

## Drought as a Threat to Cultural Practices among the Borana Pastoralists of Southern Ethiopia

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Submitted on: 2025, 30 August; accepted on 2026, 09 January. Section: Research Papers

**Abstract:** Borana is one of the most drought-stricken areas in Ethiopia. Recently, it has experienced five consecutive droughts between 2019 and 2023, resulting in significant deterioration in livelihoods and influencing cultural practices. The general objective of this study was to investigate the impacts of drought on cultural practices among the Borana pastoralists in southern Ethiopia. The study employed a qualitative ethnographic research design, utilizing in-depth and key informant interviews, focus group discussions (FGDs), and observations. The participants included community elders, parents, youths, experts from government offices (particularly from the culture and tourism office), and representatives of NGOs working on drought crises in the area. The study findings showed that the recurrent drought in Borana has affected daily rituals, sacred sites, occasional and annual ceremonies, traditional food systems, indigenous social security and networks, dressing style, hairstyle, house structure, and utensils in use. In addition to cultural impacts, this drought caused the loss of traditional knowledge and skills, losses in crop yields and livestock production, a lack of water and pasture, stress, poverty, and forced displacement. The study recommends that humanitarian and development interventions prioritize addressing the underlying challenges posed by climate change in order to protect and preserve cultural practices and livelihoods affected by recurrent drought crises, rather than relying primarily on emergency relief measures.

*Keywords:* Drought, Culture Change, Borana Pastoralists, Ethiopia

## Introduction

Climate change is widely recognized as the greatest challenge facing the international community in the 21st century. For too long, global warming has been seen as tomorrow's problem (Mearns & Norton, 2009). Now it is recognized as one of the most difficult issues affecting agricultural and pastoral development globally (Muluken & Desta, 2021). Sub-Saharan Africa is the driest continent-sized region, with drought being the most common natural disaster that occurs frequently and severely. The Borana experienced a prolonged drought that had direct and multifaceted political, spiritual, social, and environmental consequences. Since the majority of Borana pastoralists depend on livestock production, droughts have a significant impact on their wealth status and their entire cultural practices, which are worth studying.

Global policy debates and a growing body of research show that indigenous peoples remain among the poorest of the poor and are particularly vulnerable to the impacts of climate change (Oelz, Dhir & Harsdorff, 2017). This is so because they are dependent on and have intimate contact with the environment and its resources, with which they maintain complex cultural relationships (ILO, 2017; Figueroa, 2011). They share collective ancestral ties to the landscape and natural resources that are inextricably linked to their identity and culture (Nyadzi, Ajayi, & Ludwig, 2021). Thus, for Indigenous communities, climate change can lead to a loss of cultural identity due to the loss of places and ways of life (Norton-Smith et al., 2016). First, their situation differs because they are poor due to the scale and scope of the threats that climate change poses against their livelihoods, culture, and way of life. Second, their economic, social, and cultural activities depend on renewable natural resources, which are the most vulnerable to climate variability and extreme weather events. Third, they live in the geographical regions and ecosystems most affected by climate change. Finally, the rights and institutions of indigenous peoples are often not recognized (ILO, 2017; Massey, 2020).

During periods of drought, many communities' social networks and social cohesions are weakened, primarily due to increased workloads, depleted economic resources, and migration. Many rural families are geographically isolated from extended family, and transportation costs and time spent visiting family during drought make maintaining contact difficult (Aslin & Russell, 2008, cited in Lester, Flatau & Kyron, 2022). Moreover, communities that are uprooted because of climate change face the risk of losing their entire way of life, including the practice and transmission of living cultures. In this scenario, oral traditions, languages, cultural practices, storytelling, performing arts, social customs, family events, and traditional knowledge, including essential environmental knowledge, food culture, and dressing styles are all at risk (Dunn, 2017; Demi, 2016). Some underscore the close relationship between human culture and the abundant biological diversity of their environments; some would even say that they "co-evolved" with nature (Harmon 1996). If such cultural keystone species were to become extinct or endangered, the linked peoples would lose a piece of their identity, culture, and, eventually, language for all time (Dunn, 2017).

The integrity of indigenous peoples' food systems is closely linked to the overall health of the environment. The recent deterioration in many aspects of environmental quality has affected the quality of local food and limited its availability (Turner et al., 2013). This is more common in Africa (Leal et al., 2021).

Religions have a concern for environmental protection, and they usually communicate their moral teachings in society and shape the human mind to act appropriately. Religions link humans to the natural world, and shape human-environment interactions. Specific to traditional belief in Africa, links are more important. In this case, traditional belief systems use the theocentric view, in which humans and other creatures have God-assigned places and roles in the universe as agents of God (Obasola, 2013). Bartels (1983) discusses the Oromo worldview in which the moral value of safuu is originated from God, and humans have a moral obligation to uphold cosmic order and social order. With the same justification, someone who breaches these moral values is left to evil.

This study addressed the impacts of perennial drought beyond its economic and livelihood effects, including psychosocial well-being, community networks, social capital, rituals, food, and drinks, which posed an overall crisis in the culture of the community. Crises in culture occur when the traditions passed from generation to generation, such as folkways, mores, religious beliefs, and ritual practices, no longer conform to the more secular interests and practices of daily life (Park, 1943).

Droughts in the Borana pastoralists have previously been studied for their socioeconomic impacts, adaptive or indigenous drought management strategies, livelihood impacts, and leadership challenges in drought management. It was also studied for its impacts on livestock production and productivity, impacts on forests, drought vulnerability perceptions, and food security and its adaptive strategies (see Zewdie et al., 2017, Galgalo, 2019, Hurst et al., 2012, Gemechu, 2002, Petros et al., 2021, Tiruneh & Tegene, 2018, Wolteji & Garbaba, 2023, Tora et al., 2021, Birhanu et al., 2017). Given the multidimensional impacts of droughts and the Borana are predominantly pastoralists whose cultural practices and daily routine lives are dependent on the availability of livestock and livestock production, the impacts of drought on culture are worth studying. This aspect of the impact of the drought is not yet covered. Therefore, this study attempts to fill these existing gaps by addressing the following research questions:

- What are the impacts of droughts in terms of food culture, dressing style, house structure, and furniture?
- What are the impacts of droughts on social capital and security?
- How do recurring droughts challenge cultural, religious, and political ritual performances and gatherings?
- How is the drought interacting with indigenous knowledge and skills of pastoral life?

