



DOI: <http://dx.doi.org/10.4314/star.v4i4.00>
ISSN: 2226-7522 (Print) and 2305-3372 (Online)
Science, Technology and Arts Research Journal
Sci. Technol. Arts Res. J., April-June 2016, 5(2): 094-109
Journal Homepage: <http://www.starjournal.org/>

Original Research

Human Ecology and the Environment among the Maccaa Oromo: Knowledge, Values, and the Practices of Conservation

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Abstract

The study of the predominant human-environment relationships and the indigenous ecological knowledge and practices have enormous roles in understanding the ever-growing environmental problems, and consequent social problems on one hand and in natural resources and biodiversity conservation on the other. For the Oromo, land, forest, and water resources are natural resources of high value upon which interrelationships among human and non-human nature are founded. Hence, in an effort to understand the cause and magnitude of environmental problems, and to establish prospective measures in solving social and environmental problems, understanding the community's worldview and the indigenous knowledge they have maintained in esteeming and managing the natural resources for vigorous coexistence are important. Therefore, the objective of this study was to elucidate the implications of the Oromo indigenous knowledge and worldview in natural resources management. For the study, qualitative research methods: qualitative interviews focus group discussions, non-participant observation, case study, and secondary data analysis were employed. Both primary and secondary data sources were consulted to enrich the study. The finding shows that the Maccaa Oromo possesses indigenous ecological knowledge embedded in their worldview; which has enabled them to utilize and conserve natural resources. This was made possible by the highly sophisticated worldview and knowledge founded on the knowledge of the organization of the three worlds, the physical, the human, and the spiritual world unity to function the whole. The Maccaa Oromo has the knowledge of laws of Waaqa, and customary laws, norms, values, and the concept of Safuu and Ayyaana in their worldview, which guides their entire actions and relations in the universe. In general, these concepts are important component of the Oromo worldview. They are believed to strengthen and maintain internal moral quality and unity of the Oromo. In spite of social dynamics and change, the underpinned knowledge of these concepts have been used to maintain enthusiastic coexistence between the physical, the human, and the spiritual worlds among the Oromo in general and the Maccaa Oromoo in particular.

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Article Information

Article History:

Received : 10-01-2016

Revised : 16-03-2016

Accepted : 23-03-2016

Keywords:

Worldview,
 Indigenous Knowledge,
 Human Ecology,
 Natural Resources.
 Maccaa Oromoo

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INTRODUCTION

The environmental and subsequent social problems that the earth has faced become a global agenda. As a fundamental cause of the problems, studies in different paradigm counts on human activities. Hence, it is demanding to assess social values and practices as environmental issues, complex social problems that emanated from social behavior and processes demand systematic and integrated sustainable and reliable solution. Since the entire environmental and social problems are rooted in social behavior and processes, it needs the integration of society and their cultural values to the level of drafting and applying the policy to curtail the problem. To integrate the society in solving the problem, understanding the culture and worldview of the society is vital. Indigenous peoples possess resilient social and cultural values, ordered social control and integrated social systems rooted in their indigenous knowledge of the universe in general and their locals in particular. They possess standards of behavior in their relations with and adaptation to the wider ecological niche hitherto established in their worldview. They have had little or no contact with strange culture. However, with the introductions of eccentric culture to the socio-cultural lives of the indigenous peoples, several aspects of their previous patterns of thought and worldview have been changed.

Among the indigenous peoples of Africa, the Oromo live in Ethiopia and in some parts of Northern Kenya. They are one of the major African peoples (Mohammed, 1994). They are one of the Eastern Cushitic populations who live in the Horn of Africa (Feyisa, 1998). The Oromo constitute a good half of the population of Ethiopia. They are the single largest national group in the Horn of Africa. The Oromo make up about 40-50 percent of the total population of Ethiopia. The Oromo are known to have lived for thousands of years in what is today Ethiopia. Geographically, the Oromo land extends from Sudan in the West to Somalia in the East, from Raayya in Tigray in northern extreme, and to Kenya in the South (Lewis, 1984a, Asmarom, 2006). The Oromo also live in Wembera and Kemissie zones of the Amhara National Regional State; the Raayya, and

Asseboo in Tigray National Regional State and in Northern Kenya and Somalia (Tesema, 2006). Despite their size of population and vital socio-economic setting, the Oromo have been one of the least studied and least known peoples in East Africa. Tesema (2006) attributes this to the lack of written language to record their history; and the available written sources by non-Oromo writers are full of distortions, biases, and misunderstandings. Further, De Salviac asserts that the Oromo constitutes a homogenous race from the same blood and the same ethnic group (De Salviac, 2005). As a result, the Oromo share the same culture and similar psychological makeup.

Mohammed asserts that the Oromo developed their own cultural, religious, and political institutions, which shaped their history and expressed their worldviews (1994). Consequently, the Oromo such as the Raayya and Asseboo, the Jaarsoo clan of the Itu and Humbana groups in Somalia, who have lost their language, have retained their Oromo identity (Gemetchu, 1996). The Oromo whose origin is rooted in one source had multiplied itself in the course of historical periods into various branches that collectively evolved to its present stage of a nation. Among the main branches it formed in that historical period, Maccaa were one. The term 'Maccaa' means a very wide and large population (Alemayehuet *al.*, 2006). Similarly, the name 'Maccaa' means people (Bartels, 1983). Moreover; the Oromo have been living in the vast parts of East African region, bestowed with peculiar cultural traditions, including the Gadaa system, which is the foundation of Cushitic civilization. As part of the global systems, the Oromo people challenged with global environmental problem and subsequent social problems as indigenous peoples elsewhere in the world.

Human being interacts with their environments with cultural setups that have either positive or negative influences upon the environmental components, including the natural resources. According to Salzman and Attwood (2002), human populations socially organized and oriented by means of particular cultures, have ongoing contact with and influence up on the land, climate, plants, animal species, and other humans in their

environments and these in turn have reciprocal impacts. Each community has its own particular orientation or adaptation to the wider environment institutionalized in the culture of the group, particularly in its technology, which includes established knowledge of plants and animals, weather and minerals, as well as tools and techniques of extracting food, clothing, and shelter (Salzman & Attwood, 2002). According to Robinson (2011) culturally and socially, environmental problem represents problems of social organization, communication, and socialization. He asserts that our understanding of environmental issues as primary social constructions is important to understand how these issues are created, maintained and resolved. Hence, community level interaction is an interesting social space from which to witness environmental understanding. In the same vein, Strang (2009) argues that failing to engage with local communities could carry a high social and ecological crisis. However, modern conservationists and the concerned government institutions almost throughout the world have overlooked the roles of indigenous communities in natural resources conservation.

