

ORIGINAL ARTICLE

Variation of indigenous botanical knowledge versus social characteristics between the Afar and Oromo nations in and around the semi-arid Awash national park, Ethiopia

Tinsae Bahru^{1*}, Zemed Asfaw² and Sebsebe Demissew²

¹Forestry Research Center (FRC), Ethiopian Institute of Agricultural Research (EIAR), P. O. Box 30708, Addis Ababa, Ethiopia

²The National Herbarium, Department of Biology, Faculty of Science, Addis Ababa University, P. O. Box 3434, Addis Ababa, Ethiopia

*Corresponding Author: E-mail: batinsae@gmail.com

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ABSTRACT

Variation of indigenous botanical knowledge (IBK) versus social characteristics between the Afar and Oromo Nations in and around the semi-arid Awash National Park (ANP), Ethiopia was conducted between September 2008 and March 2009. The study aimed to investigate and document variation of IBK versus social characteristics and their associated threats between the Afar and Oromo Nations. A total of 96 informants were selected using prior information. Data were collected using semi-structured interview, guided field walk, discussions, market survey, and field observation. The results indicated that there was a significant difference of IBK within and among the different age, gender, nations and informants among the local Kebeles between the Afar and Oromo Nations. Overgrazing, followed by deforestation were the major threats in the study area, which scored 21.7% and 19.9%, respectively. Strengthening and encouraging IBK, the active participation of local communities and awareness rising through training or educational programmes are plausible recommendations.

Keywords: ANP, Conservation, Ethiopia, IBK, Overgrazing

INTRODUCTION

Balick and Cox (1996) stated that indigenous peoples are peoples that follow traditional, non-industrial lifestyles in a particular area, where they have lived for generations. They have had wider opportunities for interactions with their natural environments. As a result, they accumulate a significant potential of indigenous knowledge (IK). Thus, IK is as old as human civilization (Qureshi and Ghufraan, 2007). According to Quanash (1998), IK is defined as the

accumulation of complex knowledge, rule, beliefs, standards, skills, practices and mental sets, which are possessed by local people in a particular area. This accumulation of IK is due to the intimate dependency of local people on natural resources so that it helps them to adapt and survive in the particular area. For instance, the pastoral people in various parts of Ethiopia know the life history, population dynamics, spatio-temporal distribution of wild plants and animals better than cultivated plants and livestock using their IK

(Zemedede Asfaw, 2006). So, IK is a local knowledge, *i.e.*, unique to a given culture or society. For example, gathering and processing of medicinal plants in 'Boosat' were restricted to traditional medicinal practitioners and their trainers and they kept their knowledge secret (Debela Hunde *et al.*, 2004). It is generated by farmers, pastoralists, cattle breeders, traditional healers and local artisans (Balick and Cox, 1996). This knowledge is the information base for agriculture, health care, food preparation, education, environmental conservation and so forth of that particular society (World Bank, 1998).

Over centuries, indigenous peoples have developed their own IK on plant resource use, conservation and management (Balick and Cox, 1996; Cotton, 1996), which resides within individuals, families or villages (Balick and Cox, 1996). People in various parts of Ethiopia can name, classify, relate and tell the uses, merits and demerits of plants using their accumulated IK in their surroundings through day-to-day interactions with plants (Zemedede Asfaw, 2006). This IK can differ among community members according to their gender, age, social standing, profession and intellectual capabilities. It is transferred over generations through oral traditions, proverbs, sayings and songs (Balick and Cox, 1996) as well as written sources (Zemedede Asfaw, 1997). However, a rapid loss of IK within the indigenous peoples is associated with cultural changes such as the opportunity of attending schools, migrating to urban areas and learning the national language (Cotton, 1996).

According to Debela Hunde *et al.* (2004) ethnomedicinal knowledge in 'Boosat' diminished with the death of elderly knowledgeable members of the society as only a few young people are willing to acquire it. As the indigenous peoples become westernized from time to time, the accumulated IK is blurred, eroded and eventually lost. Such loss of IK is accelerating throughout the world, which leads to the disappearance of plant lore (Balick and Cox,

1996). Thus, the main aim of the present study was to investigate and document variation of IBK versus social characteristics and their associated threats between the Afar and Oromo Nations in the area.

MATERIALS AND METHODS

The study area

Geographical location

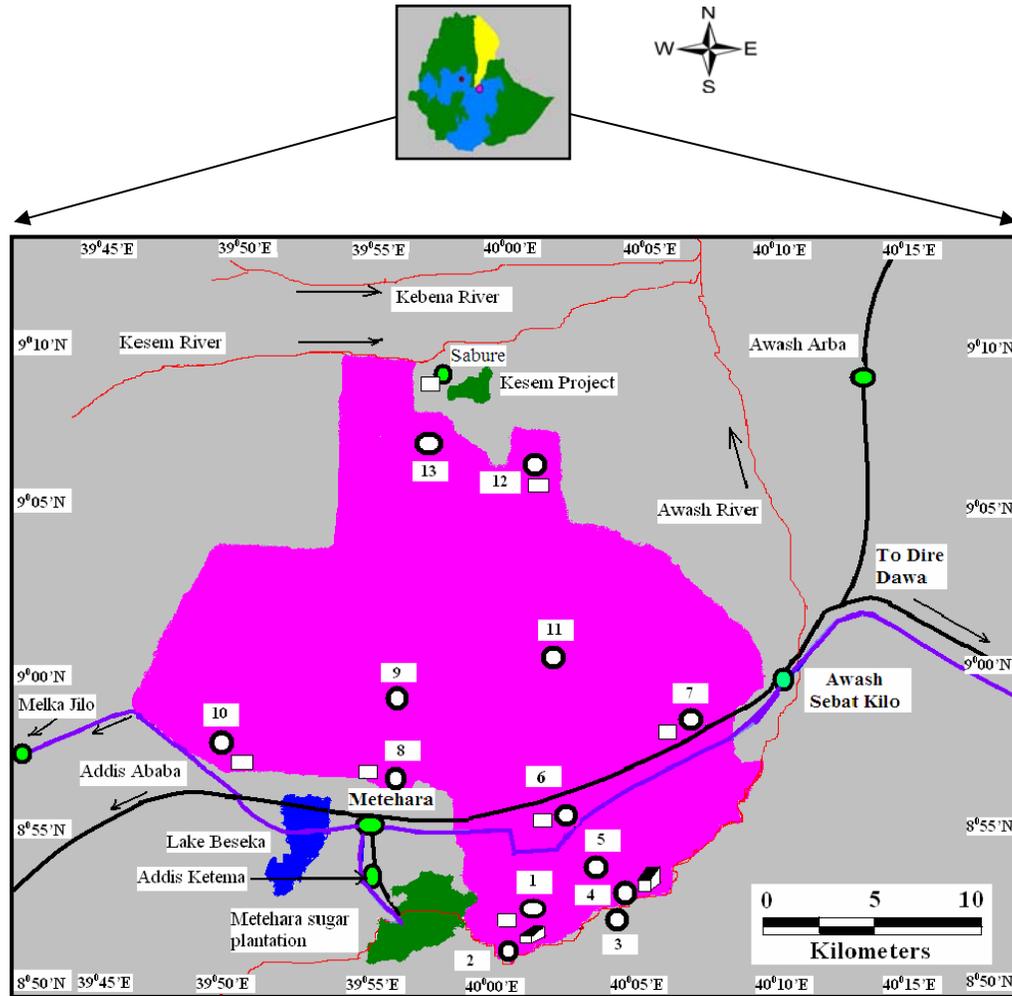
The study was conducted in Awash National Park (ANP) located in Afar/Oromia Regional State (RS), Ethiopia, in the northern part of the Great East African Rift Valley at the point where the Rift widens out into the Afar Depression (IUCN/UNEP, 1987). It is 225 km away from Addis Ababa and situated between latitudes 8°50' and 9°10' N and longitudes 39°45' and 40°10' E (EMA, 1992) (Fig. 1). Various sources reported that ANP was named after the Awash River. The Park covers approximately 756 km² and its altitude ranges from 750 meter above sea level (m a. s. l.) in Awash River Gorge to 2,007 m a. s. l. at the top of Mt. Fentale. However, most of the Park's lands lie at about 1,000 m a. s. l. Thirteen data collection sites in ANP were used including 1. Gotu, 2. Awash River, 3. Awash Gorge, 4. Karreyu Lodge, 5. Ilala Sala plain, 6. Hamareti, 7. Geda, 8. Sogido, 9. Mt. Fentale, 10. Sabober, 11. Dunkuku (Kudu Valley), 12. Filwuha, and 13. Sabure.