## **Research Methods**

### *Description of the study area*

The Borana rangeland is located between 4° and 6° N latitude and 36° and 42° E longitude, and it has an altitude of 1,000 to 1,600 m. It covers about 63,939 km<sup>2</sup> and is home to the largest pastoral population in the Oromia Regional State of Ethiopia (Coppock, 1994). The area is characterized by an arid to semi-arid climate, with average annual rainfall ranging between 500 and 700 mm (Helland, 1982; as cited in Teka et al., 2018). The Borana people live in southern Ethiopia near the Kenyan border, in an area of approximately 45,435 km<sup>2</sup>, where 75 percent of the land consists of arid plains. These

semi-nomadic pastoralists, who number about 1.1 million, have traditionally relied on herding cattle as their main source of income (Lucien, 2025).

Farming was originally introduced by settlers and soldiers following the incorporation of the area into the modern Ethiopian state. However, the Borana-inhabited lowland is not suitable for farming. Rainfall variability, both spatially and temporally, is a significant constraint to long-term agricultural development in the area (Tache 2000). Despite the absence of clear statistical data, studies show that farming has been expanding gradually over time (Tache 2000). A sample study by Elias et al. (2015) shows that cropland in the Borana area accounts for 2-8% of the rangeland.

The Borana region, which normally experiences a bimodal rainfall pattern with *Ganna* (March–May) and *Hagayya* (September–November) rains, has faced a prolonged drought due to the failure of five consecutive rainy seasons from 2019 to 2024. This severe and extended dry period has increased surface temperatures and aridity, leading to a critical shortage of pasture and water. As a result, livestock — particularly cattle, the community’s main livelihood asset — have suffered widespread emaciation and mass mortality. Since 2020, 3.5 million cattle have died from hunger and thirst, representing 90% of the livestock in the Borana region, which has resulted in a full-scale humanitarian crisis (Lucien, 2025).



*Figure 1. Livestock deaths due to drought in Borana pastoralists, southern Ethiopia (Source: European Union, 2024)*

The Borana practice a relatively strong indigenous governance, *Gadaa*, and social protection system, *Buusaa-gonofaa*. The *Gadaa* system is the indigenous system that governs the social, economic, religious, and cultural affairs of the Oromo people in general and the Borana in particular, which was prescribed as an intangible cultural heritage of humanities in 2016. Livestock is an essential source of food and income, as well as a symbol of pride and social status for the Borana. Key inputs for livestock production,

pasture, and water depend heavily on rainfall conditions. In Borana, during this drought, the availability of animal products such as milk, butter, and meat is very low, which affects the availability of nutritious food for families (Sintayehu & Sintayehu, 2023).

This study was conducted in the Dubuluk District of the Borana Zone of the ONRS, which is situated 645 km south of Addis Ababa, the Ethiopian capital (see map 1). According to the 2023 Dubuluk District drought situation report, Dubuluk IDP Camp is the largest and legally recognized camp in the Borana Zone, with 7,396 families and a total population of 24,845. The camp is where a significant number of internally displaced people were settled as a result of the drought, and the culture crisis brought on by the drought is more noticeable. The study's data were gathered between April 14 and June 30, 2023.

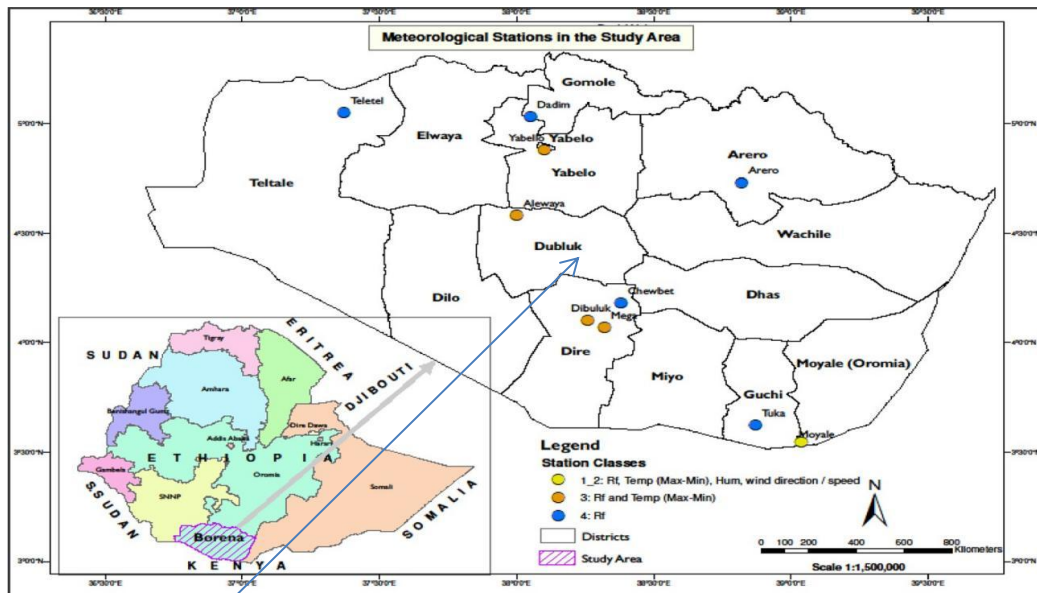


Figure 2. Map of the study area (Source: Shibru et al., 2023)

### Research design

We applied a qualitative-ethnographic research design because it involves collecting data in the participants' setting, analyzing the data inductively, and making interpretations of the meaning of the data (Flick, 2022). It also helps researchers explore how people make sense in their own minds and in their own words out of their own concrete, real-life experiences and everyday behaviors (Dangal, 2021).

