of institution, "The income from forest production and wild life is to growth of socio-economic of residents of the area",

Depending on the above proclamations, the Oromia Forest and Wild Life institution with FARM AFRICA Organization (NGO) expanding the program of Participatory Forest Management (PFM) in some districts of the zone by organizing farmers in to different cooperation associations and facilitating for them to govern their surrounding environment forests. Concerning with PFM, the project took measure by demarcating boundary to forest area in 1989 and 2004 E.C. In the case, wide area of *Kobboo's* forest exists under state forest. As informants suggested even if *Kobboo* owners abandoned to get the right of ownership they uses the resource found in the forest and preserve it as earlier. Agriculture and Rural Development and Forest and Wild Life Agency Office experts of the districts are said that till now there is no difficult problem faces them.

The districts Office in the research area described that those organized in to cooperation association in addition to their role in conserving *Kobboo* forest they start to conserve around 50,000 hectares of forest area in the project of PFM as indigenous knowledge of the society.

Besides, researcher plan, aim and the process of working that performed by those association, and the secondary data which he obtain from offices as well as interview make with informants he discuss the information that obtained list below.

On the first the purpose of the PFM association is to increase advantage of forests like honey different spices by expanding participation of cultural knowledge of society on governing PFM. Moreover, protecting deforestation may occur to forest like burning, cutting, new expansion area for coffee plantation, new settlement and others. The other is to develop legal based utilization of forest resources like honey, spices, wild coffee production and wood in the society and to make continue growth of society in and around forests by economy is the main goals of the associations.

Depending on those aims the PFM project has four classes. Development plan, utility plan, natural resource protection plan and Controlling and follow-up plan; Under objectives of Natural

resource protection: unless the farm and firstly settled land by society new settlement in and around forest is impossible, not use land improperly, protecting fire accident especially during beehive smoking, without awareness and permission of association no one can use forest resources for construction, members of association can guard turn by turn.

Under objectives of using forest: honey production, collecting spices, wild coffee and fire wood, wood for construction purpose likewise, all those who are advantageous and use this forest must be respect and not to violate rule and regulation of the association. For the needy permission is given by committee of Natural resource management being with class committee. Different objectives are makes based on use prescription of forest resource: For example, whenever, traditional beehives is made a tree species that is endangered like *Waddeessaa and Qararoo* cannot be used rather using a plant species that is plentiful and not endangered; beehive must be smoking in time of not hot and no wind and while this also using water for fire accident; identify and know peoples those who use honey production and specific place they hold their beehives in *Kobboo* forest; using firewood dried and not wet plants; facilitating condition for poor peoples as they use wood to sell and got money if necessary; in construction of house, agricultural materials, and home tools while it is aimed the committee of association must permitted/informed; for the case of timber the question is raised to committee by needy and association pass the issue to Oromia Forest and Wild Enterprise Agency; then the enterprise give response.

Regarding control and follow-up, informants said that they are discussing on the tractability of the plan at *gandaa* level. They added the registration of forest resource is conducted once in every three years.

Informants confirm that PFM, which is decentralized by government, is not contradicting with indigenous forest management knowledge. In the study areas the plans of the associations are derived in line with *Kobboo* rule it strengthen the amendment. Previously, in *Kobboo* rule, replacing the seedling after tree cutting down was not learned. In this program besides conserving existing forest they are working on increasing the numbers of indigenous trees.

Understanding the benefits of trees the communities are actively engaged in planting trees accordingly to the plan with their association. Currently, farmers associations are organized by

government on PFM project but, some farmers have fear on this program. For example, if one individual inherit *Kobboo* forest from his family he use the forest privately, but if the *Kobboo* is demarcated under state forest the owner loosed the right to use the forest except using some resources of the forest. This will cause in responsibility to the owners of the *Kobboo* and they did not care for the forest. Because the individuals might imagine the forest is no more their own private forest. For this reason they wish to deforest before it took over by government.

In other hand, during organization of PFM both the owners of *Kobboo* forest and who did not have *Kobboo* forest are united together. This might result for carelessness among the members and the spirit of owner-ship will minimize through the *Kobboo* owner farmers, which it may affect the forest resource in the area. For this and other negative results of PFM, government should critically analysis the organizing system of the project. Besides, the efforts made by one NGO named Wet Land joining on forest protection. This NGO opened the Office in Nono Sal'e district and it is already on the progress to take the action.