Climate

ANP is characterized by semi-arid climate or *Qolla Zone* with the annual rainfall ranging between 400 and 700 mm. The area is located within the Inter-Tropical Convergence Zone, which makes both temporal and spatial variability in rainfall, humidity and temperature (Jacobs and Schloeder, 1993). Rainfall is bimodal with two distinct seasons, *i.e.*, the *short* rains between February and April; the *long* rains between July and September (Jacobs and Schloeder, 1993; Almaz Tadesse and Masresha Fetene, 1999). The climate data obtained from Awash Sebati Kilo Station indicated that the highest mean

annual rainfall of the study area over the 10 years was 120.8 mm recorded in July, whereas the lowest mean annual rainfall was 5.9 mm in February. Likewise, the highest

average temperature over 10 years was 30.6°C recorded in June, while the lowest average temperature was 24.2°C recorded in December (Fig. 2).



Legend

- ANP
- Highway
- Railway
- River
- State farm plantation
- Hotel
- Towns
- Addis Ababa
- Oromia RS
- Lake Beseka
- Study site
- Park camp
- Afar RS

Figure 1. Map of ANP modified from EMA (1992), Jacobs and Schloeder (1993) and Berihun Gebremedhin and Solomon Yirga (2005).

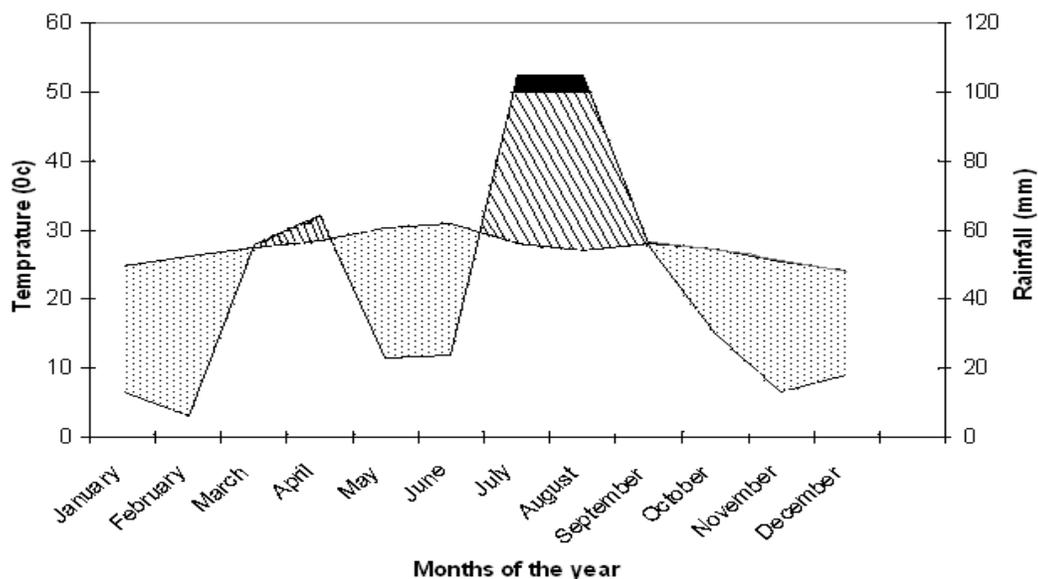


Figure 2. Climate diagram at Awash Sebat Kilo meteorological station, east of ANP (from 1999-2008). Source: Raw data obtained from NMSA (2009). Awash Sebat Kilo: Altitude: 960 m a.s.l.; Latitude 8°59' N; Longitude 40°09' E.

Geology, soil and hydrology

Jacobs and Schloeder (1993) reported that ANP is found in a zone of interface between two tectonic mega-structures, *i.e.*, the African and Somali plates. These plates are pulling apart (rifting) and away from the Arabian plate. Due to this reason, ANP occurs in one of the most geologically active regions of the world. The phenomena of rifting and volcanism are continuous processes. Hence, it is estimated to have continued for 25 to 30 million years in Ethiopia, while about 5 million years in the ANP. According to Jacobs and Schloeder (1993), ancient alluvial and colluvial soils, soils of volcanic origin as well as recent alluvial soils are the three major soil types of the study area. The major water sources in the study area include Awash River with major tributaries around ANP including the Kesem and Kebena Rivers, Lake Beseka and the Hot Springs at the northern tip of the ANP.

Vegetation and wildlife

Out of the nine vegetation types of Ethiopia, the vegetation type of ANP is classified under *Acacia-Commiphora* woodland (Sebsebe Demissew and Friis, 2009) in the Somali-

Masai Regional Center of endemism (White, 1983). ANP is home of at least 81 species of mammals, 453 species of birds and 43 species of reptiles (Jacobs and Schloeder, 1993). Various sources indicated that ANP is home to one critically endangered and endemic mammal, Swayne's Harte-beest (*Alcellaphus biselaphus swaynei*) and five vulnerable species (Lesser horse-shoe bat, *Rhinolophus hiposiderose minimus*; Trident leaf-nosed bat, *Asellia patrizii*; Spot-necked otter, *Lutra macuricollis*; lion, *Panthera leo* and Soemmering's gazelle, *Gazelle soemmerringi*).

People and land use

There are diverse socioeconomic activities found around the ANP including pastoralism, crop agriculture and harvesting natural resources (Jacobs and Schloeder, 1993). Pastoralists living around the ANP belong to the Afar and Oromo Nations. The Afar pastoralists, found in the north and northeast of ANP, represent the Afar Nation. The Afar Nation is situated in the Awash-Fantalle Wereda (District) of the Afar RS (Region 2). Its administrative town is Awash Sebat Kilo. It has Six Kebeles namely Doho, Dudub, Sabure, Awash, Boloitya and Kebena.

Of these, the first three are surrounding the Park. Based on the population census conducted by FDREPCC (2008) in Ethiopia, the total population of Awash-Fantalle Wereda is about 29,775 of which 15,471 (51.9%) are males and 14,304 (48%) are females.

On the other hand, the Karreyu and the Ittu pastoralists, situated in the western and southern parts of the ANP, belong to the Oromo Nation. The Oromo Nation is found in the Fantalle Wereda of the Oromia RS (Region 4). The administrative town of Fantalle Wereda is Metehara. A total of 18 Kebeles are found in the Wereda. Out of these, three Kebeles surround the Park namely Benti, Fate Leidy and Gelcha. According to the population census reported by FDREPCC (2008) in Ethiopia, the total population of Fantalle Wereda is about 82,225 of which 43,510 (52.9%) are males and 38,715 (47.1%) are females. The primary economic activity of both Nations is livestock production. Hence, they are transhumant pastoralists, *i.e.*, pastoralists who maintained permanent settlements, but shift their livestock seasonally so as to utilize the resources (pasture and water) found far away from settlement areas. As a result, they live temporarily or enter in the Park during some periods to use the resources.

Ethnobotanical data collection

A reconnaissance survey of the study area was conducted from August 15 to 30, 2008 in order to obtain an impression about sampling sites. Accordingly, 13 study sites (Fig. 1) were selected and established as data collection sites. Following this, data was collected between September 2008 and March 2009, on three field trips that were carried out in each study site, following the methods by Martin (1995), Cotton (1996) and Cunningham (2001). Semi-structured interview, guided field walk, discussions, market survey and observation with informants and key informants were employed based on a checklist of questions using the Afar and Afan Oromo languages with the help of translators. Voucher

specimens were collected, identified and kept at National Herbarium, Addis Ababa University.

During the study, information regarding IK in and around the ANP was gathered and the selection of informants and key informants was carried out based on prior information obtained from clan and religious leaders, knowledgeable elders, Park's scouts (*i.e.*, who have served in the ANP for more than 12 years and members of either the Afar or Oromo Nations), pastoralists and agro-pastoralists. Others included individuals from different age groups, gender and nations as well as field observation. Despite the effort made to involve as many women informants, only few could take part in the study as they are not encouraged culturally within the society. Others are lack of permission from their husbands or other socio-cultural reasons, which they refrain from describing. Consequently, informants were selected from the Afar and/or Oromo Nations based on the vicinity of their Kebeles and associated impact to the Park. Four Kebeles from the Afar Nation (Awash, Doho, Dudub and Sabure Kebeles), whereas five Kebeles from the Oromo Nation (Benti, Fate Leidy, Gelcha, Ilala and Kobo Kebeles), were selected. Of these, 96 informants (7 or 8 individuals for each study site (76 men and 20 women) between the ages of 20 and 80 were selected using prior information. Out of these, 36 key informants (32 men and 4 women) were selected.

Ethnobotanical data analysis

The data were analyzed and summarized using priority ranking, following Martin (1995) and Cotton (1996). Variation of IBK with social characteristics between the Afar and Oromo nations was compared using SPSS Version 13.0 software, and the statistical significance was determined by Chi-Square (χ^2) test at 95% confidence interval. The Jaccard's Coefficient of Similarity (JCS) was also calculated and the species similarity between the Afar and Oromo Nations were compared as it was

described for habitat types in Kent and Coker (1992). Accordingly, JCS was calculated between paired habitat types (A and B) as follows:

$$JCS = \frac{c}{c+b+a}$$

where: *a* is the number of species found only in habitat A; *b* is the number of species found only in habitat B and; *c* is the number of species commonly found in both habitats A and B. Finally, JCS was multiplied by 100 in order to obtain the percentage species similarity between the Afar and Oromo Nations as applied by Kent and Coker (1992) for habitat types.