### Participant selection techniques

Participants in this study were community elders, men and women, government experts (from the culture and tourism offices), and NGOs working to reduce the drought crisis in the area. We employed a purposive sampling technique to identify the research participants because it is an appropriate technique to access individuals based on their knowledge, experience, and verbal eloquence to describe the culture to which they belong (Gentles et al., 2015). Accordingly, our selection criteria were (i) knowledge of Borana culture; (ii) drought-induced internally displaced persons; NGOs officers who engaged in humanitarian

aid in the study area; and (V) government officials who have been living in the selected district for relatively longer. Finally, participants were of both genders to see the gender impacts of the drought. The sample size for this study was established according to the principle of data saturation.

### *Data collection methods*

We collected relevant data through in-depth and key informant interviews, focus group discussions (FGDs), and observation. The discussions and interviews were undertaken where suitable for the participants.

*In-depth interview:* The in-depth interview serves as a rich source for exploring people's internal feelings and attitudes on a particular issue. With regard to this, we have conducted semi-structured, in-depth interviews with the families of internally displaced people due to drought. In total, seven participants (three females and four males) participated in an in-depth interview.

*Key informant interview:* The key informants for this study were those with community knowledge and who held government or NGOs positions in the study area. They were six community elders (two females and four males), four experts from government officials with knowledge of and experience with culture, and two NGOs workers who are assisting the community during this drought. In total, twelve key informants participated.

*Focus Group Discussion:* We conducted two separate FGDs to understand a group view of the issue under discussion. The first FGD was a group of eight men, while the second FGD was a group of eight women. All discussants were from drought induced internally displaced people.

*Observation:* We have employed non-participant overt observation in addition to interviews. We visited the IDP center and observed the day-to-day activities of the displaced people. We observed the food they eat, the tents they live in, the utensils they use, and their daily activities.

### *Data analysis*

Thematic analysis was employed for analyzing, classifying, and explaining themes relating to the data. The analysis is conducted by categorizing the data according to their meanings and identifying patterns, regularities, and critical events. Thus, the data were interpreted with rigorous subjectivity to present evidence by using the participant's actual words since objectivity is less likely to be attained in qualitative-ethnographic research (Flick, 2022; Dangal, 2021). Therefore, we transcribed the audio records; coded and categorized the data based on their similarities, and discussed.

### *Data quality assurance*

We ensured the trustworthiness of the data through the technique of triangulation. We (the authors) are from diverse professional backgrounds, and we triangulated our multidisciplinary perspectives on a single theme during the study. We also triangulated the data from interviews and observations to maintain the dependability and credibility of the findings. With regard to reflexivity and positionality, the first author is native, while the rest are not, except they share a common language with the Borana. Thus, the potential bias of native ethnography was neutralized by the presence of outsider researchers. Further, the

positionality in native ethnography is also fluid, for it shifts contextually. The author conducted fieldwork after a long time away from the community in the context of IDP, where the usual pastoral way of life and former cultural patterns had not been in place.

### *Ethical consideration*

Primarily, the participants were informed about the purpose of the study and consented to participate in it. The findings of the study were reported in an aggregate fashion, and codes were utilized to maintain the confidentiality of the information. So, as an ethical consideration, the issues of informed consent, privacy, informed consent, confidentiality, and anonymity were considered.

To maintain confidentiality, the participants remain nameless, and their identities are protected from disclosure. Accordingly, the data were presented in an aggregate manner by assigning codes to represent the participants. For example, participants in focus group discussions are represented as FGD-I and FGD-II, while participants in in-depth interviews and key informant interviews are represented as P:I, P:II...., and KI:I, KI:II...., respectively.

### **Findings**

This study sheds light on the various ways in which the drought has affected the cultural elements of the Borana. Since the impacts are immense, this section focuses on the social networks, cultural and ritual performances, food culture, dressing style, political culture, house structure and furniture, and indigenous knowledge of the community.

#### *Borana food culture and dressing style in perennial drought*

“Our traditional foods and drinks are milk, meat, yogurt, cheese, and butter. But today, due to drought, we have lost all these cultural foods. We eat dry maize and wheat. We live by a safety net program.” This is a quote from one of the participants from the in-depth interview (P: IV). The participant complained that both the source and types of their food have changed because they were forced to. Similarly, a participant from the in-depth interview (P: VII) stated that, ‘Now we are dependent on support from the government, NGOs, private companies, and individual contributions, and we eat what is provided to us rather than what we prefer and used to eat traditionally.’

The participants complained that the perennial drought has directly affected livestock production, i.e., the livelihoods of the pastoral community, sources of their income, food, food habits and finally food shortage. (KI: II; KI: VI). In response the Borana families have adopted coping mechanisms such as consumption smoothing, changing feeding habits, and consuming alternative food sources (wild fruits, hunting wild animals). In this regard, the Borana have a saying: “*Bona baatee jedhan malee, bona maanin baate hin jedhan* ‘the Borana may ask ‘if one has survived, not how one has survived.’ This implies that someone hungry may eat what is not usually eaten.

A female participant (P: V) complained that it has been about two years since they were displaced and settled at an IDP camp. Still, they have not put any butter on their heads. Data from female discussants during FGD I also showed that, women, children, the elderly,

pregnant women, women in confinement, and lactating women are more affected by this drought. For instance, a powerful saying during the discussion goes, *nyaata nafaa dhabnee, nyaata mataa dhabnee, midhaguma dhabnee jireennallee dhabne*. This means ‘we lost food for our stomach and butter for our hair, and ultimately we lost not only our social and cultural grace but our lives.’

In their discussion, women paid due attention to their beauty as well, particularly their traditional hairstyle, which needs butter. One of the key informants (K: VI) said, “As our income decreased, people's ability to buy clothes, hair care products for women and girls, and other household items decreased. This has affected Borana’s well-being, dressing style, and particularly beauty for women.” Data from observation confirmed that the community underwent a culture shock in terms of food, dressing, and hairstyle. We noticed that, due to the recent drought, the pastoralists at IDP camps have no livestock to maintain their customary diet of meat, butter, and milk. Instead, they rely on government and NGO assistance for survival.