With regard to this, the UNEP (2008) asserts that management of biodiversity is not isolated, compartmentalized concept for indigenous peoples, but an integral part of their lives. The study of how the indigenous peoples view and define the social and natural order is vital, as the community level interaction is the best social space from which to witness environmental problems in an effort to revive the endangered resources and to establish the actual management strategy, and for the assessment of the cause of environmental problems. However, as revealed in different literatures, there are limitations in studies about the indigenous ecological knowledge of the indigenous peoples in the wider academic arena, and there is a limited focus on the importance of understanding the ecological knowledge of the indigenous peoples in minimizing the emerging environmental and subsequent social problems. Therefore, this study is aimed at assessing the wider indigenous ecological knowledge of indigenous peoples by providing few insights about the Oromo indigenous knowledge and

practices in natural resources management. The main issues addressed in this study includes: the values of natural resources; the perception and view of cosmic order; the practices of natural resources conservation for generations of intact coexistence; and how they have maintained sustainable resource utilization and ecological harmony since time immemorial. Furthermore, documenting such invaluable knowledge of the people is important in maintaining the balanced human-ecology relations.

MATERIALS AND METHODS

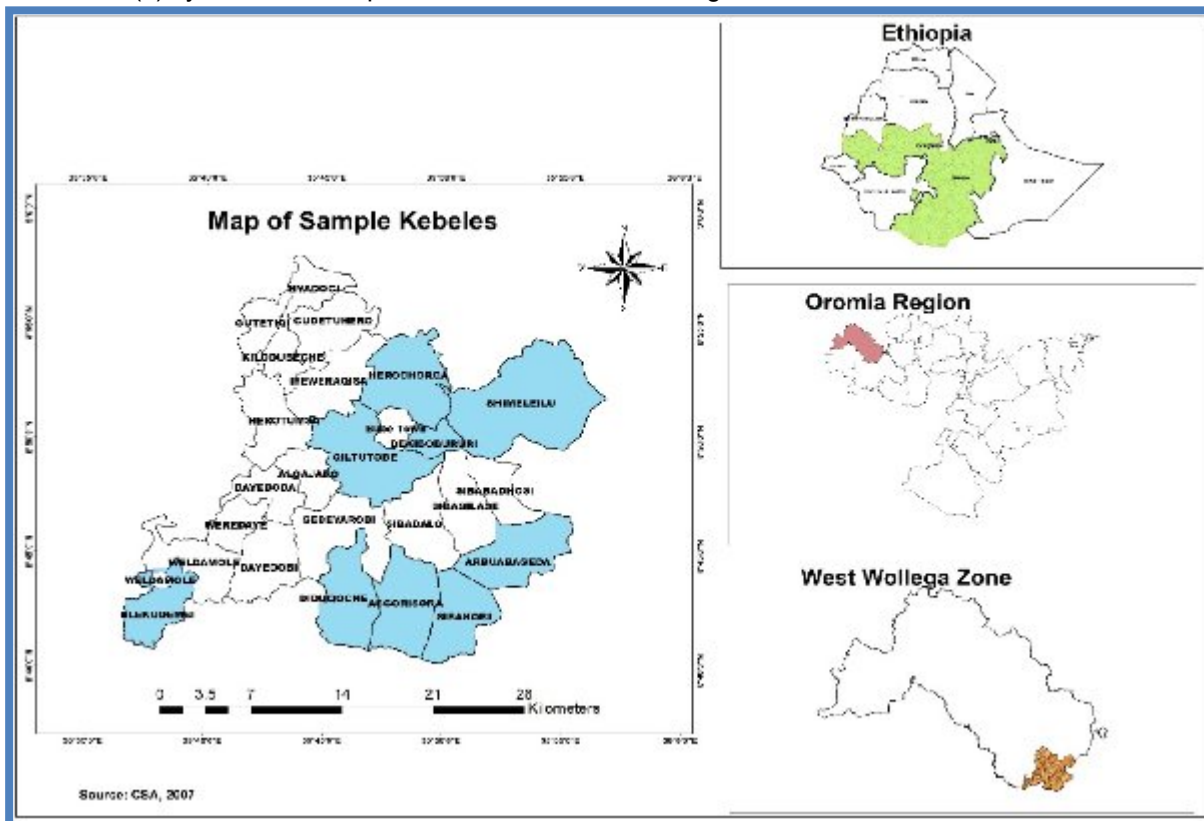
This study employed qualitative research methods because it emphasized the beliefs, perceptions, values, knowledge, wisdoms, and worldview of the people. Since the study was holistic, phenomenological and ethnographic approaches of qualitative research methods were used for the study. While both primary and secondary data sources were used to compile data for the study, Interviews, non-participant observation, focus group discussions, case study, and document analysis of both published and unpublished sources were instruments used to obtain reliable data for the study.

Two forms of interviews- unstructured interviews and semi-structured [in-depth] interviews were held with different community members. The Oromo of the area are one of the lineages of Western Maccaa Oromo of Wollega. The elders of Nole Oromo claim their genealogy descended from Maccaa Oromo. Both interviews, parallel with other techniques, were conducted in September, November, and December 2014, and in January and March 2015. Unstructured interviews were held with members of the local community, including individuals of different backgrounds, which includes sex, age, social status, religious faiths, occupation, and literacy background, elders, youths, government officials, farmers, merchants, students, and teachers of different levels. Unstructured interviews were held in different places and time available without reservation. In-depth interviews were held with key informants selected purposively by the researcher on their prior knowledge in relation to the objective of this study. The topics raised under unstructured

interviews were assessed in detail with this method.

In-depth interviews were conducted in five *Kebele* [small administration unit] among twenty-seven *kebele* administrations of the district in the first round in 2014, namely Haroo Corqaa, Arbuu Abbaa Gadaa, Siibaa Koobii, Daakkiboo Bururii, and Qilxuu Xobbee, and four *kebele*, namely Didu Qoche, Asgori Sora, Shimelelluu, and Aleku Dembi in the second field trip conducted in 2015. *Kebele* is an Amharic word and introduced in the administrative division of Ethiopia by previous government (s) systems of Ethiopia,

which preferred to use Amharic language for such formal administrative division than *Afaan Oromoo* [the language of Oromo] of the indigenous people of the area. It has to be noted that this administrative unit is called **Ganda** in *Afaan Oromoo* to stand for similar administrative unit. The researcher selected the area purposively, mainly for the presence of Oromo traditional *Qaalluu* (Oromo religious and ritual leader), the Dhati Walal National Park, and the largest natural forests are found in the area, protected by the indigenous knowledge of the Oromo of the area for long.



