



## The Role of Traditional Institution in Managing Natural Resources; the case of Oromo "Gada" system in Ethiopia: A review.

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### Abstract

Depletion of natural resources is among the major problems facing human beings all over the world in general and the highlands of Ethiopia in particular where land degradation is very severe problem. Climate change, soil loss due to erosion, depletion of surface and groundwater and loss of biodiversity are among the principal problems that our planet has been confronted with. Decades ago the natural resources of the country were in a better condition as compared to today's status which might be due to population pressure and unwise utilization of the resources in which the management approaches is completely depend on an externally induced knowledge and system and ignored the traditional management system. However, every community has its own traditional institution to manage and utilize the natural resources but due to lack of consideration of the role of traditional institutions in natural resource management and completely depending on imported knowledge and practices which caused unsustainable natural resource management. The Oromo Gada system is one of the best examples of African indigenous institutions used in managing socio-economy, political and environmental issues for centuries. According to the Oromo people, the Gada system guided how to manage the sacred natural sites. In Oromo community Gada and natural sites are two inseparable entities, the natural sites are places dedicated to rituals of the Gada system and adoring of Waaqaa (God). Hence, the Oromo community has conserved natural sites in their area for millennia. Therefore, natural areas are dedicated to various rituals and other cultural events in the Gada system. Moreover, they are places where praying of God for sustainable peace, health and wealth. Therefore, due to the influence of Gada system in natural resource conservation, there is better natural resources in Oromia region as compared to the rest of the regions.

**Key Words:** forest; gada; oromo; rangeland; traditional institution; natural resources; water

### Introduction:

The major problem affecting natural resource potential in Ethiopia is severe land degradation. This was aggravated and caused by population pressure built up, demand for fuelwood and building materials, and conversion of range and forest land to cultivation land has resulted in the devastation of natural resources such as soil, water, forest, and the rest of biodiversity [42]. The combined effects of deforestation, overgrazing, expansion of cropland, and unsustainable use of natural resources have contributed to extensive land degradation [18]. The land degradation process has been exacerbated by the historical and changing patterns of land ownership relating to ethnic groups [9]. For instance, Menelik II and his officials destroyed the "Gada" government and killed or expelled the Tulama Oromo to transfer their lands, on which Addis Ababa was founded in the late 19th century, to the Amhara colonial settlers [5; 36]. However, the world in which man lives contains several resources, and these resources make it possible for a man to exist on the earth and reproduce after its kind and produce goods and services to meet its needs. In the early ages, when human populations were low, there were more than enough of these resources for each person and there was no shortage and therefore, no conflicts over these resources [42]. However, land, forest, and water resources have socio-cultural, ecological, and economic values in the life of the Oromo community and management of natural resources has a dynamic relationship. In their worldview, land had created not bare, but with other constituents



natural resources, including forest and water and they should be utilized in the manner that does not compromise its sustainability [29].

Moreover, for several decades, governance of common-pool resources has been a subject of debate relative to the role of the state, individuals, and collectives. Hence, the quest of maximization of the contribution of the traditional institution in socio-political, economic and environmental perspectives are undermined in one or another way in developing countries for the sake of imposing a new institution that suits the needs of the particular groups. However, there is a need to place traditional institutions within the wider frames of governance for resource allocation, adaptation, and negotiated solutions [29]. Since centralized systems in natural resource management are not suitable due to the complexity of societal problems. Indeed, the role of traditional institutions for the commonly owned natural resource management has not been given generously at the tension among scholars, policymakers, and government agencies [11]; hence, customary institutions are integral to the social safety nets and shared claims over productive assets that characterize the lifestyle of the community, and it is the way they share responsibility, resolve conflict, lead themselves, and adapt to difficulties and comfort for the sustenance of their life. Besides, Africans developed a variety of traditional natural resource conservation and management strategies and regulation mechanisms in the past [4] where the Gada system is an exemplary one that the Oromo community contributed to the world. Gada system is a constitution of the Oromo society through which the society administered, defended their territory, maintained, and developed their economy [25]. It is a democratic system of governance that started before the European and American democracy [26].

According to [15] the Oromo Gada system is the oldest and living traditional socio-political, religious, cultural and environmental institutions by which Oromo people used to manage the common pool resources. Besides, it is a system of social organization based on age-grade classes of the male population that succeed each other every 8 years in assuming economic, environmental, political, military, and social responsibilities. A complete Gada cycle consists of five Gada grades and each man born to or adopted by Oromo parents is automatically placed for life into a ready-made pattern of positions and moved through it. They are performing various services for the public and also receiving certain privileges. Each man contributes his labor power, knowledge, and skill in different capacities to society including environmental protection [16]. The Gada institutions are important in the mobilization and regulation of natural resources to maintain long term use. Hence, sustainable uses of natural resources are determined by the strength of local institutions for rational management [32]. Moreover, traditional practices are important in responding to ecosystem dynamics, managing environmental variability, and securing a flow of biological resources [12]. Beyond its social, cultural, and political role, the Gada system is the main pillar for natural resource management and the fair distribution of these resources within its broad institutional arrangements [15]. In addition to Gada, the Oromo community has many traditional institutions of which "siiqee" in which the women Oromo have been empowered in resolving conflicts and dealing with environmental matters [15].