### *Perennial drought vis-a-vis Indigenous Borana support system*

The data from study participants (KI: I; P; IV) showed that *Buusaa-gonofaa* is an Indigenous social protection mechanism among the Borana. It is about sharing and caring, cooperation among the community members, clan structures, and the wider Borana as a whole. It is a comprehensive support system that manifests in the form of permanent or temporary resource transfer, gift exchange, material as well as emotional support, and labor contribution. However, this social support system has been under serious threat in the face of prolonged droughts. *Buusaa-gonofaa* is practiced in three different major forms: The first is *Dabaree*, which is a transfer of resources, such as a lactating cow or camel for milk, an ox for plowing, a selected bull for reproduction, farming land for cultivation, or a pack animal for transportation for the needy. The second is *Irbaa*, which refers to social support in response to a loss of livestock by raiders, epidemic disease, or some other incidents. The third is *Gumaata* which is a kind of support arranged during normal times to stand by friends, neighbors, clansmen, and women for different rituals and ceremonies. The Borana are always ready to practice *Buusaa-gonofaa*. Particularity, after a dry season or minor drought they inspect the overall situation of the pastoralists. They ask each other “*Bona baatanii rooba geettanii?*” which means have you successfully endured the dry season and entered the rainy season? Based on their close inspection, they identify the needy and arrange support accordingly. Those who have been better off ought to support the needy villagers, clansmen, and others.

However, *Buusaa-gonofaa* is possible only when the Borana have livestock; some are better than others to offer something. By its very nature, the conception of *Buusaa-gonofaa* is based on communalism. It encourages the importance of social cooperation and sharing burdens, standing by one another (KI: XII; P: X).

This is confirmed by FGD I and II participants who attached *Buusaa-gonofaa* to the very identity of the Borana. The Borana often say ‘we are the people of *Buusaa-gonofaa*.’ They also regard cattle as symbols of authentic Borana identity due to their integral role in cultural practices. Thus, with the perennial drought they lost not only resources but also the basic symbol of their identity.

### *Pending ceremonies and gatherings in the face perennial drought*

The Borana celebrate several annual, regular, occasional, and casual events for different reasons at household, village, clan, or societal levels. Nearly in all ceremonial events, slaughtering animals both because of ritual requirements and meat consumption by the attendants is common. In addition, other milk products such as butter, yogurt, cheese, and milk are required either for the ritual or just as the main food for consumption during the ritual. For any ritual such as marriage, name-giving, adoption, and *Gadaa* rituals the Borana support one another through gifts called *Gumaata*, which is reciprocal in nature. *Gumaata* is possible with the availability of livestock because gifts are mainly livestock products like, milk, yogurt, and butter. Nonetheless, these practices are also under serious threat from droughts, which cause massive livestock deaths. This section deals with some major ceremonies that have been under serious threat because of the drought. Nevertheless, despite adversity, the Borana remain steadfast in performing and safeguarding their cultural heritage, showing a level of commitment so strong that they are willing to sacrifice for its preservation.

*Gadaa rituals:* *Gadaa* rituals are many and each has its own specific schedule. One of the major rituals ahead of them is the *Gadaammojjii* ritual; to be celebrated once every eight years and demand huge resources to be effective. According to the participants, these rituals are under serious threat due to the drought. The *Gadaammojjii* is a rite of passage that marks the last grade in the *Gadaa* system and Borana's retirement stage. Somebody attaining this stage is exempt from any active political involvement; it is the time of serenity and seclusion. A participant from the in-depth interview (P: IV) who was a candidate for *Gadaammojjii Gadaa* grade stated:

I'm among those who are going to participate in the forthcoming *Gadaammojjii* ritual. Now I'm wearing a *Kallacha* (a large phallic ornament worn on the forehead). As the custom demands, I have to untie the *Kallacha* before I go to sleep by sipping milk. Now, there is no milk to do this. I sip *bisaan sa'a gurrachaa*, literally, the water of black cow' means simply water (euphemism) because *Aadaan hanquu jibbiti malee babbaddaa hin jibbitu* (custom hates avoidance, not confusion because of shortage). *Namii aadaa keessatti du'e waan jiruu fakkaataf gula yaana malee aadaa waan tolfannuun hin qabnu*, 'We have nothing at our disposal to undertake rituals, but one who died for the culture sounds alive'.

One of the participants (KI: IX) showed a strong link between culture and livestock for the Borana, saying that:

*Aadaa fi horiin walti ejjiti; namii yoo horii dhabe yaa aadaa dhabe. Horii dhiisii dhoqqeen horiituu aadaa keesa jirti.* Meaning, 'Our culture and livestock are interconnected; when we are without livestock, we are without our culture. Leave alone the livestock, even we need their dung for some of our rituals.'

*Clan meeting:* The Borana clans meet occasionally to facilitate clan-based support to the needy, renovate clan-owned water wells, nominate or elect leaders, resolve conflict, and

others. Regardless of the reason for gathering, the standard way of welcoming the attendants demands that the host village provide food and drinks to the attendants. Animals must be slaughtered, milk must be provided, and other traditional foods made up of meat, butter, and slaughtered coffee must be served. However, the recurrent drought has hindered clan meetings from being held regularly to discuss their agendas and address communal issues, as these gatherings largely depend on the availability of livestock. One of the participants from the in-depth interview (P: I) stated:

*“Our beauty is our livestock; our strength is our livestock; our love is our livestock. Also, clans' meetings can exist because of livestock; our cooperation is due to our livestock. For us only God is greater than our cooperation.”*

*Drought impacts on name-giving ceremonies:* All Borana children are given names through either *gubbisa* or *moggaatii*. The first is specific to the firstborn son (*angafa*). The second is for the rest of the children. All involve ceremonies and the participation of relatives and neighbors. However, *gubbisa*, is the most colorful one, which is most affected by the perennial drought in Borana. Findings from the study participants indicate that livestock play an indispensable role during *gubbisa*. Relatives and friends provide milk and its products in the form of *gumaata* (gifts) to support the host family and enjoy guests and attendants of the ceremony. The host family also receives gifts of livestock in large number from relatives and friends. This ceremony also takes about three or four days while the host family has to serve food and drinks for the attendants of the ceremony. For instance, each morning of the ceremony, the family sacrifices coffee (*buna qulani*). In addition, each morning of the ceremony, the mother of the child scoops up some fresh cow dung onto a piece of hide and takes it to the gate of the cattle. At the end of the ceremony, an ox is sacrificed for the name-giving ritual in a kraal to bless the ceremony, child, and attendants, and pray to *Waaqa* (the creator) for everything he did for the family.