Map 1: Location of the study area

In the entire field stay, twenty in-depth interviews, which took an average of one and half an hour with each interviewee, five focus group discussions, and field observations, were conducted. The researcher in the selected places of study area conducted non-participant observations. The non-participant observations were used to observe the environmental facts such as the natural forests, salt-lick (hora), and protected shrine used as sacred sites in the area. The study employed relevant official documents,

unpublished and published documents as source of data. Data from these sources, thus, were utilized to corroborate the data obtained through other methods.

RESULTS AND DISCUSSION

Human Environment Interactions among the Oromo

In societies, including hunting gathering, horticulturalist, pastoralist, and intensive

agriculture, peoples were directly linked with nature and the environment. They survived by extracting natural resources from a particular biome or environment, and they lived in a relative harmony with the natural environment (Scup in and DeCorse, 2009). This human ecological study among the MaccaaOromo encompass the systematic application of indigenous ecological concepts, social values, principles, and endogenous approaches, using the aforementioned research methods to the study of specifically articulated problem and objectives. Human-Ecology examines the way in which human population-resources relationships affect the adaptation of human population to different ecological niche, especially, how they make a living where they live. The data obtained indicates that the Oromo perceive the natural environment as part of their lives chained to the entire aspects of their life. Humanizing the [natural environment] and making part of one's own social system is the underlying principles of human-environment relations among the Oromo. In their relations with the natural environment, they pay special emphasis and care for the natural resources found in their environment as partner of their lives.

The findings reveal that the ecological intimacy is important in two ways. First, the positive reward of natural resources conservation in entire aspects of their life, including bounty harvest and healthy environment for the wellbeing of the human and the livestock. Second, the natural resources have been conserved for generations of sustainable utilization. These have been evident in their socio-cultural and economic lives. In his study about the economic history of the Maccaa Oromo, Tesema (2002) pointed out that through the application of their indigenous agricultural knowledge and practices, the Maccaa Oromo have been able to obtain surplus harvest and maintain harmonious and balanced relationship between crop cultivation, livestock raising, plant life and the environment. Thus, as the study area is found in the mainstream western Maccaa Oromo land, similar practice is still going on with slight change and modifications.

The data obtained through interviews with key informants of the study area reveals that the people among the Oromo have commanded to

use wisely the natural resources by *Waaqa* [God]. The Oromo have developed the knowledge of the rule of relationships with natural resources. This knowledge is embedded in *seera uumaa* (the laws of God), and *seera duudhaa* (customary law). Both laws entail the laws of relationships between the Oromo and the natural resources. Both laws maintain the guiding principles for an individual behavior in a community. They are laws of 'Do' and 'Don't Do'. This knowledge is thus, maintained in their indigenous religion, *Waaqeffannaa*. The Oromo of the study area have the knowledge of the concept of *Waaqa* and the laws that regulate their relations to the nature. According to Bartels, for the Maccaa Oromo, the Supreme Being, whom they call '*Waaqa*' (sky/God), is the creator of all things and the source of all life. Starting with water and rocks, going on through the vegetable and animal world to man, *Waaqaa* has appointed to every being its own place in a cosmic order of which he is also the guardian. Sin is simply a breaking of this cosmic order. *Waaqaa*'s creative and ordering activity manifest itself in the specific characteristics of man in general, of every species of plants and animals. It is manifested also in the individual characteristics of every man, of each plant and each animal taken singly (Bartels, 1983). The findings have shown that the Oromo of the study area, thus, shared similar beliefs and psychological makeup on the concept of *Waaqa* and Sin, and the presence of the Supreme Being to whom they revere in their socio-cultural lives.

Supporting this view, Asafa (2010) asserts that the Oromo society, like any other society, has been conscious of its cultural identity, its relation to nature, and the existence of a powerful force that regulates the connection between nature and society. The Oromo knowledge of society and the world can be classified into two: cultural and customary knowledge (*Beekumsa aadaa*) and knowledge of laws (*Beekumsa seeraa*). The knowledge of law is further subdivided into *Seera Waaqaa* (the laws of God) and *Seera Namaa* (the laws of human beings). The laws of God are immutable, and the laws of human beings can change through consensus and democratic means. Every person is expected to learn and recognize *Seera Waaqaa* and *Seera aadaa*. If someone violates the laws of society or the laws of

God, there are Oromo experts who can be referred to adjuration. These experts study and know the organizing principles of the Oromo worldview that reflects Oromo cultural memory and identity both temporally and religiously (ibid, 2010). This idea indicate that the Oromo people's

The Oromo Worldview in the Unity of the Spiritual, the Physical, and the Human Worlds

This study shows that mutually intelligible relationships lay between the physical, the spiritual, and human world among the Oromo. In their worldview, *Waaqa* is the creator of entire world, living, and non-living components of the universe (*uumaa*), which include natural resources and human beings. Hence, He established laws of relationships and harmonious co-existence between the three worlds. Among the Maccaa Oromo, thus, *safuu* and *ayyaana* are important elements of their worldview and knowledge. In their worldview, everything has *safuu* and *ayyaana* and humans are responsible to act accordingly. *Safuu* [the established distant among different worlds and things in same world] has been maintained through the knowledge of the concept of laws (natural laws and customary laws), and abides by it. *Safuu* entails the values of everything and sets the standards of behavior. The *ayyaana* (spirit) resides in everything and thus, governs the relationships between *uumaa* (creator) and *uumama* (creation). Generally, among the Oromo, the relationships between *Waaqa*, the natural resources, and human beings have been maintained through the knowledge of the concepts of *Waaqa*, *ayyaana*, *safuu*, and *seeraa*. This knowledge dictates the way worldview relates to other aspects of the society, in understanding the kind of life the society prefer.

In his study about the Oromo religion, Gemetchu (2005) asserts that traditionally the Oromo believed in a monotheistic black celestial Deity to whom they periodically offered sacrifice. Their politico-religious life was centered on an eight-year cycle of ritual that was performed by their leaders at key sites associated with mountains, trees, and natural springs. Among the Oromo, *Waaqa* also called '*Uumaa*', loosely translated into English word 'Creator'. *Waaqa* is the creator of all things and subdue the universe.

ecological knowledge is inherent in their worldview and regulated through the knowledge of *seeraa* [laws], and is common to all members of the society as a value guiding their relationship and behavior in the cosmic order.