RESULTS AND DISCUSSION

Variation of IBK versus social characteristics between the Afar and Oromo Nations

Variation of IBK with informants' age

In the study area, three age intervals were identified during data collection and compared their knowledge and experience in each interval with respect to the names of plant species and their associated uses. Consequently, the three age intervals, *i.e.*, the age intervals within the ranges of 15 to 25, 26 to 45 and 46 to 80 reported 20.8%, 29.8% and 49.4% of the maximum plant names respectively. Likewise, the same intervals reported 13.8%, 23.4% and 37.2% of the maximum plant uses in respective orders. Thus, the age intervals within the ranges of 46 to 80 years were the highest point and ranked first, while the age intervals within the ranges of 15 to 25 years old were the least ranked (Fig. 3). However, there was a statistically significant deference for both plant names ($\chi^2=10.13$, $p < 0.01$; $\chi^2=4.50$, $p < 0.05$) and plant uses ($\chi^2=18.0$, $\chi^2=10.13$, $p < 0.01$) for the age intervals within the ranges of 15 to 25 and 26 to 45 years, respectively. While the difference was not statistically significant for plant names ($\chi^2=0.0$, $p < 0.05$) and plant uses ($\chi^2=2.0$, $p < 0.05$) within the

range of 46 to 80 years. This indicated that older persons are more experienced and knowledgeable than the younger persons to state the names of plant species and their associated uses in this particular study. This might be due to the fact that the younger generation is more exposed to modern education, and hence not interested in learning and practicing IBK from their parents. In general, plant knowledge progressively increases with age so that older people know more useful plants than younger people as also reported by Cotton (1996), Hussien Adal (2004), Gemedo-Dalle *et al.* (2005) and Tigist Wondimu *et al.* (2006).

Variation of IBK of informants among the local Kebeles in the study area

During field study, informants from nine Kebeles were sampled around the ANP and the variation in their IBK was assessed. Hence, informants from Doho Kebele reported 46.8% and 40.1% plant names and uses, respectively. Whereas informants from Gelcha Kebele reported 19.3% and 15.8% plant names and uses in their respective orders (Fig. 4). Similarly, in both cases, *i.e.*, for Doho and Gelcha Kebeles the difference was highly significant ($\chi^2=17.69$, $p < 0.01$) and ($\chi^2=42.44$, $p < 0.01$) respectively so that there is a strong relationship between IBK of informants among the local Kebeles. Therefore, informants from Doho Kebele reported the highest plant names and uses, while Gelcha Kebele was the least. This is because local people live at far remote and less accessible areas such as towns, highway and railway (e.g. Doho and Dudub Kebeles) retained more IBK than people live at near and more accessible areas (e.g. Awash and Gelcha Kebeles) in this particular study. Teshome Soromessa and Sebsebe Demissew (2002) also reported a similar observation, where people who live in less accessible and far from towns and roads (the Benna and the Tsemay) retained much of their traditional plant knowledge than their counterparts.

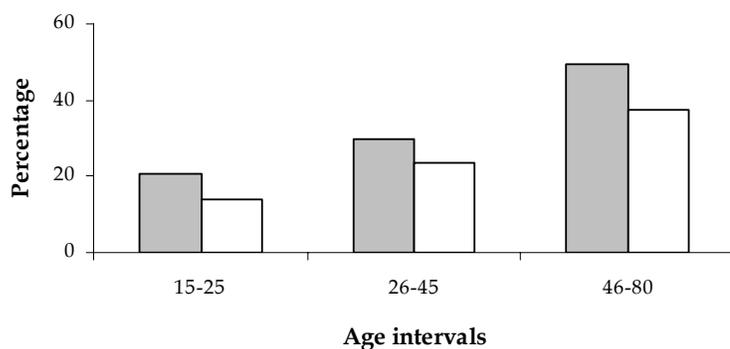


Figure 3. Variation of IBK and age of informants (grey = plant names reported by individuals, white = plant uses mentioned by individuals).

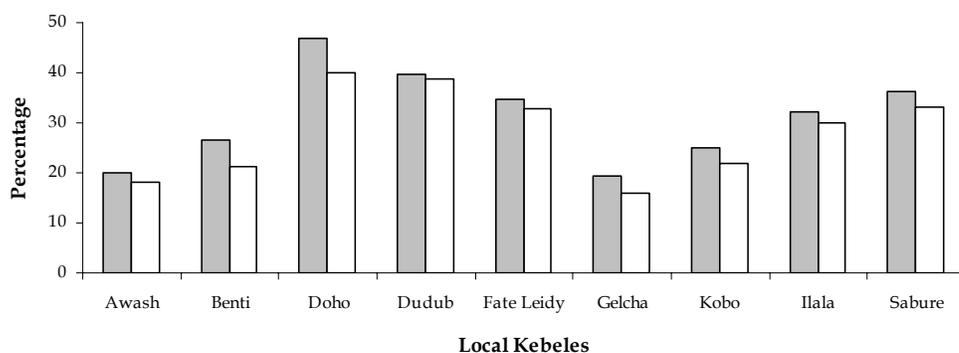


Figure 4. Variation of IBK of informants among the local Kebeles in the study area (grey = plant names reported by individuals, white = plant names mentioned by individuals).

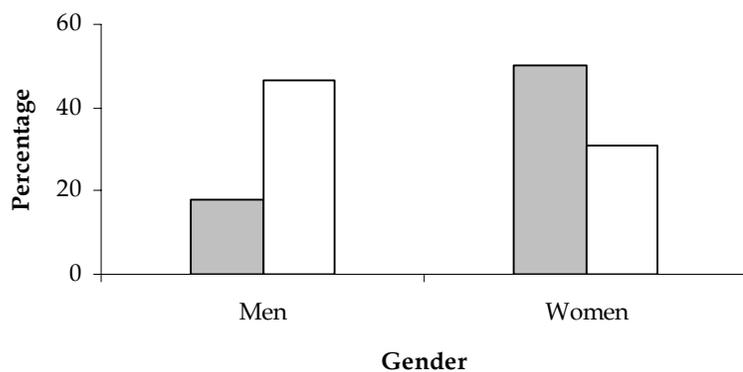


Figure 5. Variation of IBK with informants' gender (grey = forage, white = fodder).

Variation of IBK with informants' gender

The informants' responses during data collection in the field indicated that men and women reported respectively 46.7% and 30.8% of the fodders (trees and/or shrubs) out of the total fodder species, whose names were recorded. In contrast, 17.8% and 50% of

the forage (grasses and herbs) out of the total forage species were recorded in their respective orders (Fig. 5). But, comparison between men and women showed that the former know significantly ($\chi^2=8.87, p < 0.05$) more species names and uses than women ($\chi^2=2.80, p < 0.05$). This revealed that men

were more experienced, knowledgeable and familiar on fodder species other than forage species about their names and uses. On the other hand, women were more knowledgeable on forage species than on other fodder species, when compared with men for this particular study. According to Gemedo-Dalle *et al.* (2005), the IK of women on names and uses of grass species was much better than that of men from the same area. This may be due to a number of factors including occupation, culture, place of work, interaction existing between individuals, etc., which influences plant knowledge both in age and gender among individuals (Hussien Adal, 2004).

Variation of IBK between the Afar and Oromo Nations

In the area, the total number of species reported by the Afar and Oromo Nations were identified for each major use category during data collection and variation of IBK between them was assessed. Hence, the Afar Nation reported 22, 23 and 11 plant species for forage/fodder, medicine and food respectively. The Oromo Nation reported 11 and 8 plant species for fuel wood and other miscellaneous uses respectively. On the other hand, both Nations equally reported 19 plant species for material culture (Table 1). Part of the reason for this might be due to the fact that the Afar Nation is mainly engaged by livestock production, since they are more of pastoralists. Hence, they are more familiar with forage/fodder species, human and livestock medicinal plants as well as wild edible plants. The Oromo Nation is more of agro-pastoralists moving towards sedentary agriculture. Informants explained that pastoralists have far more IBK than the agro-pastoralists to state the names as well as the uses of plants. This might be as a result of long-standing interaction of pastoralists with their natural resources due to their day to day activities in this particular study.

Again, the coefficient of similarity is almost on the same range for forage/fodder, fuel wood, material culture and miscellaneous uses (Table 1). This indicated

that since the two groups situated almost in close geographical settings, there is a cultural diffusion and sharing of experiences and knowledge between them. Thus, they commonly utilize the same species.

On the other hand, most frequently reported plant parts, *i.e.*, leaves and roots for medicinal uses and their corresponding families were selected and the knowledge difference between the Afar and Oromo Nations was compared. Accordingly, the Afar and Oromo Nations used 75% and 25% of the roots, respectively out of the total reported roots for the treatment of various human and livestock ailments. On the contrary, the Oromo and Afar Nations used 55.6% and 18.5% of the leaves, respectively out of the total reported leaves for the same purpose. As a result, the Oromo Nations showed a statistically significant difference ($\chi^2=6.37, p < 0.05$) for the reported plant parts, whereas the difference was not statistically significant ($\chi^2=2.88, p < 0.05$) in the case of the Afar Nations. However, they used the remaining plant parts more or less in equal proportions (Fig. 6). Hence, the Afar Nation was more experienced and knowledgeable to use roots as compared to other plant parts, followed by leaves for different human and livestock health problems than the Oromo Nation. However, in the case of the Oromo Nation the vice versa were true for this particular investigation. Cotton (1996) stated that IK distribution among individuals can be influenced by socio-cultural factors such as age, gender, as well as ethnic group and the same observation were made in the present study.