By and large, this study shows that sustainable management of biodiversity must fulfill the aims of forest conservation, and the utilization of the local people. Therefore, in addition to strict protection of the forests, the concept for "conservation through utilization" is essential. This means, according to the findings of the research, the economic and cultural interests of the local communities in the forests had become the most effective way of protecting the forest from destruction. It is evident from this that *Kobboo* practices of forest conservation and its utilization play a key role in saving the natural forest from disappearance.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATION

5.1. CONCLUSION

It has been found out that Ilu Abba Bora Zone in general and the study area in particular was one of the few areas in Ethiopia with high forest coverage. In recent years, however, the rate of deforestation is increasing at an alarming rate and threatening the forest biodiversity, ecosystem, pristine habitats and the livelihood of the local community. The observation of the researcher revealed that the forest in the area, especially Nono Sal'e district is still dense with many plant species and biodiversity.

The communities in the study areas have strong relationship with their environment, and hence have developed their own conception of resource management. For the local people of study areas, forest is everything they need: it is source of several NTFPs, especially honey, spices, wild coffee and construction materials; it is their graveyard; it is property to be inherited by descendants.

The findings of the study indicated that the major forestlands in the area are divided into *cittuu* forests and *Kobboo* forests. The management of the two differs in two aspects: *Cittuu* forests are found around dwelling places and on hilly or mountainous areas while *Kobboo forest lands* are found relatively far away from settlement areas; the conservation of *cittuu* forests is based on the resource and habitat taboos, while the conservation of *kobboo* forest is based on the customary rights and obligations of the individual who inherited the forestland from his ancestors.

The Oromo people of the area strongly believe that there is a relationship between the wetlands, rivers and forests in their environment. Wetlands are sources of rivers and forests and keep both from drying. This means wetlands are the base for the natural forest along river banks, waterfalls and rivers. It has been found out that the resource management concept of the local people is basically based on maintaining such interrelationships sustainably. Their social organization makes possible to manage the different categories of the environment in general and forest resources in particular.

This study has revealed that the indigenous knowledge of the local people played a great role in contributing to forest resources conservation. The research also pointed out that the local people in the study area were well aware of the fact that forest was the integral part of their life. Besides, indigenous institutions and cultural understandings of the *Kobboo* forest system were still feasible in playing vital role in forest conservation.

The study also revealed that access right to resources and ownership right to *Kobboo* forest management and its conservation is significant to forest conservation. Although natural resources like *Kobboo* forests belong to state by government according to Proclamation No. 542/2007, the local people perceived the forest as their own property. This is because the forest had never been completely detached from their hand, and above all they had the strong belief that the forest had ever been protected by their ancestors to uphold nature.

The modern natural resources management institutions, particularly PFM project considered the cultural institutions of local people on forest management, and the local people themselves were pleased with it. However, the major impact on the forest and the environment as a whole has been due to coffee plantations (wide in Didu and Ale district) and expansion of similar practice by members of the local community by secondary users (government employers and merchants). These people have an indispensable position on the practice as they get income in short terms from coffee. The people are also deeply concerned about the long term sustainability of converting forest lands to coffee farms. Furthermore, forest management role of traditional religious rituals have gradually decreased due to conversion of the majority of the people into Protestant Christianity. Followers of the Protestant Christian religion do not accept the practice of traditional religion such as swearing, cursing, rituals and sacraments related with worship that contribute to forest resources management. In addition, the increase in the population of settlers in urban areas has increased demand for firewood; and hence the tradition of selling firewood has emerged largely in the study areas of Ale and Didu districts.

The investigation also pointed out the current status of *Kobboo* conservation practices in the study areas. The current situation of indigenous knowledge of *Kobboo* practices of forest conservation is that it is actively practiced in Nono Sal'e district; that is why 95% of the forest coverage of the districts is conserved by indigenous knowledge of local people. Next to Nono

Sal'e district, *Kobboo* practices of indigenous forest conservation mechanism in Didu district were relatively in good situations. This means the areas of forest coverage is more than one third (36.4%) of the total land areas. In Ale district, from the total land areas, only 11.2% were natural forestland coverage. This shows us that *Kobboo* practices are going to diminish in the district. As stated above, the major causes of *Kobboo* forest degradation these districts, particularly in Ale and Didu is that *Kobboo* forest lands are being converted to projectile coffee plantations. In addition to this, the communities' conversion to protestant Christian religions, increase in the number of the population, coffee plantation investments and other factors have become the main causes of the problems. Furthermore, the experience of charcoal production, cutting live trees for constructions, selling firewood, shortage of grazing area and cutting trees for timber were being practiced in the districts starting before a few years. The cumulative effects of these problems are decreasing forest coverage areas. Generally, if these situations continue, *Kobboo* practices might be endangered in the coming few years, especially in Ale district.

In the study area, where the altitude is above 2000m, the forest is on better condition in general and it may be sustainable to continue. However, agricultural experts of the study areas pointed out that the government (National Agricultural Research Center) is finding coffee seed cultivated on the land elevated from 2000 to 5000 meters above sea level for it is believed that coffee would be more productive at these places. Therefore, it is speculated that this practice, which is increasing coffee farm land in the native forest, threatens the natural forest conservation practices. It may also discourage the practice of indigenous knowledge that local people use.