Similarly, Bartels (1983) asserts that the Supreme Being *Waaqa* is seen first as the source of all life. Giving life, indeed, reserved to Him alone. In the Oromo philosophy of cosmic order, the land lay at the bottom of every creature as the base for other creations. The land symbolized with wife or feminine character and holds the same position as wife and motherhood role, and the God holds the role of family head, while all other creatures are the children of both land and God. The land sustains the entire life of creatures through rain. If there is rain, the Oromo view that there is life, and thus water is life. It is the will of God to send rain to make a life to happen and sustain on the land. The land has considered as the embryo and the womb of a mother that bears the child, and cares for safeguarding her children. The earth does similar as the mother do to her progenies.

With this regard, the Oromo philosophy still bears the fact that the physical world, the land [Earth] is directly and indirectly connected with the spiritual world, God functionally and relationally to sustain the cosmic order or balance. The findings clearly depicts that the land [Earth] has a motherhood role for the entire creatures, especially human beings. The underlying philosophy of the Oromo worldview about the land resource, the values attached to the land resource, and the shared attitude towards the relations between the land and the creator *Waaqa*. Due respect is lent to the land, because of the value attached to the land utilization, and related mentality of human beings among the Oromo. The relations between the creator and the land [Earth], moreover, remain mysterious to the human knowledge of the universe, and thus the key informants among the Oromo confirm the genuineness of mysterious in this sense.

In the relations between the three worlds, the spiritual, the human, and the physical, findings indicated that human beings have the coordinating middle role between resources and *Waaqa*. God

created human beings in His image and likeness, according to the Holy Bible, and believed to have the responsibility for the issue of balance and imbalance in the universe (Genesis, 1:26). It is human's behavior and man's action that determines the balances of the cosmos, with the positive or negative reciprocity from the almighty, God as per human's action and orchestrated behavior. According to the Oromo worldview, the human being is responsible for its behavior and the subsequent actions. It also affects the wellbeing and the normal functioning of the cosmos, since the motion and the relations of everything in the universe is patterned for their own cause. Therefore, the human has laws, standard of behavior, morals, values, taboo, and the patterned institutions to administrate and execute the normal standard behavior of its member to sustain balance and mutuality among the systems. The *Waaqa* is above all and believed to cause the entire things. Therefore, in utilizing these resources, human beings should respect *Waaqa*, the omnipotent, which is above all, and the cause for entire lives. The findings show that the Oromo have strong bond with all natural resources and *Waaqa*. Moreover, these resources are associated with the psychological, emotional as well as with the identity of the Oromo. Loss of a single resource would have distorted the entire aspects of the society. In other words, it is a loss of indigenous knowledge associated to each, the values, *safuu*, laws, and other internal moral quality associated with it.

The findings shown that human's relation to the environment, whether negative or positive, reciprocated by *Waaqa*, through rain, good harvest, wellbeing of human beings and their livestock, or natural disasters. For instance, *Waaqaa* for the good did of the community members rewards positively, which include rain, bounty harvest, wellbeing of human, and livestock. Contrary to this, the negative rewards for wrong doings are manifested in the absence of rain, low harvest, disease outbreak, famine, and drought. Because of these facts, the community acts in accordance with the laws, norms, values, and *safuu* to maintain harmonious and balanced relations with the natural resources and *Waaqa*. The other important thing in the relationship

between land and humans among the Oromo is that the land is valued and respected above all, next to *Waaqa*.

According to the data obtained from the local elder with focus group discussions and in-depth interviews, land has *safuu*, and laws that govern the behavior of the community in their relations to land. The forest resources have medicinal, religious, symbolic, identity, and ecological values among the Oromo. The water resources, thus, have medicinal, religious, symbolic, and other socio-economic values in their socio-cultural lives. Their knowledge of the values of each resource in their socio-cultural lives, and associated deference in their worldview guides the dynamic relationships between the Oromo and these resources. Generally, the Oromo knowledge of cosmic order, and the values of each resource are important in natural resource management. The Oromo worldview about the organization of the physical, spiritual, and the human world, has vital role in creating environmental harmony, and in maintaining balanced coexistence between the physical, spiritual, and the human worlds.

Land Use Systems among the Maccaa Oromo: Values and the Practices

The Oromo call their land "*Dachee Haadha Margoo*", literally to mean "Mother Earth." The finding shows that Land is symbolized with mother. They articulate the value of land in their language by saying '*Baattoo*', literally to mean 'care giver'. They used this term to show the holistic values of Mother Earth in their entire lives. The Oromo of the study area use this term in their daily speeches and during different rituals, in both oath and curse of different conditions. The all-embracing characteristics of the Mother Earth among the Oromo, according to the data obtained through in-depth interview with key informants shows that the Mother Earth, in Oromo wisdom is valued and respected. This is because, Mother Earth is believed to be the wife of *Waaqa* in that *Waaqa* is our Father and Earth is our Mother. We live on her, she feeds her children as mother does for her children; we all die and lay down in her; not only human beings, also plant species and animal species all laid down in her when they die. On the

other hand, which parts of our lives are out of the sight of Mother Earth? She is really the mother of all-embracing mother.

Santos (1993), asserts that for the indigenous peoples, land is life; it not only provides for the physical needs of indigenous peoples. Moreover, it also provides a line of continuity from the past to the present. Thus, according to Moshoeshoe (1993) land has mixed cultural and social meanings in addition to its role as habitat and as a source of resources for production activities for the indigenous peoples of Africa. Alao (2007) on the other hand, asserts that land is undoubtedly the most important natural resource in Africa. Its importance transcends economics into a breadth of social, spiritual, and political significances. Among other things, it is considered as a place of birth; the place where the ancestors laid to rest; the place, which the creator has designated to pass down to successive generations; and the final resting place for every child born on its surface. The findings reveal that the Oromo of the

Oromo

*Dachee Haadha margoo,
Qonnee, sirraa nyaanna;
Horre, sirra yaafna;
Humna nuuf kenni;
Horii nuubulchi;
Sirra yaana, sirra galla
Boolla huratu nuuf duuchi.*

Moreover, the findings further reveal that the Mother Earth is the precious and highly valued natural resource, with her all-accommodating role. In their daily communication and conversation with each other, the Oromo of the study area, for example two individuals for their agreement in the absence of the third party, swear saying '*Waaqaafi lafa fuulduratti!*', to mean 'In the presence of God and [Mother] Earth'. This indicates that Mother Earth has ears and eyes to witness the agreement between individuals.