Threats to useful plants and associated IK

Since the local peoples have an intimate relationship towards their natural environment, they are familiar with the threats for useful plants and associated IBK. Therefore, during group and individual discussions, key informants identified seven major threats by priority ranking in the ANP. Consequently, overgrazing/over browsing,

followed by deforestation scored 21.7% and 19.9%, respectively (Table 2).

Overgrazing/over browsing is one of a serious problem in the ANP (*i.e.*, Sabober plain, Sogido, Geda, Sabure and Filwuha study sites) due to a large number of livestock, prolonged drought and dry season as well as shortage of resources like pasture. In addition, a large number of livestock illegally graze especially on Ilala Sala grassland, whereas Hamareti, Karreyu Lodge and Dunkuku study sites are not free from livestock. Such overgrazing and trampling by livestock result in environmental degradation (Cotton, 1996). This was followed by deforestation for different purposes (e.g. firewood and charcoal production, building and construction, household furniture and farm tools, fencing materials and others), human settlement and agricultural expansion and forest fire in their respective orders. This result is in agreement with the results reported by Feyera Senbeta and Demel Teketay (2003), where overgrazing by livestock, harvesting of plant resources for various purposes and forest fire were the most significant anthropogenic factors. Due to these reasons useful plants such as *Acacia prasinata* and *Acacia negrii* are identified as threatened and near threatened endemic species, respectively in and around the ANP as also listed by Vivero *et al.* (2005).

Conservation and management of useful plants and associated IBK

The pastoralists in the study area have special indigenous management strategies so as to use the rangeland resources. The MEDA (Af) and GADA (Or) systems are the highest decision making indigenous social institutions in the Afar and Oromo Nations, respectively. These indigenous institutions are responsible for natural resource management in the area. For instance, the traditional regulation and management of plant resources has been the responsibility of these social institutions. Hence, cutting of valuable shrubs and trees particularly for charcoal making as well as killing of wildlife is strictly prohibited unless a special permission is given by the clan chiefs. In this regard, a similar investigation was conducted by Feyera Senbeta and Demel Teketay (2003) in the Kimphee Nature Reserve through the Oromo SHANACHA collective indigenous resource management system to manage and conserve forest resources. Other indigenous rangeland and herd management strategies practiced by pastoralists include herd mobility, herd diversification and herd splitting. These indigenous strategies allow the pastoralists to manipulate scarce resources, and hence to cope the arid and the semi-arid environment in the study area.

Table 2. Priority ranking of seven major threats and associated IBK as perceived by key informants in the study area

Major threats	Key informants										Total scores	%	Rank
	R ₁	R ₂	R ₃	R ₄	R ₅	R ₆	R ₇	R ₈	R ₉	R ₁₀			
Deforestation	7	7	5	5	7	4	5	3	6	5	54	19.9	2 nd
Forest fire	3	4	5	7	2	1	4	6	1	1	34	12.5	4 th
Human settlement & agricultural expansion	4	3	2	3	4	6	6	2	4	7	41	15.1	3 rd
Invasive alien plant species	1	2	2	1	1	5	2	4	1	4	23	8.5	7 th
Overgrazing/over browsing	7	5	7	5	7	7	6	7	5	3	59	21.7	1 st
Prolonged drought & dry season	1	2	3	3	2	3	3	4	7	1	29	10.7	6 th
Urbanization/modernization	4	6	4	2	5	2	1	1	3	4	32	11.8	5 th
Total scores	27	29	28	26	28	28	27	27	27	25	272	100	

CONCLUSION AND RECOMMENDATIONS

The research findings revealed that there was a significant variation of IBK within and among the different age, gender, nations and informants among the local Kebeles between the Afar and Oromo Nations. Overgrazing and deforestation were the major threats in the study area. Strengthening and encouraging IBK, the active participation of local communities and awareness raising are recommended.

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Appendix I. List of useful plant species in the study area (ANP)						
No	Scientific name	Family name	Habit	Vernacular name	Major use category	Collection No.
1	<i>Abutilon ramosum</i> Guill. & Perr.	Malvaceae	Herb	HAMBUKTO (Af); ATAYE (Or)	F, Mc	TB081
2	<i>Acacia brevispica</i> Harms	Fabaceae	Shrub	HAMARESA (Or)	F, Fu, Fo, Mc	TB204
3	<i>Acacia dolichocephala</i> Harms	Fabaceae	Tree	-	F, Fu, Mc, Mi	TB058
4	<i>Acacia mellifera</i> (Vahl) Benth. ^M	Fabaceae	Shrub	MAKA'ARTO/MA'EGHERTO (Af); SEPENE GURO (Or)	F, Fu, M, Fo, Mc, Mi	TB011
5	<i>Acacia negrii</i> Pic. - Serm.	Fabaceae	Shrub	KESEL-E (-TO) (Af); KESELE (Or)	F, Fu, Mc	TB051
6	<i>Acacia nilotica</i> (L.) Willd. ex Del. ^{Mc}	Fabaceae	Tree	KESEL-E (-TO) (Af); BURKUKU (Or)	F, Fu, M, Fo, Mc, Mi	TB003
7	<i>Acacia oerfata</i> (Forssk.) Schweinf.	Fabaceae	Shrub	GOMERTO (Af); AJO (Or)	F, Fu, M, Fo, Mc, Mi	TB045
8	<i>Acacia prasinata</i> Hude	Fabaceae	Tree	SEKETO (Af); DODOTI (Or)	F, Fu, Mc	TB201
9	<i>Acacia robusta</i> Burch.	Fabaceae	Tree	GERE'INTO (Af); WANIGAYO (Or)	F, Fu, Mc	TB180
10	<i>Acacia senegal</i> (L.) Willd.	Fabaceae	Shrub	ADADO (Af); SEPENSA DIMA/SEPESA (Or)	F, Fu, M, Fo, Mc, Mi	TB001
11	<i>Acacia seyal</i> Del.	Fabaceae	Tree	ADIGENTO/MAKANI (Af); WACHU (Or)	F, Fu, Fo, Mc	TB190
12	<i>Acacia tortilis</i> (Forssk.) Hayne ^{McMc, MmM}	Fabaceae	Tree	E'BITO/BEHBEY (Af); DEDECHA (Or)	F, Fu, M, Fo, Mc, Mi	TB026
13	<i>Acalypha fruticosa</i> Forssk. ^{Fu, MmM}	Euphorbiaceae	Shrub	CHIRI (Or)	F, Fu, Mc, Mi	TB090
14	<i>Acanthospermum hispidum</i> DC. ^{F, M}	Asteraceae	Herb	HARUWAYITO (Af)	Mi	TB129
15	<i>Achyranthes aspera</i> L. ^{Human (M); Livestock (MM)}	Amaranthaceae	Herb	ILMOLE (Af); DERGU (Or)	M	TB140
16	<i>Aframomum corrorima</i> (Braun) Jansen *	Zingiberaceae	Herb	GENIDU (Af)	Fo	TB174
17	<i>Agave sisalana</i> Perrine ex Engl.	Agavaceae	Herb	YA'A (Af); ALGE DHELTU (Or)	Mc, Mi	TB203
18	<i>Allium cepa</i> L. *	Alliaceae	Herb	ASA BESEL (-TO) (Af); KULUBI DIMA (Or)	Fo	TB170
19	<i>Allium porrum</i> L. *	Alliaceae	Herb	BESELO (Af); KULUBI DIMA (Or)	Fo	TB216
20	<i>Allium sativum</i> L. *	Alliaceae	Herb	ADO BESEL (-TO) (Af); KULUBI ADI (Or)	M, Fo	TB169
21	<i>Aloe trichosantha</i> Berger	Aloaceae	Herb	UREYITA (Af); HARGISA (Or)	Mi	TB091
22	<i>Arachis hypogea</i> L. *	Fabaceae	Herb	OCHOLONI (Af & Or)	Fo	TB226
23	<i>Aristida adscensionis</i> L. ^F	Poaceae	Herb	DURFI (Af)	F, Mc	TB060
24	<i>Aristolochia bracteolata</i> Lam. ^M	Aristolochiaceae	Herb	SUSU (Af)	M	TB095
25	<i>Artemisia absinthium</i> L. ^{McMc}	Asteraceae	Herb	HARITI (Af); ARITI (Or)	Mc, Mi	TB082
26	<i>Asparagus africanus</i> Lam. ^{Mm, McMc}	Asparagaceae	Climber	HIDE SERE/SERITI (Or)	M, Fo, Mc, Mi	TB130
27	<i>Avena sativa</i> L. ^{FF}	Poaceae	Herb	BALKERAR (Or)	F	TB064
28	<i>Azadirachta indica</i> A. Juss.	Meliaceae	Tree	MIMI HARA (Af); KININI (Or)	F, Fu, M, Mi	TB207
29	<i>Balanites aegyptiaca</i> (L.) Del. ^{McMc, MmM}	Balanitaceae	Tree	UDAYITO/ALA'TO (Af); BEBENO (Or)	F, Fu, M, Fo, Mc, Mi	TB004
30	<i>Barleria acanthoides</i> Vahl ^{FF, Fu}	Acanthaceae	Shrub	BALI WERANITI (Or)	F, Fu	TB123
31	<i>Barleria quadrispina</i> Lindau	Acanthaceae	Herb	GANSELITO (Af); BILINI (Or)	F	TB036
32	<i>Berchemia discolor</i> (Klotzsch) Hemsl.	Rhamnaceae	Tree	YEYEBTO (Af); JEJERA (Or)	F, Fu, Fo, Mc	TB191
33	<i>Bidens biternata</i> (Lour.) Merr. & Sherff ^{Mm}	Asteraceae	Herb	CHOGOGE (Or)	Fu, M	TB143
34	<i>Blepharis edulis</i> (Forssk.) Pers. ^{Mm}	Acanthaceae	Herb	KERBENA (Or)	F, M	TB134
35	<i>Boscia salicifolia</i> Oliv. ^{Fo, Mc}	Capparidaceae	Shrub	-	F, Fu, Fo, Mc	TB107
36	<i>Boswellia papyrifera</i> (Del.) Hochst.	Burseraceae	Tree	LUBATEN (Af); MUKE ITANA (Or)	F, Fu, Fo, Mc	TB099
37	<i>Boehrochloa radicans</i> (Lehm.) A. Camus	Poaceae	Herb	SAGETU (Or)	F	TB069
38	<i>Brassica napus</i> L. *	Brassicaceae	Herb	MESENGELE HARA (Af); GOMENA (Or)	Fo	TB227
39	<i>Brassica nigra</i> (L.) Koch *	Brassicaceae	Herb	SENAFICHI (Af); SENAFICHA (Or)	Fo	TB177
40	<i>Brassica oleracea</i> L. *	Brassicaceae	Herb	TIKIL GOMEN (Af); GOMENA (Or)	Fo	TB178
41	<i>Cadaba farinosa</i> Forssk. ^{Human (M); Livestock (MM), Fo}	Capparidaceae	Shrub	FURA (-YTO)/NUMHELE (Af); KELIKNATIONHA (Or)	F, Fu, M, Fo, Mc, Mi	TB031
42	<i>Calaba rotundifolia</i> Forssk.	Capparidaceae	Shrub	ANAGALI/ADENGLITA (Af); ARANGILLE (Or)	F, Fu, Mi	TB052
43	<i>Calotropis procera</i> (Ait.) Ait. ^{F, Mc, Mi}	Asclepiadaceae	Shrub	GELE'ATO/GHULA'ENTO (Af); FELFELA ADAL (Or)	Fu, M, Mc, Mi	TB012
44	<i>Capparis cartilaginea</i> Decne. ^{Mm}	Capparidaceae	Shrub	DELENSISA (Or)	Fu, M, Fo	TB117
45	<i>Capparis tomentosa</i> Lam. ^{M, Fo, Mc, MmM}	Capparidaceae	Shrub	HARENIGEMA (Or)	F, Fu, M, Fo, Mc, Mi	TB084
46	<i>Capsicum annuum</i> L. *	Solanaceae	Herb	BIS BAS (Af); BERBERE (Or)	Fo	TB173
47	<i>Capsicum frutescens</i> L. *	Solanaceae	Herb	GO BERBERE (Af); QARA (Or)	Fo	TB176
48	<i>Caralluma speciosa</i> (N.E.Br.) N.E.Br. ^M	Asclepiadaceae	Herb	LEBEHATEMO (Af); YA'TBERA (Or)	M	TB108
49	<i>Cardiospermum hallicabum</i> L. ^F	Sapindaceae	Climber	SIRIBIRU (Af)	F	TB017
50	<i>Carica papaya</i> L. *	Caricaceae	Tree	PAPAYE (Af & Or)	Fo	TB151
51	<i>Carthamus tinctorius</i> L. *	Asteraceae	Herb	SUFI (Af & Or)	Fo	TB159
52	<i>Catha edulis</i> (Vahl) Forssk. ex Endl. *	Celastraceae	Shrub	CHATI (Af); CHATI/JIMA (Or)	Fo	TB148
53	<i>Caucanthus auriculatus</i> (Radlk.) Niedenzu ^{FF}	Malpighiaceae	Climber	GALE (Or)	F, Fu	TB005