Finally, there is a ritual of giving livestock to the name-bearing child (*handhuraa kennuu*) and driving the livestock out to pasture. However, perennial droughts in Borana challenge this ceremony. The Borana have a ritually prescribed schedule for such a name-giving ceremony. The name-giving ritual also marks a status change for the parents of the name-bearing child. A Borana person may ask, ‘Whose father are you?’ or ‘Whose mother are you?’. Thereafter, the father and mother of the child are named as the father of so and the mother of so. Due to the drought in Borana, several scheduled *gubbisa* ceremonies have lapsed or been postponed. Name-giving rituals are also celebrated for all sons and daughters, even though they are not elaborate ones like *gubbisaa*. The Borana name-giving ritual changes the status of the name-bearer from a person without name to someone having a name with all privileges attached to it. The drought, therefore, has severely affected the Borana system of resource sharing and redistribution through gifts and reciprocity, which traditionally takes place during name-giving ceremonies.

*Wedding, Libation, and Funeral Ceremonies in drought situation:* The Borana reported several pending ceremonies and gatherings. The data from FGD-I and FGD-II participants showed that a wedding ceremony needs livestock and its products. For instance, when someone formally asks a girl for her hand in marriage, the bride's groom must offer an heifer (*goromsa*) as a bride price, while the bride's parents and close relatives must give *sa'a siiqqee* (cattle as a gift for their daughter), relatives and friends bring *gumaata* for

the ceremony, the bride must carry a gourd milk pot full of milk when she leaves her parents, and the groom's parents must sacrifice a sheep called *rakoo* to mark that the marriage is the first marriage that changes the bride's social status from virgin girl to womanhood and shifts her clan identity from her father's to her husband's. These are not undertaken without livestock and its products, both as ritual requirements and economic capacity to afford the expenses. Field data revealed that many people have postponed their scheduled ceremonies due to an inability to meet the essential expenses required for such events.

An equally important ritual among the Borana is *dhibaayyuu* (libation), which is a ritual of thanksgiving and prayer to *Waaqa* (God) for providing them peace, health, rain, prosperity, and all the good things in life. To perform *dhibaayyuu*, the Borana must carry a milk pot full of milk and pour it into the water or under a ritual tree. The drought affects certain ceremonial elements, such as the use of green grass, trees, and milk pots filled with milk. Nevertheless, it does not prevent people from performing the *dhibaayyuu*, as it remains an integral part of the community's life and culture. According to one of the participants (KI: VIII), the Borana villages have a cattle gateway. When they perform all rituals, including *dhibaayyuu*, they go out and come in through this gateway, however, the displaced Borana pastoralists lost their villages, live in concentration camps, have no gateway, and are not in an enabling physical setting to perform household and village-level rituals.

Finally, one of the vivid challenges of the drought is the burial site, burial, and post-burial ceremonies. Primarily, there are Borana customary practices related to where to bury their dead. The graves of a religious leader (*qaalluu*), his wife (*qaallittii*), a *Gadaa* leader, and a retired elder passing through *Gadaammojii* are in the cattle kraal. But these displaced people have no kraal. So they have no appropriate burial site. In addition, there are also burial ceremonies, post-burial commemoration, and placating the spirits of the dead. The Borana say, '*dootii aadaa qabdi* (death has its required rituals). If a person dies, a bull or calf is sacrificed for the attendants (*awwaaltuu*). Also, if the dead person has sons, graveyard libation (*soodduu*) is performed. To do this, an animal, particularly cattle, is sacrificed, and milk and yogurt are prepared. Nevertheless, the ongoing drought disrupts the conduct of graveyard libation rituals, which hold cultural and spiritual significance for the community.

### *House structure and utensils*

The findings of the study showed that the perennial drought affected domestic indoor environments, including house structures and utensils. The drought caused massive mobility, and many pastoralists were forced to flee. The majority of people in the community are forced to relocate from their traditional houses and lands. Many families left their *gorfaa-ciicoo* (milk pots), *okolee* (leather buckets), *qorii* (wooden bowl used for serving fried coffee), *buduunuu* (wooden cup for coffee), *dhuuyyuma* (straw made of wood), *irbaa* (wooden utensils used for stirring curds), *itillee* (sleeping mat made of cowhide), and many other material cultures at their original home.

Also, due to this displacement, they are living in tents (*mana teendhee*), which are quite different from the traditional Borana houses. Traditionally, the Borana house is called *mana guutuu* (a conical thatched house) and *mana galmaa* (a house built from grass). The

discussants in FGD-I and FGD-II stated that the traditional hat has partitions for different purposes, such as *golla boroo* (the cover of the east wall of the house as a backdrop to display the milk pots) or *gulantaa* (a pole laid on the floor to divide the two parts of the house: *dinqa* (the private part) and *badaa* (the public part)). Except for the husband and relatives, no one is expected to cross the *gulantaa*, for it is reserved for the husband, wife and children. However, the tents for the Borana households in the IDP center have no partitions of these sorts. All the taboos and respects attached to the partitions are not in place in the present situation, where the Borana live in tents. During our observation, we found that the drought brought about changes in house structure and utensils. The design and layout of their houses, including specific areas for different purposes such as salons, bedrooms, and milk pot displays, as well as the kraal in front of their homes with two gateways, are absent. We also noted that many of their utensils have been plastic and imported materials at the IDP center, which have no cultural value.