The study also showed that indigenous people are utilizing *Kobboo* forest resources without endangering its biodiversity. Since *Kobboo* is far from settlement areas, beehive production is being practiced. This is because the bees are not affected by herbicides used by farmers on farm land. As a result organic honey production is wide spread and the rural people become healthier and live long by eating the honey. The informants have also explained that they are selling honey and coffee products with fair prices.

5.2. RECOMMENDATION

Given the importance of the indeginous forest conservation of *Kobboo* practice for biodiversity conservation, local livelihood, and national desire for economic growth, the following measures/activities are recommended:

- It will be beneficial if the *Kobboo* practices and the social administrative set ups of the local people are highly incorporated in the project of participatory forest resources management.
- Promotion of alternative energy sources and income generation mechanisms to poor people reduces deforestation related with firewood and charcoal consumption;
- Investment projects already licensed should be assessed; their impacts on forest resources and corrective measures taken to avoid further damages of forest out of their boundaries should be encouraged;
- In the study area secondary users have main roles on deforestation. Local elders or farmers should to control and follow up their activities in and around the forest.
- Coffee plantations should be allowed in farm land or degraded areas for both investors and farmers
- PFM Projects of the study area on the following alternative forest management options can contribute to the sustainable use of forest resources and conservation of biodiversity.
    - Honey, spices (*Ogiyoo* and *tunjoo* /pepper) and wild coffee are high potential for production of NTFPs and sources of income in the study area; improving the production techniques, productivity and product quality can encourage the continuation of forest based livelihoods of the local community. Thus,it sould be encouraged.
    - Even though, Nono Sal'e and Didu districts are very suitable for bamboo, it is better to improving the poor technology of hand crafts and small-scale industry of the local people of the use of bamboo materials.
    - The area is endowed with beautiful landscape, rivers, dense forest habitat and many species of wild animals, especially indigenous birds which have high values of eco-tourism. The concerned body should work with the community in the areas to promote the sustainability.

- Recognition of the customary conflict settlement institutions on Forest Management Systems as an Alternative Conflict Management (ACM) approach among different stakeholders is crucial contribution for sustainable forest conservation and utilization.

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APPENDIX-I

Interview Questions

General Information

Name: ----------

Age: ----------

Marital Status: ---------

Religion: -------

Ethnic: -------

Educational Qualification: ------

Occupation: ------

Place of birth: ------

Name of residence area: -----

1. What do you understand by forest for Oromo people?
2. What are the resources of forest?
3. Can you tell me plant names and their usage in livelihoods?
4. How do you conserve forest resources?
5. Do you think there has been a traditional forest conservation practices in the area? If 'yes' mention them.
6. What do you know about '*Kobboo*' practices?
7. What are '*Kobboo*' rules?
8. What are the roles of '*Kobboo*' practice in forest conservation?
9. Do you think there has been a threat of '*Kobboo*' forest? If yes list them.
10. How do you assess the effectiveness of *'Kobboo'* practices on forest resource conservation?
11. What do you know about traditional and modern forest management systems?
12. How do you evaluate traditional and modern forest conservation systems?
13. Can you tell me the current situation of *'Kobboo'* practices and forest?

APPENDIX-II

Key Informants Profile

S/N	Name	Age	District	*Gandaa*	Occupation
1	Aba Qurbi	95	Ale	Jeto Koyami	Farmer
2	Awulo Alemu	40	Didu	Qoci Goji	Farmer
3	Beqelech Dhaabaa	50	Didu	Gosi	Farmer
4	Chala Lolasa	40	Nono Sal'e	Birbirsa	Forest and Wild Life Enterprise of Nono Sal'e District
5	Daraje Lema	50	Nono Sal'e	Nono	GO employee
6	Eshetu Mijano	56	Nono	Qawo	Farmer
7	Feyisa Gemechu	100	Didu	Gemachis	Farmer
8	Jijo Sayo	60	Ale	Jeto Koyemi	local leader
9	Kebede Mecha	61	Nono	Nono	Farmer
10	Kidane	40	Nono Sal'e	Birbirsa	Nono Sal'e district
11	Mamo Tola	95	Ale	Gebre Dima	local leader
12	Mardasa Gobu	83	Didu	Gordomo Gosi	local leader
13	Samu'el Birhanu	30	Didu	Lalo	GO employee
14	Sintayehu	50	Nono	Birbirsa	Culture and Tourism Office of Nono Sel'e District
15	Taka Yadasa	46	Didu	Qoci Goji	Farmer
16	Tarekegn Daba	55	Ale	Jeto Koyami	Farmer
17	Tarekeny Lema	35	Nono Sal'e	Gemechis	Culture and Tourism Office of the Zone
18	Temesgen	45	Metu	Metu	Forest and Wild Life Enterprise of the Zone
19	Yadesa Garuma	30	Ale	04	Forest and Wild Life Enterprise of Gebre-dima District