The Relations of Plant Species and Agricultural Practices

This portion of land is allotted for cultivation based on the community's knowledge of the soil type for cultivations. Among the Oromo of the area the identification of soil type for cultivation for specific type of crop and its productivity are guided by the

study area have established reverential relations with Mother Earth. Mother Earth has *safuu* (law of prohibition, a moral category based on Oromo notions of distance and respect for all things), and respect next to God. As other natural resources of the study area, the society have relations with Mother Earth, and expresses their relations through the value attached to each landscape, and the general praise and values of the Mother Earth as the whole. In their religious practices, they have seasonal rituals and prayers for Mother Earth. These prayers and rituals performed for the good of their life and livestock, and thus, for soil productivity. These prayers to the Mother Earth conducted whenever the Oromo of the area gathered for rituals, worshiping, meetings, and negotiations. As Derman and Sjaastad (2007) asserts, land resource is not merely an asset, sources of income, and commodities, but represents repositories of ancestral spirits, site for sacred rituals and historical landmark that ties the individual to a particular location.

Free Transliteration

O...Earth! the mother,
On you we cultivate, you feed us,
We reproduce on you,
Give us power and energy!
Protect our livestock!
We wonder on you,
May you plug up your hole, and protect us

indigenous knowledge they have acquired through lived experiences. Each type of crop is selective of the soil type and fertility. System of plough is the other practices, which needs a thorough knowledge of land resource usage to sustain its fertility and protect the land from erosion. Some tree species have been preserved on the land under cultivation for different purposes; among which two major purposes [rationale] are identified clearly from data obtained from various informant of the study area. The first rationale is the role of protecting the land from erosion of high rainfall often recorded in the area. Some tree species planted and protected on the land under cultivation for their conservation impacts. The upper part of the soil, according to the informants, is fertile and suitable for abundant harvest, which could easily erode with deforestation.

The second rationale is that some tree species have religious values in their indigenous religion, such as *Hoomii* (*Prunus Africana*), *Birbirsa* (*Podocarpusfalcatus*), and *Qilxuu* (*Ficusvasta*). The others have ecological impacts on the area for blowing the wind from crops and other ecosystem components of the area, like *Mukarba* (*Albizia gumifera* or *Albiziaschimperiana*) and plant species, which are believed to have the role of in increasing the soil fertility like *Qilxuu* (*Ficusvasta*), and those protecting the underground water and kept the land humid. From this point, we can infer that the Oromo have the knowledge of the dynamic relations of land and tree, in which land under cultivation is protected from erosion and through which the soil fertility is enhanced for sustainable tillage and plenty of harvest.

The findings show that rationale inland uses for agricultural activities, two types of rationales shown. The first one is their knowledge of allocating the specific land for cultivation, and the second is that their knowledge of sustainable utilization. Such indigenous knowledge and practices used in conservation of other natural resources like plant species and underground water. Other scholars substantiate this knowledge of the Oromo people in general and the Maccaa Oromo in particular. Gobena (1996) in his studies of 'Protecting the Environmental Resources of Oromia', argued, "It has been agriculture where trees are preserved not only for their shade or majestic look, but for their conservation impacts on their environments". Implicit in this idea is that the Oromo people have been practicing agriculture with the help of their indigenous knowledge that helped them to protect their environment. The fertility and productivity of this land has been preserved through the application of their indigenous agricultural methods like shifting cultivation, crop rotation, inter-cropping, minimum tillage and cattle kraal shifting.

Sacred Sites of the Natural Environment (*Bakkee Waaqeffannaa*)

Religion and the natural resources have complex and mutually intertwined relations. Religious doctrine dictates the part of natural environment and natural resource chosen for religious rituals exclusively from other socio-cultural activities.

Such environs are known as sacred sites of the natural environment. These sacred sites allotted for various religious rituals of the Oromo indigenous religion. The sacred sites of natural environments are land features like mountain (*Tulluu*), field (*Dirree*), forested land, and water bodies like river (*Laga*), ford (*malkaa*). Bartels (1983:67) said, "Tulluu Walal is the holy mountain to the Oromo of Wollega. It is the place where they perform their clan's sacrifice to God/sky; it is there that the elders hold their meetings according to traditional records." Mount Walal with its dense forest cover is found in the study area, under Dhati Walal National Park, which has been known for its sacredness among the Oromo of the study area. The Mount Jorgo and its dense natural forest cover have been used as the sacred sites and the areas have been protected for their sacredness. These sacred sites protected from human interferences and disturbances for any other purposes.

Grazing Land (*Lafa Dheedinsaa*)

Animal husbandry is one of the major economic activities among the Oromo from time immemorial. Livestock rearing, especially cows, is known among the Oromo of the study area. The economic backbone of the area, which could also sustain the livelihood of the household, depends on the livestock production. These productions have been practiced on the plot of land, including the growing of grass on the plot of land. It is the land covered with various types of grass, used for livestock grazing, used for thatch and *coqorsa* grass used in religious rituals, prayers, and blessings. *Coqorsa*, in scientific name *Cynodondactylon*, is drenched and green grass used in different rituals as a symbol of prosperity, fruitful, and growth. For the Oromo of the study area livestock are integrals of their lives. They have been supporting the community by their power in agricultural practices, their manure helps in soil fertility, they sold for money to sustain the household economy, and they are the ultimate source of meat, milk, and butter, which are integrals of Oromo social life and economy. Bartels (1983), observed the relation the Maccaa Oromo have with their cattle. He said that the cattle are the life of the people. Indeed, such

integrals of the people need portions of the land for their food provisions. The portions of land allocated for this purpose have been known as grazing land (*lafa dheedinsaa*) among the Oromo of the study area.

Burial Site (*Lafa Awwaalchaa*)

The data obtained from the study area through in-depth interview with the local elders indicates that burial sites (a place to lay down) are historical and memorial places for the clan of the deceased to remember the individual of their clan. These places are also part of the clan land. The community believes that for the deceased this land is the resting place and their *Ayyana* resided around. The value and the assumptions the community attached to this land serves to protect and conserve this land and the vegetation cover of the place. It is believed that an individual possesses *Ayyana* (spirit) when alive and when passed, this *Ayyana* (spirit) believed to remain on the grave. Because the *Ayyana* is respected and valued, the graveyard is respected and protected for generations. This portion of the land is detached from cultivation, grazing, and other social service. Some plant species planted on graves uses to mark the place where a particular individual buried and for the protection of the grave from being disturbed.