54	<i>Cetiba pentandra</i> (L.) Gaertn. ^{F, Fu, Fo, Construction and arts & handicrafts (M), Mi}	Bombacaceae	Tree	FERENJI TUTI (Af)	F, Fu, Fo, Mc, Mi	TB083
55	<i>Celtis loka</i> (Forssk.) Hepper & Wood	Ulmaceae	Tree	GUDIB'ATO (Af); METEKOMA (Or)	F, Fu, Fo, Mc	TB192
56	<i>Cenchrus ciliaris</i> L.	Poaceae	Herb	METE GUDSESA (Or)	F	TB062
57	<i>Chusquea laetum</i> Fenzl. ex Walp. ^F	Verbenaceae	Herb	HATAWI (Af)	F	TB044
58	<i>Chrysopogon aucheri</i> (Boiss.) Stapf	Poaceae	Herb	DURFI (Af); ALELO (Or)	F, Mc	TB071
59	<i>Chrysopogon plumulosus</i> Hochst.	Poaceae	Herb	DURFI (Af); DEREMO (Or)	F, Mc	TB059
60	<i>Cinnamomum zeylanicum</i> Breyn [*]	Lauraceae	Tree	KEREFA ALA (Af); KEREFA (Or)	Fo	TB217
61	<i>Cissampelos mucronata</i> A. Rich. ^{Mc, M}	Menispermaceae	Climber	HIDI (Or)	Mc	TB027
62	<i>Cissus quadrangularis</i> L. ^M	Vitaceae	Climber	AL'E (Af); CHOPHI (Or)	M, Fo, Mc	TB053
63	<i>Cissus rotundifolia</i> (Forssk.) Vahl ^{MD, F, Fu, Mc, M}	Vitaceae	Climber	BURI (Or)	F, Fo, Mc	TB111
64	<i>Citrus limon</i> (L.) Burm.f. [*]	Rutaceae	Shrub	LIMI HAMUD (Af); LOMI (Or)	Fo	TB150
65	<i>Citrus sinensis</i> (L.) Osb. [*]	Rutaceae	Shrub	FELFELE HARA/LIMI (Af); BIRTUKANA (Or)	Fo	TB152
66	<i>Cleome brachycarpa</i> Vahl ex DC. ^{F, Fu}	Capparidaceae	Herb	-	F, Fu	TB013
67	<i>Coelachyrum pojiflorum</i> Chiov. ^F	Poaceae	Herb	-	F	TB065
68	<i>Coffea arabica</i> L. [*]	Rubiaceae	Shrub	BUNI (Af); BUNA (Or)	Fo	TB149
69	<i>Combretum molle</i> R. Br. ex G. Don	Combretaceae	Tree	WE'IBA'TO (Af); RUKESA (Or)	F, Fu, Mc, Mi	TB197
70	<i>Commelina stephanianiana</i> Chiov.	Commelinaceae	Herb	-	F	TB141
71	<i>Commicarpus pedunculatus</i> (A. Rich.) Cufod. ^{Livestock (M); Human (MM)}	Nyctaginaceae	Herb	SEMERA HELA (Af)	M	TB118
72	<i>Commiphora erythraea</i> (Ehrenb.) Engl.	Burseraceae	Tree	YEYBITO (Af); CHELANKA (Or)	F, Fu, Mc	TB187
73	<i>Commiphora habessinica</i> (Berg) Engl.	Burseraceae	Shrub	HEDAYITO (Af); HAMESA (Or)	F, Fu, Fo, Mc, Mi	TB086
74	<i>Cordia monoca</i> Roxb.	Boraginaceae	Shrub	MINE GURE/SUBULA (Af); MEDERO (Or)	F, Fu, Fo, Mc	TB025
75	<i>Coriandrum sativum</i> L. [*]	Apiaceae	Herb	DIMBLALI (Af); DEBO (Or)	Fo	TB168
76	<i>Crepis rupestris</i> Sch. Bip. ^F	Asteraceae	Herb	ANEN'O (Af)	F	TB037
77	<i>Criinum abyssinicum</i> Hochst. ex A. Rich. ^F	Amaryllidaceae	Herb	ABU (Af)	F	TB205
78	<i>Crotalaria incana</i> L. ^{MM}	Fabaceae	Herb	IJISE (Or)	Fu, M, Mc, Mi	TB101
79	<i>Cryptostegia grandiflora</i> Roxb. ex R. Br. ^{Mc, M}	Asclepiadaceae	Shrub	HALI MERO (Af); HAKONKOL (Or)	Fu, Mc, Mi	TB018
80	<i>Cucumis prophetarum</i> L. ^{F, M, Mc, M, M}	Cucurbitaceae	Herb	HARE GOGI (Or)	F, M, Mc, Mi	TB032
81	<i>Cucurbita pepo</i> L. [*]	Cucurbitaceae	Herb	DELA (Af); BUKE NYATA (Or)	Fo	TB228
82	<i>Cuminum cyminum</i> L. [*]	Apiaceae	Herb	HANDER KEMUN (Af); KEMUN (Or)	Fo	TB218
83	<i>Citrullus domestica</i> Valetou [*]	Zingiberaceae	Herb	HURUD (Af); IRDI (Or)	Fo	TB219
84	<i>Cymbopogon citratus</i> (DC.) Stapf ^{*, Mc, M}	Poaceae	Herb	TEJI SAR (Af); TIJ SARA (Or)	Mc	TB213
85	<i>Cymbopogon pospischilii</i> (K. Schum.) C.E. Hubb.	Poaceae	Herb	ISESU/AYISO (-YITA) (Af)	F	TB179
86	<i>Cynanchum gerrardii</i> (Harv.) Liode ^{Fu, M, M}	Asclepiadaceae	Climber	HIDA KELA/MUKA JINI (Or)	Fu, M	TB188
87	<i>Cynanchum hastifolium</i> N.E. Br. ^{Fu}	Asclepiadaceae	Climber	SARA KORPO (Or)	Fu	TB106
88	<i>Cyperus rigidifolius</i> Steud. ^{F, M}	Cyperaceae	Herb	F'A (Af); DELADU (Or)	F, M	TB124
89	<i>Dalbergia lactea</i> Vatke ^{F, Mc, M}	Fabaceae	Shrub	DILO LELFA (Or)	F, Fu, Mc	TB198
90	<i>Dalechampia parvifolia</i> Lam. ^{FF}	Euphorbiaceae	Climber	-	F	TB092
91	<i>Datura stramonium</i> L. ^{MD}	Solanaceae	Herb	BUTA HARA (Af); BANDA (Or)	M, Mi	TB100
92	<i>Dichrostachys cinerea</i> (L.) Wight & Arn.	Fabaceae	Shrub	JIRME (Or)	F, Fu, Mc, Mi	TB009
93	<i>Dicoma tomentosa</i> Cass. ^{F, Fu}	Asteraceae	Herb	-	F, Fu	TB131
94	<i>Digitaria pennata</i> (Hochst.) T. Cooke ^F	Poaceae	Herb	SERIDO (-YITA) (Af)	F	TB076
95	<i>Dobsonia glabra</i> (Forssk.) Poir. ^{Fu}	Salvadoraceae	Tree	GHERSA (Af); ADE (Or)	F, Fu, Fo, Mc, Mi	TB195
96	<i>Echinops pappii</i> Chiov. ^{Fu}	Asteraceae	Shrub	BILINGI (Or)	Fu	TB006
97	<i>Ehretia cymosa</i> Thonn. ^{MM}	Boraginaceae	Shrub	MINE GURE (Af); ULAGA (Or)	F, Fu, M, Fo, Mc	TB097
98	<i>Elettaria cardamomum</i> (L.) Maton [*]	Zingiberaceae	Herb	HELI (Af & Or)	Fo	TB220
99	<i>Eragrostis tef</i> (Zucc.) Trotter [*]	Poaceae	Herb	TAFI (Af & Or)	Fo	TB157
100	<i>Eriochloa fatmensis</i> (Hochst. & Steud.) W.D. Clayton ^F	Poaceae	Herb	OKABTO (Af)	F	TB072
101	<i>Eucalyptus globulus</i> Labill.	Myrtaceae	Tree	BAHIR ZAFI (Af & Or)	Fu, M, Mc	TB210
102	<i>Euclea racemosa</i> Murr. subsp. <i>schimperii</i> (A. DC.) White ^{F, Fu, Fo}	Ebenaceae	Shrub	MISSA (Or)	F, Fu, Fo, Mc	TB200
103	<i>Euphorbia actinoclada</i> Carter ^M	Euphorbiaceae	Herb	INGEDA'TO (Af)	M	TB119
104	<i>Euphorbia polyacantha</i> Boiss.	Euphorbiaceae	Shrub	-	Fu, Mi	TB142
105	<i>Euphorbia tirucalli</i> L.	Euphorbiaceae	Tree	LIHASO (Af); ANO (Or)	F, Fu, M, Mi	TB046
106	<i>Fagonia schweinfurthii</i> (Hadidi) Hadidi ^{FF, Human & livestock (M)}	Zygophyllaceae	Herb	ASKENA (Af); WAN SHIMBIRA (Or)	F, M	TB144
107	<i>Ficus sycomorus</i> L. ^{Mc, M, M}	Moraceae	Tree	SUBULA (Af); ODA (Or)	Fu, M, Fo, Mc, Mi	TB043
108	<i>Ficus vasta</i> Forssk.	Moraceae	Tree	MARA'TO (Af); KILTU (Or)	Fu, M, Fo, Mc, Mi	TB047
109	<i>Fimbristylis ferruginea</i> (L.) Vahl ^F	Cyperaceae	Herb	DEREMA (Af)	F	TB112