APPENDIX-III

Some plants collected from the research area, in local names and scientific names

S/N	Local name (Afan Oromo)	Scientific name	Life form
1	Adaamii	*Euphorbia candelabrum*	Tree
2	Adaannisa	Dombeya torrida	shrub
3	Ambabbeessa	*Albizia schimperiana*	Tree
4	Andoodee	*Phytolacca dodecandra*	climber
5	Arbuu	*Ficus sur*	Tree
6	Baalan-soofii	*Ficus exasperata*	Tree
7	Baddeessa	*Syzygium guineense*	Tree
8	Baggee	combretum paniculatum	climber
9	Bahaa	Olea welwetschii	Tree
10	Bakkanniisa	*Croton macrostachyus*	Tree
11	Birbirsa	*Podocarpus falcatus*	Tree
12	Bosoqa	*Sapium ellipticum*	Tree
13	Bottoo	Scientific name is not found	tree
14	Buttujjii	Scientific name is not found	Tree
15	Caffee	*Cyperus digitatus*	Herb
16	Caggoo	Maesa Lanceolata	Tree
17	Dambii	*Ficus ovata*	Tree
18	Darguu	*Achyranthes aspera*	Herb
19	Dhangaggoo	*Rumex abyssinicus*	climber
20	Dhummuugaa	*Justicia schimperiana*	shrub
21	Diiboo	Rothmannia urcelliformis	Tree
22	Doobbii	*Pavonia procumbens*	Herb
23	Doqonuu	*Grewia ferruginea*	climber

24	Doqqoo	Scientific name is not found	Tree
25	Eebicha	*Vernonia amygdalina*	Tree
26	Gagamaa	Olea capensis	Tree
27	Gatamaa	*Schefflera abyssinica*	Tree
28	Geeshoo	*Rhamnus prinordes*	shrub
29	Giixoo/sinsinoo	cyathea manniana	Herb
30	Gindiraaroo	Discopodium peninervum	Herb
31	Goraa	*Rubus apetalus*	shrub
32	Harangamaa	*Scientfic name is not found*	climber
33	Harangamaa Gurraacha	Pterrolobium stellatum	climber
34	Harbuu	Ficus sur	Tree
35	Hincinni	Hibiscus flavi folius	climber
36	Karasoo	Polyscias flelva	Tree
37	Kusaayee	*Lippia javanica*	herb
38	Leemman	bamboo	tree/shrub
39	Liqixii	Scientific name is not found	climber
40	Lolchiisaa	Bersema abyssinica	Tree
41	Lookoo	Diospyrios abyssinica	Tree
42	Luugoo/Alaltuu	*Salix subserrata*	Shrub
43	Meexxii	*Phoenix reclinata*	shrub
44	Ogiyo	*Aframomum corrorima*	herb
45	Oomii	*Prunus africana*	Tree
46	Qarabichoo	*Echinops kebericho*	Herb
47	Qararoo	Akacaathera schimperi	Tree
48	Qassoo	*Scientfic name is not found*	Tree
49	Qatoo	Sapium ellipticum	Tree
50	Qilxuu	*Ficus vasta*	Tree

51	Qobboo	*Ricinus communis*	shrub
52	Qollaachoo	*Scientfic name is not found*	tree
53	Qomonyoo	*Brucea antidysenterica*	Tree
54	Qunnii	*Cyperus rigidijolius*	Herb
55	Reejjii	*Vernonia auriculifera*	shrub
56	Rigaa Raabaa	scientific name is not found	Tree
57	Sarxee	*Scientfic name is not found*	shrub
58	Simararuu	*Galineria saxifraga*	Tree
59	Somboo	*Ekebergia capensis*	Tree
60	Sondii	*Acacia abyssinica*	Tree
61	Soolee	*pittosporm viridiflorum*	shrub
62	Sootalloo	*Millettia ferruginea*	Tree
63	Sooyyama	*Vernonia adoensis*	shrub
64	Tujjoo	Piper capense	climber
65	Tunjoo	Scientific name is not found	Herb
66	Ulaagaa	*Ehretia cymosa*	Shrub
67	Ulmaayii	Clausena anisata	shrub
68	Umba'oo	*Momordica foetida*	climber
69	Urgeessaa	*Premna Shimperi*	shrub
70	Uukkoo	Mushroom	herb
71	Waasoo	cassipourea malosana	Tree
72	Waddessa	*Cordia africana*	Tree
73	Xiwoo	Jasmium abyssinica	climber

APPENDIX-IV

Some pictures of Focal Group Discussions and Interview with local elders from different research areas