Before mid of the 19th century, the Oromo had developed their own cultural, religious and political institutions such as Gada that shaped their history. But since the early 1850s, the independent existence of the Oromo people began eroding under the project of empire-building that changed the rule of Oromo from Gada to the feudal autocrat. As a result of Abyssinians effectively colonized the Oromo land and were killed, terrorized, and repressed. Hence, the Oromo's natural resources management tradition was depleted, and their environment and natural beauty were destroyed [6]. For the Oromo people loss of its Gada system is not only the loss Gada system, rather it is the loss of its identity, custom, value, justice, social organization, and economy in which they govern the social and environmental issues. Because Gada system is a very huge and complex social institution in which the Oromo people manage their socio-political and religious practices. It has guided the religious, social, political and economic life of Oromo for many years, and also their philosophy, art, history and methods for keeping time. The activities and life of each and every member of the society are guided by Gada. Hence, considering the role of Oromo's Gada system in political, social, environmental and economic aspects, the United Nations, Science, Education and Culture Organization (UNESCO) has recognized it as an intangible cultural heritage of the world in 2016 [21].

The unique approach of natural resource management and the resource abundance and diversity in most parts of Oromia is due to the cultural set up within the Gada system. Currently, most of the remnant forests, water bodies, land suitable for various production are found in Oromia. This may be due to the natural formation of the area and the traditional management by the Oromo people guided by the Gada system. However, among the Oromo, the Borana and the Guji have relatively retained most of the traditional and original ways of life of the Oromo community. They are currently implementing in natural resource management [7; 46; 19]. However, the roles of the traditional institution in natural resource management have owed no or little emphasis by modern conservationists and governments [7; 8]. Particularly, in Ethiopia, natural resource management has been under the monopoly of the government, and as a result, the state has been accounted as stewardship in natural resource management and conservation. This has posed a problem from the emperor's era up to the present time. In most of the country, unlimited use of common-pool resources continues to be a major cause of natural resource degradation despite the key role traditional leadership plays in enforcing natural resource management rules and strategies [50; 34; 15]. Besides, underutilization of indigenous knowledge and institutions; their roles in sustainable development were undermined and marginalized. Traditional leadership, beliefs, customs, taboos, and folk tales are used as a traditional mechanism for scaring people from loss of common property [47; 15]. Hence, this review was aimed to through a rigorous review the existing scant study on the role of the Gada system in managing commons resources and make accessible for the wider users.

In the Gada system, knowledge and information have continuously been transmitted from generation to generation, hence, the young Oromo individuals are expected to learn important things that are necessary for social integration and



community development. The young Oromo community learns about their environment and its management from their families, communities and experts through stories, folk tales, riddles, and other mental games which help to acquiring the knowledge of society through Gada principles. Hence, as the Gada system is inherent in the life of the Oromo community, its contribution to natural resource management is continuous and sustainable.

### **Gada and Forest Resource Management:**

Forests are believed to absorb carbon dioxide in its process of photosynthesis and change it into oxygen. They are home to varieties of wildlife; increase the fertility of the soil and protect it from erosion and help in the conservation and maintenance of the water cycle. Therefore, the conservation of forests indirectly assists the conservation of other related natural resources such as soil, air, water, and wildlife. Usually, forest development works are maintained by the government and whenever the government changed the resource will be destroyed due to the connotation with bad memory with the previous government. For example, the vast afforestation campaign by the Derg government of Ethiopia was destroyed immediately after the collapse of the government. However, any conservation of forests based on traditional institutions is likely effective [15]. From the long-term global experience, the existing natural forests which are still in danger are found where indigenous people with their traditional practices are living. For instance, the Amazon basin in Latin America and Zaire Basin in Africa is the real model for the existence of precious natural forests. Hence, to maintain such meager natural forests and to restore the lost ones, it needs to involve indigenous people and make use of their indigenous knowledge. This is why some conservationists have been trying to give attention to indigenous people and their institutions in conservation endeavors.

For the Oromo, forest resources have sociocultural and ecological values, the socio-cultural importance of forest resources are manifested in their daily shores, and facilitate their socio-cultural and spiritual life, including cultural material objects and related significances. Hence, these cultural material objects are the manifesto of the Oromo cultural property and identity. Moreover, the greenness of forest resources symbolized as a development and productivity in the Oromo community [31]. Besides, the Oromo's Gada institution has a long-life exemplary role for forest management. According to [6], before the colonialists destroyed the Oromo Gada institution, the natural resources and the beauty of Oromia was an oasis luxuriant endowed with large trees and known for its opulent and dark greenery which used to shoot up from the soil. The greenery and the shade delight the eyes all over and give the landscape richness and a variety, which make it like a garden without boundary (Asefa, 2020). The healthy, uniform and pleasant climate; the fertile soil, the beauty of the habitats, the security of the environment in which their houses seem to be situated makes Oromo land one dream of remaining a beautiful country. This blessing was due to the esteem of the Oromo Gada for the environment [14]. Moreover, the Oromo community values the significant role that forests played in maintaining the balance of nature and a suitable climate for human existence.