Land for Habitation (*LafaManaa/ BakkaJireenyaa*)

It is a land allotted for settlement for both human and tame animals. It is a highly valued place, selected based on thorough ecological knowledge, with better healthy lives of the people and the livestock. Settlement areas are respected places of the natural environment because of their socio-cultural and ecological importance. There is a common saying among the Oromo "*Lafa manaafi nama garaatu nama dhiba*", (literally to mean, 'it is difficult to get a true friend [life partner], and suitable land for homestead.') The sayings reveal that there are strong and mysterious relations between human and homestead among the Oromo.

Among the Maccaa Oromo of the study area, there are scattered homesteads, arranged patrilineally and patrilocally, each with reserved land for cultivation of crops used for household consumption, known as *lafa qe'ee* (homestead) and *lafa boroo* (land near to the compound of the home). These categories of land portion mainly are based on their proximity to the home and the types of grains cultivated. Both lands are fertile; however, *lafa qe'ee* is more fertile than *lafa boroo*, and uses for different purposes. The main land portion in this category is land for libation (*lafa dhibaayyuu*). A land portion of homestead serves as ritual site for the members of the family. *Lafa qe'ee* has trees planted for fence and shade as well as wind blockings.

Forest Land (*LafaBososnaa*)

For the Oromo, forest resources have socio-cultural and ecological values. The findings reveal that forest resources are source of shelters, source of food for humans and animals, source of traditional medicine, and source of firewood. The socio-cultural importance of forest resources are manifested in their daily chores, and facilitate their socio-cultural and spiritual life, including cultural material objects and related significance. Hence, these cultural material objects are the manifesto of Oromo cultural property and identity. The majority of material objects used for house construction and clothing, traditional farming objects, household furniture's, which could be traced to the Oromo cultural knowledge, are products of forest resources.

Moreover, some plant species have symbolic values. The symbolic value of the forest resource, for the Oromo reveal in their indigenous religious philosophy, and in the Oromo concept and philosophy of development. According to the findings, the greenness of forest symbolizes development and productivity. Accordingly, some plant species have direct linkage to the Oromo indigenous religion [*Waaqeffannaa*], used as places of worship and rituals. Some plant species were used to conduct religious prayers under its shade; others were used for religious rituals as a symbol or other related practices as dictated in their indigenous religion.

Table 1: Some Plant Species of Religious values

| <i>Plant Species</i> | | | | |
|----------------------|---------------------|------------------------------|----------------|--|
| N | Local Name | Scientific Name | Habitat | Specific Religious Purpose |
| 1. | <i>Hoomii</i> | <i>Prunus Africana</i> | Tree | For libation taken under during festivity and rituals |
| 2. | <i>Birbirsa</i> | <i>Podocarpus falcatus</i> | Tree | For libation taken under during festivity and rituals, the symbol of God [<i>BirbirsaWaaqaa</i>] |
| 3. | <i>Ulaagaa</i> | <i>Ehreticac ymosa</i> | Tree | |
| 4. | <i>Somboo</i> | <i>Ekeberg iacapensis</i> | Tree | For libation taken under during festivity and rituals |
| 5. | <i>Eebicha</i> | <i>Vernonia amygdalina</i> | Shrub | The leaf is used during religious festivity and to wash the of a person for religious purpose |
| 6. | <i>Bakkannisa</i> | <i>Crotonma crostachyus</i> | Tree | The bark, the steam, and the leaf is used in different rituals |
| 7. | <i>Raamsoo</i> | <i>Cassia petersiana</i> | Shrub | The leaf used for baptism during religious healing and thus blessing |
| 8. | <i>Ulmaayii</i> | <i>Clausena anisata</i> | Shrub | The leaf is used during religious festivity and to wash the of a person for religious purpose |
| 9. | <i>Urgeessaa</i> | <i>Premna schimperi</i> | Shrub | The leaf is used during religious festivity and for libation in religious practices |
| 10 | <i>Alaltuu</i> | <i>Salixsub serrata</i> | Shrub | |
| 11 | <i>Qilxuu</i> | <i>Ficus vasta</i> | Tree | For libation taken under during festivity and rituals, religious gatherings |
| 12 | <i>Laaftoo</i> | <i>Acacia abyssinica</i> | Tree | For libation taken under during festivity and rituals, the symbol of God |
| 13 | <i>Dhummuug gaa</i> | <i>Justicia schimperiana</i> | Shrub | The leaf used for baptism during religious healing and thus blessing |
| 14 | <i>Ce'ii</i> | <i>Celtis Africana</i> | Tree | |
| 15 | <i>Coqorsa</i> | <i>Cynodon dactylon</i> | Herb | For religious libation, for blessing during festivity, the symbol of fertility, and growth |
| 16 | <i>Kusaayee</i> | <i>Lippie javanica</i> | Herb | The leaf is used during religious festivity and for libation in religious practices |

As shown in the table above, these plant and shrub species are typical examples of forest resources, which have religious values indifferent religious rituals among the Oromo. However, these are not the only plant species used in the ritual practices of the Oromo indigenous religion. The researcher gathered these during the fieldwork conducted in the study area. This means that there is a shortage of time and finance for the detailed study of the subject matter. In addition, forest resources distinctively used as markers of the Oromo identity. The findings show that the name of the natural forests and other natural resources of the Oromo embrace the name of ancestry and renowned personalities of the Oromo people. Naming, naturalizing, and humanizing the natural resources of some extent of peculiarity is common among the Oromo.

The findings show that forest is one of the major natural resources among the Oromo in which other life forms are dependent on the existence and abundance of the resource. The forest ecology of the study area comprises different plant

species of indigenous origin, big tree, small tree, bush, shrubs, and other planted trees. The Riverine flows of water in different volume, animal kingdom of various species are elements of forest ecology in the area. This plot of land in which the forest ecology exists is known as forestland. Forestland is a land covered by natural forests and plantation forests composition. The community has been protecting forest coverage of the area from human disturbances and interferences with traditional laws and sanctions. The protection is obviously because of its multiple complex socio-cultural and ecological significances. Hence, forest, land, and water resources have dynamic relationships and the rationale behind allocation of land for different purposes are based on predominant forest composition and the feature of landscapes, which are not suitable for cultivation such as hill, valley, protected shrines, Riverbanks, residences of wild animals, and other social services. Forests, either natural or plantation are part of natural environment and they have social, cultural and ecological importance for the people of the study area.