110	<i>Flacourtia indica</i> (Burm.f.) Merr. ^{FF, FuFu, FoFu, McMc}	Flacourtiaceae	Shrub	-	F, Fu, Fo, Mc	TB014
111	<i>Forsskaeola viridis</i> Webb. ^{Fu, FuFu}	Urticaceae	Herb	-	F, Fu	TB030
112	<i>Gomphocarpus abyssinicus</i> Decne. ^{Mb}	Asclepiadaceae	Herb	-	Mi	TB182
113	<i>Gossypium hirsutum</i> L. [*]	Malvaceae	Shrub	TUT (Af)	Mc	TB214
114	<i>Grewia bicolor</i> Juss. ^{Mc}	Tiliaceae	Shrub	ADIBI'ATO (Af); HARORESA (Or)	F, Fu, Fo, Mc	TB185
115	<i>Grewia ferruginea</i> Hochst. ex A. Rich. ^{Mc}	Tiliaceae	Shrub	ADIBI'ATO (Af); HARORESA (Or)	F, Fu, Fo, Mc	TB186
116	<i>Grewia schweinfurthii</i> Burret ^{Mc}	Tiliaceae	Shrub	ADIBI'ATO (Af); MUDHE GURE (Or) HEDAYITO/HUDA/MINE GURE (Af); DEKA TUNTUNA (Or)	F, Fu, Fo, Mc	TB181
117	<i>Grewia tenax</i> (Forssk.) Fiori ^{Mc}	Tiliaceae	Shrub		F, Fu, Fo, Mc	TB038
118	<i>Grewia velutina</i> (Forssk.) Vahl ^{Mc}	Tiliaceae	Shrub	ADIBI'ATO (Af); HARORESA (Or)	F, Fu, Fo, Mc	TB054
119	<i>Grewia villosa</i> Willd. ^{Mc}	Tiliaceae	Shrub	GARIWA (Af); OGOMDI (Or)	F, Fu, M, Fo, Mc, Mi	TB024
120	<i>Guizotia abyssinica</i> (L.f.) Cass. [*]	Asteraceae	Herb	NUGI (Af & Or)	Fo	TB230
121	<i>Hagenia abyssinica</i> (Bruce) J.F. Gmel. [*]	Rosaceae	Tree	BEGALA (Af); HETO (Or)	Fu, M, Mc	TB209
122	<i>Heliotropium longiflorum</i> (A. DC.) Jaub. & Spach	Boraginaceae	Climber	HININISO (Af); KORCHA MICH (Or)	F	TB085
123	<i>Heliotropium zeylanicum</i> (Burm. f.) Lam	Boraginaceae	Herb	HININISO (Af); KORCHA MICH (Or)	F	TB007
124	<i>Heliotropium undulatifolium</i> Turill.	Boraginaceae	Herb	ADILIS (Af); KORCHA MICH (Or)	F	TB113
125	<i>Hibiscus micranthus</i> L. f. ^{F, Fu, Mc}	Malvaceae	Herb	AKILEHENA (Af)	F, Fu, Fo, Mc	TB145
126	<i>Hippocratea africana</i> (Willd.) Loes. ^{McMc}	Celastraceae	Climber	MISI (Af); TERO (Or)	F, Fu, Mc	TB196
127	<i>Hypparrhenia anamesa</i> W. D. Clayton	Poaceae	Herb	ISESU (Af); LUCHOLE (Or)	F	TB063
128	<i>Hypparrhenia diplandra</i> (Hack.) Stapf [♀]	Poaceae	Herb	ISESU (Af)	F	TB077
129	<i>Hypparrhenia hirta</i> (L.) Stapf	Poaceae	Herb	AYISOYITA/ISESU (Af); MENE CHITA (Or)	F, Mc	TB070
130	<i>Hypparrhenia rufa</i> (Nees) Stapf	Poaceae	Herb	ISESU (Af); MENE CHITA (Or)	F, Mc	TB040
131	<i>Hyphaene thebaica</i> (L.) Mart. ^{F, Fu, Fo, Mc, Mc}	Arecaceae	Tree	UNGA/GARA'TO (Af); METI (Or)	F, Fu, Fo, Mc	TB128
132	<i>Indigofera arrecta</i> Hochst. ex A. Rich. ^{Mb}	Fabaceae	Herb	HERCHUMEN (Or)	Fu, M, Fo, Mc	TB008
133	<i>Indigofera coerulea</i> Roxb. ^{Mb, FoFo}	Fabaceae	Herb	ADULALA (Or)	Fu, M, Fo	TB120
134	<i>Ipomoea batatas</i> (L.) Lam. [*]	Convolvulaceae	Herb	FELFELE (Af); MITATISI (Or)	Fo	TB160
135	<i>Ipomoea carnea</i> Jacq. ^{Fu}	Convolvulaceae	Shrub	BIROLI (Af)	Fu	TB015
136	<i>Jatropha curcas</i> L.	Euphorbiaceae	Shrub	ABETE BULK (Or)	Fu, Mi	TB102
137	<i>Justicia angaloides</i> (Nees) T. Anders. ^{FF}	Acanthaceae	Herb	KETE GURATI (Or)	F	TB125
138	<i>Kalanchoe densiflora</i> Rolfe ^{Mb}	Crassulaceae	Herb	BOSOKI (Or)	M	TB019
139	<i>Kleinia odorata</i> (Forssk.) DC. ^{FF, MEMc, Mb}	Asteraceae	Shrub	LUKO (Or)	F, Fu, Mc, Mi	TB206
140	<i>Lagenaria siceraria</i> (Molina) Standl. [*]	Cucurbitaceae	Climber	DELA (Af); BUKI (Or)	Mc	TB210
141	<i>Lantana camara</i> L.	Verbenaceae	Shrub	BADUWA HARA (Af); MIDAN DUBRA (Or)	F, Fu, Fo, Mc, Mi	TB050
142	<i>Lepidium sativum</i> L. [*]	Brassicaceae	Herb	HILIFE (Af); FETO (Or)	Fo	TB171
143	<i>Linum usitatissimum</i> L. [*]	Linaceae	Herb	TELBA (Af & Or)	Fo	TB229
144	<i>Lippia adoensis</i> Hochst. ex Walp var. <i>Koseret</i> Sebsebe [*]	Verbenaceae	Shrub	KOSERET (Af & Or)	Fo	TB221
145	<i>Lucopersicon esculentum</i> Mill. [*]	Solanaceae	Herb	TIMATIM HARU (Af); TIMATIMI (Or)	Fo	TB153
146	<i>Maerua angolensis</i> DC. ^{Fu, Fo, Mc, Mb}	Capparidaceae	Shrub	DUNIBAYITO/SEKILELI'A (Af)	F, Fu, Fo, Mc	TB136
147	<i>Mangifera indica</i> L. [*]	Anacardiaceae	Tree	MANGO (Af & Or)	Fo	TB154
148	<i>Mamlikara butugi</i> Chiov.	Sapotaceae	Tree	BUTUYE (Af); BUTUJI (Or)	F, Fu, Fo, Mc, Mi	TB194
149	<i>Melhamia ovata</i> (Cav.) Spreng. [♀]	Sterculiaceae	Shrub	HAMBOKITO (Af)	F	TB033
150	<i>Momordica trifoliolata</i> Hook.f. ^{FoFo}	Cucurbitaceae	Climber	KORICHA AJA (Or)	Fo	TB138
151	<i>Moringa stenopetala</i> (Bak.f.) Cuf.	Moringaceae	Tree	-	Fu, Fo, Mc	TB096
152	<i>Morus mesozygia</i> Stapf	Moraceae	Shrub	-	F, Fu, Mc	TB105
153	<i>Musa paradisiaca</i> L. [*]	Musaceae	Herb	MUSU (Af); MUZI (Or)	Fo, Mi	TB161
154	<i>Nanorrhinum hastatum</i> (R.Br. ex Benth.) Ghebr. ^{FF}	Scrophulariaceae	Herb	-	F	TB109
155	<i>Nicotiana tabacum</i> L. [*]	Solanaceae	Herb	DEMBAKO (Af); TAMBO (Or)	M, Fo	TB208
156	<i>Nigella sativa</i> L. [*]	Ranunculaceae	Herb	HABEL SODA (Af); NUGI GURATI (Or)	Fo	TB172
157	<i>Ocimum basilicum</i> L. [*]	Lamiaceae	Herb	DINADA/TELITAL (Af); URGUYITU (Or)	Fo	TB165
158	<i>Ocimum forskolei</i> Benth. ^{Mb}	Lamiaceae	Herb	SURI MI'A (Af); DAMA KESE (Or)	F, Mc, Mi	TB093
159	<i>Ocimum spicatum</i> Defflers ^{M, Fo}	Lamiaceae	Shrub	MISE (Af); KORCHA MICH (Or)	Fu, M, Fo	TB139
160	<i>Ocimum stirbeyi</i> Schweinf. & Volk. ^{Fu, Mc}	Lamiaceae	Shrub	BIRTELI (Af)	Fu, Mc	TB021
161	<i>Olea europaea</i> L. subsp. <i>cuspidata</i> (Wall. ex G. Don) Cif.	Oleaceae	Tree	WEYIBO (Af); EJERSA (Or)	F, Fu, M, Mc, Mi	TB132
162	<i>Oncocalyx schimperii</i> (A. Rich.) M. Gilbert	Loranthaceae	Semi-parasitic	HATOTE (Af); DERTU HARORESA (Or)	Fu, M, Mc	TB028
163	<i>Orthosiphon pallidus</i> Royle ex Benth.	Lamiaceae	Herb	HAMBOKITO (Af); URGUYITU (Or)	Mi	TB146
164	<i>Otostegia integrifolia</i> Benth. [*]	Lamiaceae	Shrub	TUNGTI (Af); TINITI (Or)	Fu, M, Mi	TB215
165	<i>Panicum maximum</i> Jacq. ^{Mb}	Poaceae	Herb	DONIKITO (Af); LOLOKA (Or)	F, Mi	TB067
166	<i>Parkinsonia aculeata</i> L. ^{Fo}	Fabaceae	Shrub	-	F, Fu, Fo, Mc	TB057