The Oromo people have a special outlook towards forests because of the special benefit they draw from forests. They use it as a dry

season grass reserve, a source of wild food, a place where ritual practices are taking place, and a place of refuge at times of war. Besides, they use different trees for different purposes, particularly for ritual activities. Ritual activities are conducted under the shade of big trees for the wellbeing of the people, livestock, and the environment [39]. According to [29], different trees have different meanings to Oromo with great respect for these plant species in everyday social, political, religious and environmental aspects of the Oromo people. They express the love they have for a tree by naming children, places, towns with the name of trees, for instance, Birbirs (Podocarpus falcatus), Garbii (Acacia albida), Harbuu (Ficus sur), Qilxuu (Ficus vasta), Ejersa (Olea europeae), Mi'eessaa (Prunus africana), Gaattiraa (Juniperus procera), Hoomii (Pygeum africanum), Somboo (Ekeberigia capensis), Oda (Ficus sycomorus). Besides, it is too common to see places, towns and peoples with the names of those trees all over Oromia and this indicates how the Oromo community values forest as their children and their country. Moreover, the Oromo community considered those trees as the sacred grove and cutting growing green trees of such species are not allowed by Gada rule.

Podocarpus falcatus has a special association with the Gada system; the Oromo community used the tree as a pillar and put green leaves under it to appease or propitiate their God. It needs to be covered by Jaawwii (red cloth) and a ram should be sacrificed under it. Whereas Ficus vasta is highly valued for its appearances like the breast that produces milk, and edible fruits. On the other side, Olea europeae is one of the respected indigenous trees that Oromo people used to make very expensive household utensils hence, the inhabitants in any way could not utilize those trees rather they conserve them for the next generation [2]. Moreover, the Oromo sacrifice domestic animals under the Dakkii trees to maintain peace and to avoid diseases. The Dakkii tree has also another advantage, the Oromo people climb these trees and control the movement of enemies from a distance and this makes the tree more important and targeted for conservation [15]. In generally, Oromo people consider forest resources as a cherished area where God's blessing is too close hence, prayers are often praying under Oda (Ficus sycomorus) tree [33] and it is taboo among the Oromo people to cut trees, destroy forests, or hunting of wild animals in these areas. Moreover, traditionally, the Oromo community put sanctions through their Gada rules on those who destroyed forests with fire or by cutting down the trees without genuine use. Furthermore, outsiders are not allowed to cut down trees or use forest products from the forest area of the village without the permission of the villagers [33].

The Gada rule which used to regulate social, economic, environmental and political issues is formulated under the shade of the Oda (Ficus sycomorus) tree. [17], in his study, indicated that the Guji Oromo have deep knowledge of the sustainable use of forests and other natural resources. The Gada assembly permits the use of dead trees for firewood and branches for construction and other purposes and prohibits using big and young growing trees for such purposes. They give care for the shoots or growing parts of plants and flowering and seed-bearing trees. The Oromo Gada rule strictly prohibits the settlement in the forest. On the contrary, forest settlement is the main problem for forest destruction in the country where the Gada system is weak. The



Gada rule enforces the establishment of the buffer zone to halt the expansion of fire beyond the needed area. The Gada rule directs all Oromo's to protect ritual areas and care for growing and big trees as they do for their children and elders. According to OFWE (2018), The Oromo in western and southern have special attention for Forests conservation due to its use as a shade tree in coffee production field.

The conservation of forests and related natural resources is based on the utilitarian values of the resources and the beliefs of the society proved that the indigenous knowledge and culture cherished by the Oromo community is forest friendly. The Gada System and the associated norms of the Oromo community and the sanctions imposed on those who break the laws and the norms played a significant role in the conservation of forests in the Oromia region. However, with the conquest of the Oromo and the consequent repressive rules imposed by the Ethiopian rulers, on the Gadaa System and the embedded indigenous knowledge of society on the forest conservation appears to have been greatly deteriorated and this resulted in the degradation of forest resources in the region [15].

Furthermore, the beliefs and the associated value ("safuu") of the Oromo seem to play a significant role in the conservation of natural resources. The Oromo, for instance, perform prayer ceremonies along permanently flowing rivers, by the side of big mountains, hills and under the shade of big trees especially Oda (*Ficus sycomorus*) and it is because the Oromo people believe that Waaqa (God) likes these natural features that are green and distinguished by their size or other impressive qualities with aesthetic appeal. In the same manner, Oromo celebrates thank giving day (Irrecha) during the end of the rainy and dry season to give thanks to God for a successful transition from heavy rain and extended dry season hardship under the shade of Oda (*Ficus sycomorus*). Hence, they provide great respect and conservation for such areas (Workineh, 2005).