The data reveals that some largest natural forests of the area are repository of their identity, since these resources bear the name of the renowned personality of their ancestors. The typical examples of such natural forests among the Oromo of the area are Alaku Dambi and Jorgo natural forests. Both natural forests were called after the name of their renowned ancestors Alaku Dambi and Jorgo Dagago. Currently, both natural forests constituted the largest portion of natural forest coverage of western Ethiopia. The other reason for allocating forestland among the Oromo is that in their worldview natural forest composes various plant species, which have medicinal, religious, and ecological importance. For these reasons, such landscapes, covered by natural forests are valued, delimited, and protected. Moreover, the ecological value of natural forest among the Oromo includes such values as source of rain, suitable climate, and ecological balance. Generally, socio-cultural and ecological values the community attached to forest resources helped to identify such landscapes from other areas, and designate it as a repository of natural forests.

Moreover, the data reveals that four areas of knowledge are very important among the community in allocating specific landscape as forestland, and cutting down any plant species and its seedling is traditionally protected from such areas. The first one is forests that have the role of blowing against wind (*mataa qilleensaa*), forests, or plant species, which have the impact of protecting wind from settlement areas or home, and cattle kraals. The second area of their knowledge is (*mataa bishaanii*), forests found at upper stream and riverbanks, which protect the water sources from drying out. The third one is (*gaaddisa loonii*), forests and plant species used as shade for their livestock during the dry seasons. Finally, it is (*bakka jireenya bineensotaa*), used as a home for wild animals.

The Holistic Values of Water

Among the Oromo of the study area, the characters of water are compared with *Waaqaa*, in the sense that both have secrets hidden from human beings. The saying about the unique characteristics of water, '*Iccitiin Waaqaa fi bishaanii hinbeekamu*' is common among the

Oromo of the area. This is to mean that the mystery of God and water is unknown. It is because of the fact that the character of water is intangible and mysterious like that of *Waaqaa*. In their indigenous religion, they believe that *Waaqaa* is mysterious, and it is beyond the human intelligence to understand the mystery of *Waaqaa*.

The values of water have been revealed in their blessings, seasonal celebrations, and religious rituals. Water used as a symbol of wealth, health, growth, and prosperity in all these social phenomena. For example, in their blessings, the elders hold the fresh grass (*coqorsa*), and say, '*jiidhaa, jiidhatti hafa*', which means may you be fresh and prosperous throughout your life. Implicit in this blessing is wishing individuals to become wealthy and prosperous throughout their lives. In their blessings, they say, "*Garbata'aa, bal'adhaa*". This is wishing individuals to multiply [having progeny] and having an extended family like ocean. Moreover, water among the Oromo, is used as a symbol and resource to be exploited in their socio-cultural and spiritual lives. For Africans, the importance of water resource further reinforced by its socio-cultural and religious significances, as the sources of major rivers have been known to serve as deities through whom people engage in communion with the Supreme Being (Alao, 2007). Likewise, FAO (2003) asserts that the concept of water resources is multidimensional. It is not limited only to its physical measure (hydrological and hydro-geological), the flows, and stocks, but encompasses other more qualitative, environmental, and socio-economic dimensions.

Fresh and natural salt lick (*hora*) is found in the district. A *hora* is natural salt lick to which people bring their cattle. They themselves also drink from it. In addition, they use the *hora* water for rituals of purifications (Bartels, 1983). According to the data, the natural salt lick, *hora* Dardaraa, is historical natural salt lick found in the District. They believe that this water has medical value for livestock ailments and makes them strong and productive. They also used this water to treat human infected with rabies. Persons bit by mad dog used to go to this *hora* and swim in the water wearing the clothes he/she wore during the

bit, and thus, drink the *hora*. It is believed that the *hora* removes the rabies from the body of the victim, and the victim treated/ healed. It is also believed that this particular *hora* heals patients suffering from bacterial caused diseases and physical deterioration. A *hora* is natural salt lick to which people bring their cattle. Peoples also drink from it. In addition, they use the *hora* water for rituals of purifications (Bartels, 1983). It is believed that the cattle drink the *hora* to make them healthy, strengthen them for plough, and to make them become fertile and productive. Hence, the community utilized their indigenous knowledge to protect the *hora* for sustainable utilization. The surrounding forests of this particular *hora* have been protected to preserve the *hora*. As reflected in their knowledge, forests have the shielding impacts for underground water and soil erosion, in which water, forest, and land dynamic management have been practiced.

Human-Ecology and the Environment: Dynamic Approach

For the Oromo, management of natural resources has dynamic relationship. In their worldview, land was not created bare, but with other constituents of natural resources, including forest and water. Hence, in the Oromo wisdom, the practice of land conservation is dynamic, which include conservation of forest and water. UNEP (2008) asserts that intimately tied to indigenous knowledge of land management practices was the management of forests. Using indigenous knowledge, expertise, and taboos all the communities practiced forest management. Spiritual, medicinal, and ecological importance of forest resources, have an immense role in preservation of forest resources. For instance, in some indigenous African communities, thus, there were tree and plant species that were considered sacred, or totems, or were associated with some bad omens. UNEP (2008) further affirms that in various countries many of the communities maintained shrines and protected forests, which were used as places of worship and other rituals. In addition, certain trees were considered sacred or totems, so they are protected. The findings reveal that the knowledge of wise utilization and

conservation of land resource among the Oromo is revealed in their rationale of land uses and land allocation for specific purposes. The Oromo allocate land resource based on its importance in socio-cultural and economic lives of the people, and for sustainable utilization and conservation. Based on data gathered from the study area, among the Oromo, land is generally categorized into six specialties. These are land under cultivation, sacred sites, forestland, homestead, grazing land, and burial site.

Through the application of indigenous knowledge of landscape classification, the Oromo properly utilize the resource and at the same time conserve them. According to Tesema (2002: 104), the *Maccaa* Oromo use their land resource traditionally classified into four categories, which includes forest land covered with trees and shrubs, land under cultivation uses to produce coffee, grain and root crops; land for thatch used to cover houses; and land for grazing. However, in the study area, the data show that sacred sites and the land for burial purpose are also significantly included in their classification of land resource use. The Oromo of the area have been practicing indigenous agricultural methods, such as minimum tillage, shifting cultivation, inter-cropping, and horizontal plough for sustainable utilization and bounty harvest. Settlement land [homestead], thus, was systematically allotted based on their ecological suitability and relevance for habitat, abundance of resources such as pure water for homestead consumption, plenty of fertile land for farming and grazing.