167	<i>Parthenium hysterophorus</i> L. ^M	Asteraceae	Herb	MIGA AMELI (Af); ALI WARIO/BIYE BASA (Or)	M	TB023
168	<i>Pennisetum menzianum</i> Leeke	Poaceae	Herb	-	F, Mc	TB209
169	<i>Pennisetum setaceum</i> (Forssk.) Chiov.	Poaceae	Herb	AREB MURI (Or)	F, Mc	TB079
170	<i>Peristrophe paniculata</i> (Forssk.) Brummitt ^F	Acanthaceae	Herb	-	F	TB127
171	<i>Persicaria setosula</i> (A. Rich.) K. L. Wilson	Polygonaceae	Herb	ALELITU (Or)	Mc	TB193
172	<i>Piper longum</i> L. *	Piperaceae	Climber	TIMIZ (Af & Or)	Fo	TB222
173	<i>Piper nigrum</i> L. *	Piperaceae	Herb	HINID/BELEW (Af);	Fo	TB223
174	<i>Plicosepalus sagittifolius</i> (Engl.) Danser	Loranthaceae	Semi-parasitic	HATOTE (Af); DERTU DEDACHA (Or)	Fu, M, Mc	TB087
175	<i>Premna resinosa</i> (Hochst.) Schauer ^{Fo}	Lamiaceae	Shrub	BOBA'O (Af); URGESA (Or)	F, Fu, Fo, Mi	TB035
176	<i>Prosopis juliflora</i> (Sw.) DC. ^{Fu, MM, Fo}	Fabaceae	Shrub	WEYANE (Af & Or)	F, Fu, M, Fo, Mc, Mi	TB020
177	<i>Psidium guajava</i> L. *	Myrtaceae	Tree	ZEITUNA (Af & Or)	Fo	TB147
178	<i>Pupalia lappacea</i> (L.) A. Juss. ^M	Amaranthaceae	Herb	SOROT KUFU (Af); METENE (Or)	F, M, Mc	TB137
179	<i>Rhus vulgaris</i> Meikle ^{F, Fu, MM}	Anacardiaceae	Shrub	DEBOBESA (Or)	F, Fu, M, Fo, Mc	TB103
180	<i>Rhamnus prinoides</i> L. 'Herit. *	Rhamnaceae	Shrub	GESHO (Af & Or)	Fo	TB164
181	<i>Rhynchosia malacophylla</i> (Spreng.) Boj. ^{Mc, M}	Fabaceae	Herb	-	Mc, Mi	TB115
182	<i>Rhynchosia minima</i> (L.) DC. ^{Mc, M}	Fabaceae	Climber	KELELA (Or)	Mc	TB002
183	<i>Ricinus communis</i> L. * ^{MM, M}	Euphorbiaceae	Shrub	SHERBETI (Af); KORO (Or)	Fu, M, Fo, Mc	TB048
184	<i>Rosmarinus officinalis</i> L. *	Lamiaceae	Shrub	HAWAGI (Af); KORA (Or)	Fo	TB166
185	<i>Ruta chalepensis</i> L. *	Rutaceae	Herb	DINADA/TELITAL (Af); CHIREKOTE (Or)	M, Fo	TB163
186	<i>Saccharum officinarum</i> L. *	Poaceae	Herb	SEKOR ALA (Af); SHONKORA (Or)	Fo	TB155
187	<i>Salvadora persica</i> L. ^M	Salvadoraceae	Shrub	HADAYITO/DADAHO (Af); ADE (Or)	F, Fu, M, Fo, Mc	TB039
188	<i>Saussevieria ehrenbergii</i> Schweinf. ex Baker	Draceneae	Herb	YI'E (Af); ALGE (Or)	Mc	TB010
189	<i>Schinus molle</i> L. ^{MM}	Anacardiaceae	Tree	KUNDO HERBERE (Or)	Fu, M, Mc, Mi	TB114
190	<i>Seddera arabica</i> (Forssk.) Choisy ^{Ff}	Convolvulaceae	Herb	RIBA (Or)	F	TB042
191	<i>Seddera bagshawei</i> Rendle ^{MM}	Convolvulaceae	Herb	RIBA (Or)	F, M	TB133
192	<i>Senna italica</i> Mill. ^{MM}	Fabaceae	Herb	SELILU (Af); HINA HARE (Or)	F, M	TB184
193	<i>Senna occidentalis</i> (L.) Link ^{Leaf (M); root (MM); Fo, MM}	Fabaceae	Herb	FERAHYITI (Af); SHESHEKISA (Or)	M, Fo, Mi	TB183
194	<i>Sesamum indicum</i> L. *	Pedaliaceae	Herb	SELITI (Af); SELITA (Or)	Fo	TB158
195	<i>Sesbania sesban</i> (L.) Merr.	Fabaceae	Shrub	ENCHINI/HARCHA (Or)	F, Fu, Mc	TB135
196	<i>Sida rhombifolia</i> L.	Malvaceae	Herb	WELAYINEBA (Af); HATAWI (Or)	F, M, Mc, Mi	TB121
197	<i>Sida schimperiana</i> Hochst. ex A. Rich. ^{MM}	Malvaceae	Shrub	WELAYINEBA (Af); KORCHA IJOLE (Or)	F, Fu, M, Mc, Mi	TB094
198	<i>Solanum congalans</i> Forssk.	Solanaceae	Herb	-	F, Fu	TB104
199	<i>Solanum hastifolium</i> Hochst. ex Dunal	Solanaceae	Shrub	BURI BOLO (Or)	F, Fu	TB088
200	<i>Solanum incanum</i> L. ^{Mc, M}	Solanaceae	Shrub	AMBOKO ASO (Af); HIDI LONI (Or)	F, Fu, Mc, Mi	TB016
201	<i>Solanum nigrum</i> L. ^{Fo}	Solanaceae	Herb	SARA KORPO (Or)	F, Fo	TB034
202	<i>Solanum schimperianum</i> Hochst. ex A. Rich. ^{MM}	Solanaceae	Shrub	AMBOKO ASO (Af); HIDI RE'E (Or)	Mi	TB029
203	<i>Solanum tuberosum</i> L. *	Solanaceae	Herb	BETATA/ALI FURA (Af); DINICHA (Or)	Fo	TB231
204	<i>Sorghum arundinaceum</i> (Desv.) Stapf	Poaceae	Herb	FINCHO (Or)	F	TB066
205	<i>Sorghum bicolor</i> (L.) Moench. *	Poaceae	Herb	DERO (Af); MISHINGA (Or)	Fo	TB232
206	<i>Sorghum purpureo-sericeum</i> (Hochst. ex A. Rich.) Aschers. & Schweinf.	Poaceae	Herb	KILA/KILO (Or)	F	TB068
207	<i>Sporobolus cosimilis</i> Fresen.	Poaceae	Herb	HAMELITO (Af)	F, Mc	TB078
208	<i>Sporobolus ioclados</i> (Trin.) Nees ^F	Poaceae	Herb	HAMELITO (Af)	F	TB061
209	<i>Sporobolus pyramidalis</i> P. Beauv.	Poaceae	Herb	HAMELITO (Af)	F	TB074
210	<i>Sporobolus spicatus</i> (Vahl) Kunth	Poaceae	Herb	DONEKITO (Af)	F	TB080
211	<i>Steganotaenia araliacea</i> Hochst. ex A. Rich. ^{Fu, Fu}	Apiaceae	Tree	-	Fu	TB055
212	<i>Sterculia africana</i> (Lour.) Fiori	Sterculiaceae	Tree	KERERI (Or)	F, Fu, Fo, Mc, Mi	TB022
213	<i>Syzgium aromaticum</i> L. *	Myrtaceae	Tree	KORONIFEL (Af); QIRNEFUDI (Or)	Fo	TB224
214	<i>Tamarindus indica</i> L. ^{Fo}	Fabaceae	Tree	SEGENTU (Af); ROKA (Or)	F, Fu, M, Fo, Mc, Mi	TB126
215	<i>Tamarix nilotica</i> (Ehrenb.) Bunge ^F	Tamaricaceae	Shrub	SEG'ITO (Af)	F, Fu	TB202
216	<i>Terminalia brownii</i> Fresen.	Combretaceae	Tree	WE'IBA'TO (Af); BIR'ENSA (Or)	F, Fu, M, Mc, Mi	TB098
217	<i>Tetrapogon cenchrifolius</i> (A. Rich.) Clayton	Poaceae	Herb	AYTI ADOYITA (Af)	F	TB075
218	<i>Tetrapogon tenellus</i> (Roxb.) Chiov.	Poaceae	Herb	ABURI (Af)	F	TB073
219	<i>Thymus serpyllatus</i> Hochst. ex Benth. *	Lamiaceae	Herb	HARA FURO (Af)	Fo	TB225
220	<i>Trachyspermum ammi</i> (L.) Sprague ex Turrill *	Apiaceae	Herb	ADO HABEL SODA (Af); AZIMUD ADI (Or)	Fo	TB175
221	<i>Tragia mixta</i> M.Gilbert ^M	Euphorbiaceae	Climber	MISI HARA (Af); DORI (Or)	F, M	TB122