According to the teachings of the Oromo religion (Waaqeffannaa), the land and resources around ritual places are viewed as sacred and they are well protected. They believe cutting the sacred trees is the same as violating the will of God (Waaqaa). For instance, the Korma Korbeessa tree is a sacred tree under which a bull or a goat is sacrificed in different parts of Borena Oromo and they worship Waaqaa (God) under the tree (Workineh, 2005). As a result, the tree cannot be fell down, and Oromo farmers consider the existence of trees on their rangeland or farmland consider as the symbol of prosperity and they purposely preserve on their land.

Taddesse et al., (1995) investigated that the Oromo community cannot unnecessarily exploit natural forests because there is a moral code of ethics in which all Oromo should act accordingly. The Oromo Gada institution does not consider trees as mere resources that can be used without limit and the Oromo religious beliefs and indigenous moral laws imposed a system of ecological check and balance [15]. Specifically, the Guji Oromo had Woyyuu (sacred shrines) associated with Gada rituals or myths of the origin. These sacred shrines were the common property of the whole society and were found all over the territory of Guji, covering vast areas of the land and protected in common.

Negessa, (2011) also indicated that the conservation and the management of forests have been deeply enshrined in Oromo culture. They perform praying under trees, in forests, and around rivers. Many of the ritual activities related to name-giving when one passes from one Gadaa grade to the other Gada grade and other Gada related ceremonies, wedding ceremonies, and funeral process are done with the use of trees and their products. Naming and other rituals by Abbaa Gada take place under Oda (*Ficus sycomorus*) tree. Due to these values, Oromo people cannot damage the forest resource, rather they conserve them. In many parts of Oromia, during the wedding ceremony, the bride and the groom are expected to sit under respected trees like Dhugoo, *C. mycrostuchus*, Haruu, and Uddessa. Dhugoo is to mean the man of truth, wishing the bride and groom to be honest and stand for truth and there is also a tree called Ceekkataa, which is used only for digging a grave hole or to point out the place of the grave hole. In Guji Oromo myth, a person who killed another person using Ceekkataa, starting from that day, the tree is considered as a tree of blood (Muka Dhiigaa) and used for funeral purposes (Negessa, 2011). Therefore, the Oromo community has valued and managed trees that have different cultural values for different purposes.

Kitessa (2007) in his study found that the Jimma Oromo community conserve forest trees either for religious practices or for the benefits they derive from the forest as in the case of coffee shade. Traditionally each block of forest is under the possession or supervision of a specific clan and used only by these groups or individuals. Entering these areas and cutting trees by an intruder is prohibited. Every member of the community is responsible for any destructive activities in his plots. Nobody has access to anybody's plot without the permission of the owners (Fufa, 2013). Feyera and Demel (2003) also reported that there is a traditional institution called Shennechaa (representative leader from Gada) in Jimma Zone, which regulates the management of the forest. It enforces codes to protect forests and to prohibit activities that affect forest resources such as cutting trees, commercial logging, timber extraction, charcoal making, unwise use of fire in the forest, debarking, girdling, and indiscriminate under lashing.

#### **Gada and Water Resource Management:**

Water has a strong tie to the physical and spiritual well-being of humankind. Regardless of the differences in religion, culture, and social norms, every person depends on water. Different traditional water technologies and management practices have been used in various parts of the world since time immemorial [16]. The traditional practices are dependent on local situations. Some are linked with surface water and others with groundwater extraction and management (Beshah et al., 2016). Management of water as common property in the pastoral community of Oromia remains relatively intact to date (Tachu and Irwin, 2003). Despite the collapse of most of the indigenous institutions of Oromo over the last 30 years, those concerned with the administration of water have sustained their importance (Homann et al., 2005). It is important to note that access to water and grazing land is fundamental to the survival of pastoralists because of the inherent nature of the ecological setting of their livelihood. Thus, the water and land management functions of the Gadaa system remained relatively robust. Homann, (2005) described that the Oromo community's water management strategy focusing on the role of the Gada institution. He elaborated that the Borana Oromo's water



management strategy classified under drought conditions, as follows:

- Wet season (after rainfall): it is a time when open water sources are used, and wells are closed.
- Dry season: when herds are successively shifted to more distant ponds and traditional wells are re-opened to preserve water near the homestead.
- Progressing dry season (water scarcity): when the drinking frequency of cattle is gradually and subsequently reduced to one day (dhabsuu); two days (limaalima) and finally three days (sadeen) and this strategy is controlled under Gada structures.

The Borana Oromo society manages access to water is might be linked to the tasks of cleaning, maintenance, and rehabilitation. For example, cattle are restricted from entering the water sources by fencing off the sources and making them drink water hauled into troughs (naaniga). They define the rights to access the various sources of water (wells, rivers, and ponds). Watson (2001) in his study identified the following most important sources of water that are highly regulated in the Oromo community; they are: (A). Hand-dug shallow ponds (Haroo): it is the property of an individual or his direct descendants who initially excavated it. Rights to use the pond are obtained by providing labor for the maintenance of the pond. Although the ownership is to excavate, it is administered by the Gada leaders. (B). Wells (Eelaa): they are divided into two types, Adadi (shallow wells) and Tulla (deep wells). The Tullas are reached up to a depth of 30 m and water is drawn by a row of people standing one above the other and passing up containers of water.