### *Ancestral wisdom in the face of perennial drought*

The findings of this study showed that the perennial drought has challenged the existing indigenous knowledge and skills. One of the participants (KI: XI; KI: VIII) stated that there are several indigenous knowledge systems that pastoralists used to employ to cope with droughts in the distant past. For instance, pastoralists used to migrate from area to area to manage the effects of drought. These include shifting grazing system, grazing land management, water resources management, diversifying herds, making hay, protecting enclosures to reserve pasture for hard times, and using a social support system. They have also indigenous knowledge of forecasting the climate and responding accordingly. Further, the Borana store and preserve food for times of food shortage. During this drought, however, these indigenous knowledge and skills have been challenged. Moreover, the Borana physically dispersed in all directions in the region or fled to IDP camps to survive the drought. This caused the loss of physical contact for knowledge transmission between the elderly and the younger generation. The Borana use the term *argaa-dhageettii* for knowledgeable persons based on what they saw and heard and are always ready to transmit their knowledge. The community possesses a wealth of indigenous knowledge, transmitted from generation to generation. This knowledge encompasses animal husbandry, weather patterns, and the use of medicinal plants.

Pastoralism serves as a practical school for teaching Borana children to make them able, skilled, and self-reliant pastoral men and women. Despite being gender biased, Borana boys are socialized to have skills that are related to pastoralism, such as livestock herding, selection of browse, watering and its time, treating livestock for disease, selecting quality breeds, and identifying pastoral resources. Similarly, girls are trained to develop skills such as milking, processing milk and its products, taking care of calves, fetching water and firewood, cooking traditional food, brewing traditional drinks, preserving food, and taking care of younger children. The impact of drought extends beyond the immediate crisis, potentially causing long-term cultural changes. For example, the depletion of natural resources, including plant species, results in the loss of medicinal plants as well as the associated knowledge and skills.

### *Emerging Opportunities*

Despite the fact that the prolonged drought has severely affected the Borana livelihood and their ways of life, some opportunities emerged during this drought. The participants emphasized two opportunities. These are children's education and engaging in different income-generating methods other than pastoralism.

Data from FGD I and II participants showed that they interacted with different humanitarian actors to learn about the culture of saving more than ever before and get information about contemporary world ways of managing shocks. One of the participants from the in-depth interview (P: VII) stated that due to their livelihood, which is pastoralism, they do not let their children attend formal school. Parents send some of their children to school and let the rest take care of their livestock. The massive death of livestock thus forced parents to send all of their children to school. This happened because there are no livestock to herd. In addition, under the condition of a food shortage, schools are the most preferred place for children, as there is school feeding. Interviewee (P: IV) stated, *“Before, our children enrolled in school after they got older because they engaged in livestock herding and grazing. But nowadays, they are enrolling at an early age. Also, those students who dropped out rejoined schools.”* Another participant (KI: V) underscored that the perennial drought proved that education is good not only for children, but it can also save families from such severe crises. Those who educated their children are not worried because their children are supporting them.

The pastoralist Borana have also engaged in pity trade and daily labor around semi urban areas to adapt to the changing circumstances. A participant from the in-depth interview (P: II) stated, *‘harka ufumaa taa’u biraa ka udaanin guuran wayya’* this means ‘the hand that collects dung is better than the one that does not do anything.’ Another participant from a key informant (K: III) said, *‘Akaayiin dhiira duraa lama hin gubbattu.’* Meaning ‘one should never repeat molding while roasting.’ Connotatively, it means that one should not repeat the same mistake twice. For this participant, depending on livestock as the only means of livelihood is risky, and the Borana need to diversify their livelihood. Additionally, one participant (P: I) said *“hyoomatan qaroommatan”*, which means ‘Scarcity makes someone wise’ for one learns a lesson from a challenge one encounters.

### **Discussion**

Primarily, the Borana, who call themselves the people of Buusaa-gonofaa, an indigenous social support system, have failed to practice it because the practice of this system is based on livestock and its products. This drought causes massive animal deaths, disrupts community networks and relationships, and causes displacement and mobility, disconnecting family, friends, and clans who are close to supporting one another. This finding corroborates the studies by Aslin and Russell (2008, cited in Lester, Flatau, & Kyron, 2022), who found that during periods of drought, social networks and social cohesion are weakened in many communities, primarily due to increased workloads and the inability to leave properties because of water and food-related problems, depletion of economic resources, and migration. Many rural families are geographically isolated from their extended family, and transportation costs and time spent visiting family during drought make it difficult to maintain contact.

As noted by the United Nations (2008), indigenous peoples are dependent on their environment, and since they have lived there for countless generations, they have relied on a variety of native fungi, plant, and animal species for food, medicine, ceremonies, public health, and the economy. In drought situations, their food system is challenged. The findings of this study showed that the recurring drought affected the supply and quality of traditional food and food habits among the Borana. They have no livestock to maintain their customary diet of meat, butter, and milk. Instead, they rely on government and NGO assistance for their food and drinks. In the same manner, Turner *et al.* (2013) pointed out that the integrity of indigenous peoples' food systems is closely linked to the overall health of the environment. Likewise, according to Leal *et al.* (2021), the ever-increasing deterioration in many aspects of environmental quality has affected the quality of local foods and reduced their availability. Furthermore, because the livelihoods of indigenous communities in Africa are closely linked to their environment, many impacts of climate change threaten their well-being, especially their food culture.

The finding also indicated that the perennial drought challenged Borana's religious life, like ritual libation, name-giving ceremonies, marriage practice, and burial culture. The absence of livestock has put the Borana in a state of total confusion that has emerged from their failure to practice social, political, and religious rituals. Consistently, Harmon (1996) shows how human cultures are closely linked with ecological diversity. A more related argument was made by Garibaldi and Turner (cited in Dunn, 2017). According to them, the identity and integrity of most cultures are fundamentally based on plants and animals. If these important cultural species were to become extinct or threatened, the interconnected peoples would forever lose part of their identity, culture, and ultimately their language. Ecosystems strongly influence human culture, and changes in ecosystems can have significant impacts on cultural identity and social stability (Millennium Ecosystem Assessment, 2005).