222	<i>Trigonella foenum-graecum</i> L. *	Fabaceae	Herb	AB'KA-'E (-YE) (Af); MERERA (Or)	Fo	TB167
223	<i>Trilepisium madagascariense</i> DC. FuFu, McMc	Moraceae	Tree	SELAWETA (Or)	Fu, Mc	TB189
224	<i>Typha</i> spp. F, Mc	Typhaceae	Herb	GEDE (Af)	F, Mc	TB089
225	<i>Vernonia cinerascens</i> Sch. Bip.	Asteraceae	Shrub	FILE NEME'A (Af); KERTATUME (Or)	F, Fu, Mc	TB049
226	<i>Vernonia uncinata</i> Oliv. & Hiern	Asteraceae	Herb	FILE NEME'A (Af)	Fu	TB110
227	<i>Withania somnifera</i> (L.) Dunal Human & livestock (M)	Solanaceae	Herb	GERBA ADO (Af); BALE URU (Or)	F, M, Mc, Mi	TB116
228	<i>Ximenea americana</i> L.	Olacaceae	Tree	HUDHA (Or)	F, Fu, Fo, Mc	TB199
229	<i>Zea mays</i> L. *	Poaceae	Herb	GERMASILA/BORDOGE (Af); MASHILA/BEKOLO (Or)	Fo	TB156
230	<i>Zingiber officinale</i> Roscoe *	Zingiberaceae	Herb	DENGE DILI (Af)	Fo	TB162
231	<i>Ziziphus mucronata</i> Willd. Mc	Rhamnaceae	Tree	KUSIR-A (-TO) (Af); KURKURA HADO (Or)	F, Fu, M, Fo, Mc, Mi	TB056
232	<i>Ziziphus spina-christi</i> (L.) Desf. Mc	Rhamnaceae	Tree	KUSIR-A (-TO) (Af); KURKURA (Or)	F, Fu, M, Fo, Mc, Mi	TB041

Major use category [F = Forage/fodder; Fu = Fuel wood; M = Medicine; Fo = Food; Mc = Material culture; Mi = Miscellaneous uses]

* Useful plant species recorded outside of the ANP during market survey; Plant species without asterisks are recorded inside of the ANP

F, Fu, M, Fo, Mc, Mi = Useful plant species reported by the Afar Nation

FF, FuFu, MM, FoFo, McMc, MiMi = Useful plant species reported by the Oromo Nation

Useful plant species without symbols of major use categories are reported by both Nations