The rights to access water from these sources have been privatized and are sold by individuals and groups. Tache and Irwin (2003) also mentioned that occasional water sources (surface water from rain) have the most unreliable supply, and no restrictions are imposed in accessing these sources of water. In contrary to this, hand-dug ponds and wells are regulated and they are the most important sources of water as they are the most reliable and labor-intensive types and they are managed by a council of the clan group that has power in the Gada system, which includes a retired hayyuu (special counselor of abba Gada) and abba herregaa (the coordinator of water use and maintenance) and other members. Any violation of the Oromo Gada rules of water use and maintenance is referred to and discussed by the kora Eelaa (well assembly) in the presence of the criminals [16]. The complex web of entitlements enables an individual to gain access to water from any particular well and the turn that person is given in the rota for the watering of animals (Watson 2001).

The Gada rules govern the use of water-based on the membership of the clan of the abba konfi and on the contribution to the labor of constructing the wells. Animals are given water according to a strict order by the abba konfi, abbaa herregaa, and other clan members according to their seniority in the clan [15]. In addition to the entitlements, the Oromo tradition and laws forbid the denying of anyone access to water or the request for its payment. In general, this indicates that nature is equal for every resident; hence there is no discrimination in accessing natural resources in the Oromo Gada institution (Constantinos, 1999). In most parts of Oromia people have the experience of feeding livestock on the salt leak and the access to such resources has been governed by the Gada rules. However, currently accessing common resources

are the main cause of conflict in other parts of the country where Gada rule and other traditional institutions are weak [16].

Since Oromo community have a close association with livestock husbandry, well development and management of water resource is a central feature of the community. The critical link between the Gada leadership and the clans appears to be the well. Abba Gada solicits the cooperation and assistance of numerous Abba Eelaa (father of Well) to get maximum participation of clan in Gada activity (Legesse, 1973; Teressa, 2015). It is obvious that well administration and Gada system have a two-way relationship with one can affect the other in which Gada leader is to coordinate and control the clans at clan level and the well administrator supports the democratic good governance of the Gada leaders for their direct contact with the clan. Abba Gada uses well officer as an intermediary in pursuing offenders who are unwilling to submit to the authority of Gada councils whenever a need arises [15].

#### **Gada and Rangeland Management:**

In the Gada system, every aspect of the Oromo community such as access to rangeland and water wells, seasonal mobility, conflict management, and mutual assistance are governed by the Gada system led by Abba Gada with strong hierarchical structures, kinships, and social ties have been central in enforcing the Gada's decisions [15]. The Oromo community has different institutions for different resources; they have an institution for the democratic management of waste, pastures, and others under the Gada system [3; 24; 7]. The Gada customary codes were thus the backbone of the long-standing communal resource use and management systems of the Oromo. In the history, Oromo community has been based on cattle husbandry for survival and income generation; they have been effective over generations in producing animal products while maintaining rangeland resources productive [24; 3]. According to the study by [44] for many centuries, the Oromo pastoralists were able to manage their rangeland based on their own experience and traditional knowledge. Their management system involves the interaction between plants, grazing animals, abiotic components and anthropogenic factors. They have a well-established traditional system of range management ruled by the Gada Institution. Accordingly, they categorized landscapes in terms of seasons of use and based on the grazing capacity of the land [35]. [22] classified the Borana Oromo rangeland utilization into Kalo, Worra and Fooraa land use units. Kalo is grazing land for calves, Worra is used for lactating livestock and Fooraa for dairy livestock this enables range utilization among the Oromo community considers the carrying capacity of the rangeland. The most important part of the rangeland management is the obligation for animal movement to be regulated according to the patterns outlined by elders based on range availability, rangeland condition and seasonal carrying capacity of the land [49].

[23] studied that the Oromo community's indigenous knowledge about range ecology, livestock resources, and social organization has developed highly efficient range management strategies to deal with the high-risk environments of arid areas. Herd splitting is one of the Oromo's indigenous rangeland management knowledge. It is the practice of dividing the livestock into separate herds depending on their age, sex and productivity. [1] in their survey also identified that most of the respondents (96%) from the study area, responded that they split their herd into different divisions. They divide their herds based on their ages. The



deliberate division of the herd concerning age is due to that small calves and large livestock cannot graze together. Hence, herd diversity and splitting are techniques that can be used to maintain the long-term productivity of the range, and in some cases to improve degraded rangelands. The Borana elders confirmed that pastoralists divided livestock as Waatiyee (Calves less than 5 months) Yabbiyee (calves more than 5 months), Haawichaa (milk providing cows), and Loon Fooraa (mobile herds). Waatiyees are kept on open grazing around the encampment and supplemented with forage cut and carry. Yabbiyee also grazes open grazing around villages and enclosure. Haawichaa and animals younger than three years were sent to the grazing herds. However, mobile herds were sent to remote grazing during drought and this allows easy management of rangelands [23].