The findings of this study showed that the perennial drought has disrupted indigenous knowledge and skills. They showed the interferences are not only with the material well-being but also with the valued community's long-standing knowledge system, their skills, and their communication channels.

The pastoralist community has a wealth of indigenous knowledge that is passed down from generation to generation, which marks both their group and pastoral identity. In this regard, the findings conform to the study by Nyadzi *et al.* (2021), which shows that Indigenous peoples share collective ancestral ties to their environment and have knowledge of this environment and its resources. They also develop group identity out of this environment and the culture they develop to cope with the environment. Thus, they are vulnerable to the impacts of climate change because their livelihoods, culture, spirituality, and social systems depend largely on their environment.

## **Conclusions and Recommendations**

The Borana community is facing a challenge due to the prolonged droughts that have wiped out their herds. These droughts have affected their food production, traditional rituals, and indigenous knowledge systems. The loss of livestock, disruption of rituals, and erosion of indigenous knowledge all have long-lasting implications for the culture and their identity. However, within the community, three approaches are being debated to address these challenges. One group advocates a return to ancestral wisdom and traditional

practices for survival. Another group supports abandoning pastoralism in favor of permanent settlement and adapt to permanent residence, farming, and engaging in income-generating activities such as trade and daily labor. The third group favors transforming pastoralism into modern animal husbandry. Despite these differing perspectives, all groups seek support from wider communities, interventions from the government and non-government organizations to bring new ways of pastoralist life that synergize the alternatives to the benefit of the Borana community.

Based on the findings of the study, we recommended both short and long term interventions. Primarily, humanitarian aid is a temporary measure to save people's lives and prevent further animal losses. But empowering the community by tackling the underlying causes of the issue—which center on market vulnerabilities, rangeland degradation, and climate variability—is a long-term solution. It is strongly advised to design a different livelihood structure that will enable the community survive future droughts. Accordingly, to protect the culture, communities' resilience-building programs that protect the production and productivity of livestock and enhance alternative livelihoods should be designed. This may include water development, fodder production, livestock markets, small business development, inclusive financial services, pro-pastoralist industry developments, irrigation schemes, climate-smart agriculture, livestock (poultry, shoats), production, etc. By building the community's economic power, socio-cultural values can be protected, and the community will keep its dignity and cultural values. Moreover, working with *Gadaa* leaders and other customary leaders on community governance and development matters may be helpful. The generation should maintain the values of indigenous knowledge (*Gadaa*).

### **Limitations**

A primary limitation of this research is the relatively small number of participants, which may limit the generalizability of the findings. Additionally, the study focuses specifically on an IDP camp rather than the wider community, which may restrict the applicability of the results to other contexts.

### **Acknowledgment**

We gratefully acknowledge the voluntary participation and valuable time contributed by all study participants, with particular appreciation extended to the participants from the Internally Displaced Persons (IDP) Camp in Dubuluk District in Borana Zone, Ethiopia. Their willingness to share their experiences and insights was essential to the successful completion of this study. We also express our sincere appreciation to Jimma University for funding this study.

### **References**

- Bartels, L. (1983). Oromo religion: myths and rites of the western Oromo of Ethiopia; an attempt to understand. Reimer, Berlin, Germany.
- Birhanu, Z., Ambelu, A., Berhanu, N., Tesfaye, A., & Woldemichael, K. (2017). Understanding resilience dimensions and adaptive strategies to the impact of preennial

- droughts in Borana Zone, Oromia Region, Ethiopia: A grounded theory approach. *International journal of environmental research and public health*, 14(2), 118. <https://doi.org/10.3390/ijerph14020118>
- Coppock, D. L. (1994). *The Borana plateau of southern Ethiopia: Synthesis of pastoral research, development and change*. International Livestock Centre for Africa, Addis Ababa, 374.
- Dangal, M. (2021). *Qualitative research design*. <https://doi.org/10.13140/RG.2.2.34406.55360>
- Demi, S. (2016, February). Indigenous food cultures: Pedagogical implication for environmental education. In an International Colloquium on global governance/politics, climate justice & agrarian/social justice: linkages and challenges. Kortenaerkade, Netherlands.
- Dunn, C. P. (2017). Climate change and its consequences for cultural and language endangerment. In *The Oxford Handbook of Endangered Languages*. Oxford University Press Oxford, UK.
- Elias, M., Hensel, O., Richter, U., Hülsebusch, C., Kaufmann, B., & Wasonga, O. (2015). Land conversion dynamics in the Borana rangelands of Southern Ethiopia: an integrated assessment using remote sensing techniques and field survey data. *Environments*, 2(1), 1-31.
- Figueroa, R. M. (2011). Indigenous peoples and cultural losses. *The Oxford handbook of climate change and society*, 232-249.
- European Union (2024). Southern Ethiopia: "We had nothing to eat until the cash arrived." [https://civil-protection-humanitarian-aid.ec.europa.eu/news-stories/stories/southern-ethiopia-we-had-nothing-eat-until-cash-arrived\\_en](https://civil-protection-humanitarian-aid.ec.europa.eu/news-stories/stories/southern-ethiopia-we-had-nothing-eat-until-cash-arrived_en)
- Flick, U. (2022). *The SAGE handbook of qualitative research: "Being creative with resources in qualitative research"*. SAGE publications Ltd.
- Galgalo, W. (2019). *Socio-Economic Impacts of Drought and Determinants of Coping Strategies: The Case of Yabello Pastoral and Agro-Pastoral Areas, Borana Zone, Oromia Regional State, Ethiopia* (Ma Thesis, Haramaya University)
- Gemechu, T. (2002). *Indigenous survival strategies in the face of famine: The case of Boorana Oromo, southern Ethiopia*. Unpublished MA thesis, Addis Ababa University.
- Gentles, S. J., Charles, C., Ploeg, J., & Mckibbin, K. A. (2015). Sampling in Qualitative Research: Insights from an overview of the methods literature. *The qualitative report*, 20(11), 1772-1789.
- Harmon, D. (1996). Losing species, losing languages: Connections between biological and linguistic diversity. *Southwest journal of Linguistics*, 15(1&2), 89-108.
- Hurst, M., Jensen, N., Pedersen, S., Shama, A., & Zambriski, J. (2012). *Changing climate adaptation strategies of Boran pastoralists in southern Ethiopia*. Munich Personal RePEc Archive.
- ILO (2017). *Indigenous peoples and climate change: From victims to change agents through decent work*. International Labour Office, Gender, Equality and Diversity Branch.
- Leal Filho, W., Matandirotya, N. R., Lütz, J. M., Alemu, E. A., Brearley, F. Q., Baidoo, A. A., ... & Mbih, R. A. (2021). Impacts of climate change to African indigenous communities and examples of adaptation responses. *Nature Communications*, 12(1), 6224. <https://doi.org/10.1038/s41467-021-26540-0>