In the Oromo worldview, *Waaqaa* is the creator of all things (*uumaa*), including natural resources and human beings. Thus, it is believed that He had set up the laws for order and co-existence between *Waaqa*, human beings and the natural environment. The findings, thus, reveal that *safuu* and *ayyaana* are important concepts of the Oromo worldview about cosmic order. *Ayyaana*: the Spirit, *Ayyaana* is a phenomenon of great importance in Oromo religion. It is believed that God created different creatures by different *Ayyaanas* (spirits) (Alemayhuet *al.*, 2006: 29). In sum, in the Oromo worldview there is strong dynamic relationship between the physical, the spiritual, and the human worlds.

The Oromo use four concepts to explain the organization and interconnection of human, spiritual, and physical world. These concepts are *Ayyaana* (spirit), *Uumaa* (creator), *Uumama* (nature), and *Safuu* (moral and ethical order). *Ayyaana* maintains the connection between the creator and the created (Asafa, 2010). Similarly, Gemetchu (2005) asserts that these four concepts are elements of the Oromo worldview." According to Gemetchu (2005), the core meaning of *ayyaana* refers to that by and through which God (*Uumaa*) creates anything and everything. *Ayyaana* is in fact both that which causes something to come into being and becomes that which it has caused." *Safuu* is a moral category based on Oromo notions of distance and respect for all things. The concept of *safuu* is not merely an abstract category: it constitutes the ethical basis upon which all human action should be founded. *Uumamaa* refers to the entire physical world and the living things and divine beings contained within it, animal, vegetable, mineral and spiritual. He argued that these four concepts constitute the basis of the Oromo worldview, and they should be seen as interlinked and interconnected aspects of a whole. The Oromo worldview embeds indigenous knowledge in entire aspects of their lives, in which everything have values and respects called *safuu*, and the super natural spirit called *ayyaana*, through which every creatures related to their creator, and believed that through which creator controls His entire creatures.

CONCLUSIONS AND RECOMMENDATIONS

In general, the findings show that in their view about the mystical bond between the creator and the creatures, humans, among the Oromo are responsible to act in accordance with the awareness and through reverence to the natural law. They have maintained *Safuu* through their knowledge of the concept of laws (natural laws and customary laws), and abides by it. *Safuu* entails the values of everything, and determine the standards of behavior. The *ayyaana* (spirit) positioned above all creations next to God, in their knowledge about cosmic order. Therefore, among the Oromo the natural resources are viewed as a part of life and the knowledge of conserving the natural resource is embedded in these concepts.

The land has its own *Safuu*, the forest and tree have their own *Safuu* and the water, spring; shrines have their own *Safuu* and deserve management in the Oromo cosmological wisdom.

According to the Oromo worldview, the physical, the human, and the spiritual worlds are interconnected phenomena. These different worlds have maintained balanced relations, which forms the cosmos. In their knowledge about this cosmic order, the Oromo have different indigenous knowledge, which dictates their relations with the other world. This knowledge includes the knowledge of the concept of *Uumaa*, *Uumama*, *Ayyaana*, and *Safuu*. These four concepts are believed to guide and maintain their relations with the worlds in cosmic order. In their knowledge, the Oromo are aware of the values of natural resources, and have normative practices and relations to each resource to sustain the balanced coexistence. They are aware of their action in their relation to natural resources and God, whether their action is positive or negative. The study reveals that the Oromo have indigenous knowledge, which is part of their worldview in their relations to natural resources, and have maintained relations with their environment for generations. They have indigenous knowledge and practices of natural resources management, and relations with land, forest, and water resources that encompasses the entire aspects of their life. These natural resources (land, forest, and water) form the skeleton around which environmental knowledge of the Oromo organized. Above all, these resources are the reservoir of their comprehensive ecological knowledge, and the repository for the cultural traditions and identity of the Oromo.

Oromo society has undergone different socio-cultural dynamics. As a result, the Oromo indigenous knowledge and practices in natural resource conservation, their indigenous perceptions of environment, their indigenous institutions, and their philosophy and worldview have been in the process of change. Political ecology tends to focus on larger forces impinging on a community at one point in time. These forces either have positive or negative impacts on human-environment relations, and the traditional

thoughts of the community. The findings of this study reveal the actual impacts of such forces on the community that have been brought socio-cultural dynamism and changes in human-environment relations among the Maccaa Oromo. Different literature on the Oromo have also showed changes in the Oromo indigenous socio-cultural lives and belief systems, value, ecological perceptions, and relations to natural resources since the time of Abyssinian Administration. In similar vein, Gemetchu (1996, p. 97) asserts that historical experience of the Oromo in relation to the Christian Abyssinia culture has come to challenge the very basis of Oromo culture and faith. He further points out, "Borrowing with their faith from the Judeo-Christian tradition; Abyssinians were come to revere a white God and reduced the Oromo belief in *Waaqa Gurracha* to a form of devil worship" (Ibid).

Similarly, Bartels, (1983) asserts that because of the establishment of [Amhara] government since 1888, the establishment of church, the influence of Catholic and Protestant mission, the changing of landholding system into the hands of none [Oromo] has greatly contributed to a growing disintegration of traditional Maccaa society. Tesema, (2006) also indicates that the earlier system of socio-political and cultural organization such as Gadaa, were gradually transformed and social value were either replaced or modified leading to individual holding and wealth accumulation among the Maccaa Oromo.

The ethnographic data obtained from the study area also reveal that changes in their indigenous

knowledge and practices in natural resources conservation mostly account to the conquest and the subsequent gradual introductions of the alien culture. The indigenous land tenure systems of the community that have survived for generations are challenged with the introduction of successive government's tenure systems, even though the community continued to call their clan land. The introduction of formal conservation systems, which took the role of indigenous people without due considerations of the socio-cultural relations of the people to the resource, and the introduction of different religious faiths contributes to these dynamism. Moreover, the emergence of modern world systems and the impact of globalization have much contributed in reversing the long established cultural traditions and the underpinned philosophical principles of lives and existence.

ACKNOWLEDGEMENT

This work is a synergistic product of many minds. We are the sum total of all the individuals who have in some way, little or great, contributed to our lives. I learned everything I know from someone. We are all products of what we have gained from others. I thank the multitude of friends, educators, my mentor, authors, and family members whose lives have contributed to mine. Above all, my special thanks extended to the owner of this knowledge and my mentor in my research, the indigenous peoples in general, and the Oromo people in particular. This work is dedicated to them.

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