The Oromo community in general has the long-term tradition of rangeland enclosure. [1] identified the use of traditional range enclosures locally known as kaloo is widely practiced in their area for dry season grazing. Traditional range enclosures can be used as a method of rangeland restoration where rangelands are often heavily grazed to allow the herbaceous vegetation diversity to recover. The prime purpose for the kaloo to be designated is to reserve grasses for dry season grazing. Mostly kaloo is designated for waatiyee and yabbiyee. According to the view of Borana elders, beside the divisions to which the enclosure is designated for the enclosure is allowed to dullacha laafaa (weak cows), qottiyyo (oxen) and livestock to be sold this is used during drought season to improve the weight of livestock. The kaloo (enclosure) is managed by Jaarsa dheeda (elder of grazing) of that reera. Each member of the village and reera has the responsibility for the management of the enclosure. If there is the misuse of the enclosure the issues have first to be resolved at the village level by elders of the villages. If the issue has to be focused in-depth, Jaarsa dheeda has to make a decision.

However, the Oromo community managed the issue of commons on rangeland through the Gada system. They developed an acute art of managing grazing land and have established institutions that are indispensable to the development and proper management of these resources [49]. [45] identified Borana's grazing management mechanisms as follows:

- Division of herd into warra and fora herds
- Moving animals during the dry season
- Deferment of grazing area (kalo)
- Demarcation of grazing and settlement areas
- Migration of village members
- Bush control (burning)

Moreover, the Gada leaders look after those activities whether they are friendly with the norms of Gada. Rotational grazing reduces the grazing pressure, avoids weakening of plant vigor and allows quick recovery or regrowth of plants. Sometimes areas are also kept in rest for a succession of growing seasons when they are overgrazed. The community practices conservation of grazing area by fencing the boundary of rangeland with a thorny bush. This was especially done in the dry seasons for feeding immature stock and lactating cows. Although it was labor-intensive it was important to reduce grazing pressures and seasonal feed shortages, so it helped to maintain livestock production and productivity. Besides that, it helped seed setting and plant regrowth [45]. Moreover, in the Borana area, Abbaa Ollaa (head

of the encampment) is the smallest level of settlement usually 30 to 100 household heads who are responsible for the affairs of the encampment at its initial stage and decides when and where to move cattle which in turn responsible for wise utilization of rangeland and water [48]. Besides, Jaallabaa (messengers) and Abbaa Qe'ee (conveners) are responsible bodies for an emergency at ad hoc meetings for solutions to problems related to rangeland utilization. Moreover, there is Jaarsa Hayyuu (counselors) who are responsible for mediation between institutions appointed by special clans [49]

Particularly in the Borana area, the Gada rule states that there should be land reserved for abnormal dry seasons where the decision is made by the grazing council (Kora Dheedaa), and herd diversification to reduce the impact of drought on the entire herd [15]. Moreover, there are special meetings for efficient coordination of natural resource management and distribution. The grazing council's annual meeting to plan the re-partitioning of the rainy season pastures and Kora Deebanu (the clan-based convocation after a drought for the rehabilitation of deprived clan mates). The Oromo community through flexible natural resource use strategies and stratified herd management [3]. They matched the livestock with the available grazing and water resources during times of abundance and scarcity [27]. For scarce resources particularly water, the discussion for its distribution, watering schedules, labor requirements and maintenance of wells, is determined by the well council and it is the legitimate expression of Borana jurisprudence [24]. Besides fair distribution of resources, traditional institutions are the way to strengthen the society's intimate connection to the natural environment driven by their beliefs, behaviors, and cultures for sustainable natural resource management [38].

According to the Borana Oromo, customary institutions have been categorized into micro and macro institutions and they are further subdivided into many branches. Each of them has the responsibility for natural resource management and other societal issues at various levels. The micro-level institutions for the management of rangeland are Warra, Ollaa, Ardaa, Reera, Madda, and Dheedaa. The appointed and elected individuals in the community like Jaarsa dheeda (responsible for control over grazing land), abbaa herregaa (responsible for control watering scheme) and Jaarsa madda (responsible for control water sources). In general, they have their roles and responsibilities for managing natural resources. Where Warra is the smallest unit in the village that includes the family of one household and their roles in rangeland management start from the advice of parents to their children who look after livestock. They told to their herders not to be out of the customary law of Gada. There is an area reserved and not to be allowed for grazing during the rainy season. For instance, kaloo (enclosure) is not grazed during early rain to allow the growth of grasses and during such season livestock and calves graze open grazing areas. Herders or member of warra take care of resources on their side and even reports their father when he/she sees others are exploiting the resource [24].