- Lester, L., Flatau, P., & Kyron, M. (2022). *Understanding the Social Impacts of Drought*. Perth: The University of Western Australia.
- Lucien M. (2025). Borana: the scorching sky. <https://www.equaltimes.org/borana-the-scorching-sky?lang=en>
- Massey, J. (2020). *Climate Change, Culture and Cultural Rights*.file:///D:/Early/New%20folder/New%20folder/JMassey.pdf
- Mearns, R., & Norton, A. (Eds.). (2009). *Social dimensions of climate change: Equity and vulnerability in a warming world*. World Bank Publications.
- Mekuyie, M., & Mulu, D. (2021). Perception of impacts of climate variability on pastoralists and their adaptation/coping strategies in Fentale district of Oromia region, Ethiopia. *Environmental Systems Research*, 10(1), 1-10. <https://doi.org/10.1186/s40068-020-00212-2>
- Millennium Ecological Assessment. (2005). *Ecosystems and human well-being: wetlands and water*. World resources institute.
- Norton-Smith, K., Lynn, K., Chief, K., Cozzetto, K., Donatuto, J., Redsteer, M. H., ... & Whyte, K. P. (2016). *Climate change and indigenous peoples: a synthesis of current impacts and experiences*. United States Department of Agriculture, Forest Service, Pacific Northwest Research Station.
- Nyadzi, E., Ajayi, O. C., & Ludwig, F. (2021). *Indigenous knowledge and climate change adaptation in Africa: A systematic review*. CABI Reviews, (2021).
- Obasola, K. E. (2013). African religion and environmental dynamics: implications for human and sustainable development. *Journal of Studies in social sciences*, 4(2).
- Oelz, M., Dhir, R. K., & Harsdorff, M. (2017). *Indigenous peoples and climate change: From victims to change agents through decent work*. International Labour Office, Gender, Equality and Diversity Branch, 1-56.
- Park, R. E. (1943). Education and the cultural crisis. *American Journal of Sociology*, 48(6), 728-736.5
- Pelser, A. J. (2001). Socio-cultural strategies in mitigating drought impacts and water scarcity in developing nations. *South African Journal of Agricultural Extension*, 30, 52-74. <https://doi.org/10.4314/sajae.v30i1.3619>
- Petros, W., Wang G. and Eshetayehu, K. (2021). Leadership Challenges in Drought Disaster Risk Management: Borana Pastoralist Area, Southern Ethiopia. *Leadership*, 54(10). <https://doi.org/10.17605/OSF.IO/BZXEU>
- Shibru, M., Opere, A., Omondi, P., & Gichaba, M. (2023). Understanding physical climate risks and their implication for community adaptation in the borana zone of southern Ethiopia using mixed-methods research. *Scientific Reports*, 13(1), 6916. <https://doi.org/10.1038/s41598-023-34005-1>
- Sintayehu, A., & Sintayehu, W. (2023). From the Field Borana pastoralist struggling to survive under the recurrent drought in Ethiopia. <https://alliancebioiversityciat.org/stories/borana-pastoralist-struggling-survive-under-recurrent-drought-ethiopia>
- Tache, B. (2000). Changing Pattern of Resource Control among the Borana Pastoralists of Southern Ethiopia: A Lesson for Development Agencies. In: Manger L., Ghaffar Ahmed A. M. (eds.), *Pastoralists and Environment, Experiences from the Greater Horn of Africa*. Addis Ababa: Haan Organization for Social Science Research in Eastern and Southern Africa (OSSREA), 51-74.

- Teka, H., Madakadze, C. I., Botai, J. O., Hassen, A., Angassa, A., & Mesfin, Y. (2018). Evaluation of land use land cover changes using remote sensing Landsat images and pastoralists perceptions on range cover changes in Borana rangelands, Southern Ethiopia. *International Journal of Biodiversity and Conservation*, 10(1), 1-11. <https://doi.org/10.5897/IJBC2017.1123>
- Tiruneh, S., & Tegene, F. (2018). Impacts of climate change on Livestock production and productivity and different adaptation strategies in Ethiopia. *Journal of Applied and Advanced Research*, 3(3), 52-58. <http://dx.doi.org/10.21839/jaar.2018.v3i3.150>
- Tora, T. T., Degaga, D. T., & Utallo, A. U. (2021). Drought vulnerability perceptions and food security status of rural lowland communities: An insight from Southwest Ethiopia. *Current Research in Environmental Sustainability*, 3, 100073. <https://doi.org/10.1016/j.crsust.2021.100073>
- Turner, N. J., Plotkin, M., & Kuhnlein, H. V. (2013). Global environmental challenges to the integrity of Indigenous Peoples' food systems. *Indigenous peoples' food systems and well-being: interventions and policies for healthy communities*, 23-38. Food and Agriculture Organization of the United Nations (FAO), Rome, Italy.
- UN (2008). *Climate change and indigenous peoples*. 7th session of the United Nations Permanent Forum on Indigenous Issues. New York, USA.
- Wolteji, B. N., & Garbaba, F. G. (2023). A geo-spatial assessment of drought impacts on forest cover in Yabello forest, in the semi-arid region of Ethiopia. *SN Applied Sciences*, 5(5), 148. <https://doi.org/10.1007/s42452-023-05364-1>