Ollaa (Village) is the collection of different warra and abba ollaa (head of the village) is the most popular man among his villagers in terms of his ability to organize, analyze and manage things according to Oromo custom or Gada. One or more villages have grazing areas in common. From the villages which have grazing



area together elect one person to take care of enclosure. Ardaa: is a particular site that is inhabited by a village or cluster of villages (Dika, Galgalo. 2013). It is a small grazing territory where its residents can commonly share the water, pasture, and other resources within the context of customary laws of pasture and water. Reera: is the cluster of villages that are found in a specified site or two or more close sites inhabited by people who can use water from the same sources and their herds can use on the same grazing grounds where Abba Reera (head of the cluster) is a famous man who can manage rangeland and water resource of Rera area. Mada: It is a wider territorial unit than Reera. It is made up of a combination of clusters, which often surround the water well at its center. A Mada is administered by the council of elders drawn from different clusters of that Mada. They usually meet at water point to discuss how to manage and share water and pasture among residents in their unit, or with other newcomers who come from other Mada in search of better resources. Dheda: is a wider unit than Mada. In most cases, it includes several Mada that are managed independently by the council of elders drawn from different Mada's. Jaarsa dheda (the elder of grazing land) are responsible for mobility decisions; addressing social disputes and have an important role in conflict resolution. However, in the Borana area, deep Tula wells and natural ponds containing water throughout the year are managed through customary laws. The grazing lands surrounding well are protected during the wet season and used during the dry season.

#### **Rules and Regulations of Gada in Natural Resource Management:**

The customary laws proclaimed by the Gada institution include socio-cultural regulations and environmental protection. The formulation and announcement of customary laws are performed according to the principles and regulations of the Gada system [24]. According to the Gada law killing or thrusting wild animals, plowing in the forest, defecation and urinating in the sacred shrines are strictly forbidden. When a person destroys the sacred shrine by constructing a house, cutting down a tree and farming its land, he/she would be punished by paying bull and heifer [21]. Gada system sanctions different strategies that the Oromo community at all levels adapt to restrict access to parts of the natural resource in their jurisdiction [39]. Natural resource management among the Oromo community is based on democratic principles of the Gada system in which democratic selection of leadership; training through ritual activity; formation of law; participatory and transparent decision making in different assemblies. Having defined administrative units at different levels of the Gada system helps the Oromo community in the decentralization of governance, equitable access to resources, and development of solidarity among people [15]. Besides, natural resource management the Borana Oromo has unique administrative and social units at different levels ranging from the lowest social unit Olla (neighbor) to the highest Pan Borana Assembly (Gumi Gayo) to manage the rangeland [15].

In different parts of Oromia where the Gada institution is actively exercised, natural resources are tightly controlled mainly by the customary Gada system and other traditional institutions. The top of the natural resource management under the Gada system of Oromo is Gumi Gayo (Pan Oromo Legislative Assembly) which reviews the directions for the good governance of the Entire

Oromo community and lawmaker. Additionally, via the appointee and election of the pan Oromo legislative assembly, Aba Gada is responsible to coordinate and manage the institutions for the entire natural resource management [15]. Moreover, one major economic function of Gada is the distribution of resources by establishing who had to help whom, when and why, by settling conflicts between families over goods and through making laws. It is the system that governs the Oromo's use of natural resources and enables the various groups to coordinate their use of important natural resources. In the Gada system, the Oromo individual who has entered the Luba grade (individuals in the age range of 40–48) are considered to be elders [33]. According to [17], the Lubas (elders) settle disputes among groups and individuals and apply the laws dealing with the distribution of resources, criminal fines, and punishment, protection of property, theft, etc. Thus, the elders in the community form a dominant component of the customary mechanisms of conflict resolution and natural resources management [17] The authority held by the elders is derived from their position in the Gada system. While the rules and regulations laid down by the Gada tradition must be respected by all councils of elders. The problem regarding resource use that could not be solved by these elders would be handled by the higher Gada leaders [48] described that the role of Aba Gada in natural resources management and conflict resolution as follows: The Aba Gada is seen as the figurehead of the whole of the Oromo community and is often described as the president and as well as performing rituals matters are referred to him and his counsel made a final decision when issues cannot be resolved at a lower level of Gada institution.

The foundation of the Gada system is rooted in the informal or customary Oromo institutions of custom or tradition, laws, ethics and justice. They define the access and the rights that a group has to natural resources. According to [39], a herder bringing his cattle to an area would traditionally negotiate grazing rights with the Aradda council and the decision would be made according to the number of cattle already grazing in the area and forage availability. If the area were already being used to its maximum potential, the herder would be asked to explore other areas to graze. For centuries the Borana Oromo has been managing natural resources using its customary institutions. The governing body (Abba Gada) formulates and enforces general laws which are known as the 'aada seera' that govern access to and use of natural resources. Each newly elected governing body revises existing tenure arrangements and rangeland management in Borana is a social and political affair. The households reported being abided by the traditional bylaws on how to keep one turn in watering animals as ordered by the traditional water resource administrators or Abba Herregaa, assigned by the Gada council as a routine practice.

Each water source is subject to a complex set of restrictions, rules, and regulations that are administered and enforced by selected agents like Abba Herregaa under the surveillance of the traditional elders. Failure to supply labor to the well and failure to participate in the politics of the well council will lead to rapid exclusion. Depending on the degree of problem punishment by money, desilting and fencing to a water source are among the simple punishment however, the major sanction under the Gada system is an exclusion from the resource use. However, the development of water points by a different organization in the past has a



negative impact on traditional management and usage system of the resource. This is because of the fact that lack of proper land use planning practice by planners and lack of sufficient resources to effectively maintain and manage water points by the local government. Even if they agree that management of water points developed by external bodies (more than 90% of the respondents) had to be by the whole community, those problems resulted in discrimination of watering point management by the community [42].

### Conclusions and Recommendations:

Globally governments fail to appreciate, collaborate and complement the traditional methods of resource allocation and resolution of conflicts. Limited state understanding of the role played by traditional institutions like the Gada system has diminished the efficacy and relevance of this customary institution in conflict management in Oromia which has contributed to the degradation of rangelands and weakened the resilience of pastoralists to droughts. In the Oromia region where the Gada rule is active customary laws are often more important than statutory laws and are relied upon in deciding access rights to natural resources and in resolving conflicts. Therefore, states should recognize and support the customary courts and enforce their ruling. Hence, neglecting these norms and laws may have negative consequences for the development policy of the nation in general and for the local community who rely on them in particular. A 'systematic combination' of customary and statutory institutions in the development and management of natural resources may facilitate cross-cultural understanding, thereby improving the socio-economic development of the country.

According to Borana tradition, natural resources management and conflict resolution are combined and as a result of the great respect the customary institution received from the local communities, it is the best institution to deal with the operation and management aspects of natural resources governance. Hence, full authority should be given to the indigenous (Gada) institution in making decisions regarding access rights to scarce natural resources. Furthermore, the role of local customary institutions in water resources management and conflict resolution should be spelled out clearly in the water resources policy of the country. [16]. Gada as a system of governance embodies several institutions that manifest themselves in an overall socio-economic and political culture. The custom and laws, aada, seera, required to regulate the use of water sources, pasture lands, domestic and wild animals, people and all the goods used in homes. These laws and customs provided the requisite social and political order, which enabled them to move in and to live with each other in peace [35]. The Gada system has devised elaborate rules for the environment and resource utilization. Agenda of natural resource and environment have been the central issues of discussion and decision at the Gada assembly. Issues concerning people's relationship with the land and their environment were dealt with Gada centers where laws governing the land and water use were revised every eight years. In the Borana area, the Gumi Gayo (local Gada assembly) devised rules for resource utilization, which is known as Seera Gumii (law of assembly). According to their rule, no one is allowed to cut certain species of trees and there are Gada rules, which generally protect forests and the use of water resources. For the utilization of water resources, Aba ela (the father of water wells) is

responsible for digging water wells and managing the utilization of water. The Gada laws forbid anyone from selling water to another person of his clan member and the consequence was very serious usually banishing from the locality. Moreover, prayers are often made under Mi'eessaa (Euclea shimperi) tree in lowlands with family groups [33]. In the Guji Oromo area, it is taboo to cut trees, destroy forests, or hunting of wild animals. And they used these areas only for livestock grazing [40]. In general, Oromo has a tradition of managing forests, if a person destroys forests with fire or by cutting down the trees without genuine use, she/he is primarily advised by her/his family. If the person does not stop damaging forests, she/he is referred to the upper level (village or ollaa). Besides, outsiders are not allowed to cut down trees or use forest products from the forest area of the village without the permission of the group or the village. Village or group's forest conservation includes not only prevention of outsiders from destructing forests but also insider's proper use. At this stage, physical punishment could be used if the person is not willing to stop his/her destructive activities. In this case, the lineage has got the power to beat the person by laying him/her on the grass under big trees. Every member of specific groups is obliged to observe the punishment to get a lesson from it. The punishment also includes the slaughtering of an ox from the person's cattle and eating in a group. The beaten person's body is massaged using butter so that the person will get relief. The punishment is made with the hope that the person will not repeat the same destruction. In case the person is found involved in the same destructive activities, the case is referred to as the last supreme power of Gada [33]. Based on the contribution of the Gada system for natural resource management the following recommendations were suggested:

- Exclusive assessment and in-depth study of the existing traditional indigenous knowledge in each community and examine its contribution to natural resource management in the country.
- Scrutinize the role of the Gada system and practices for natural resource management in every part of Oromia and integrating with the scientific approach of the extension system.
- Awareness creation and consensus-building on the role of the Gada system in natural resource management among farmers, experts, scientists and researchers.
- Since Gada encompassing the whole life of the Oromo community, all sectors should support the revival of Gada system in areas where Gada system become weak.
- Prepare a holistic approach of natural resource management through integration of Gada system based natural resource management and the conventional extension approaches

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