

Forest Allocation, Benefit Sharing, and Management Practice in the KOBO Community Forest Among the Sheka People

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Research

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Abstract

Background: *Sheka people have the right to forest allocation, benefit sharing, and management practice that they possess due to traditional ownership or other traditional occupation. Locally, these forests are known as KOBO. There is a scarcity of documented information on the KOBO culture of forest allocation, benefit sharing, and management practice among Sheka people. A study was conducted in Sheka zone southwestern Ethiopia.*

Methods: *A framework based on ethnographic information is proposed in this paper; accordingly, qualitative indicators are suggested for different variables relating to indigenous forest allocation, benefit sharing, and management practice. A representative sample of 20 volunteered research participants were chosen. Observational and interview surveys were done by the first author through personal visits.*

Results: *The analysis of data shows the KOBO culture is productive and efficient for forest management, and this useful culture has demonstrated its significance in the protection of various forest types and tree species, contributing to the conservation of biodiversity. These results lend support to the idea that the KOBO forest conservation culture is illustrated in the Sheka people forest utilization, protection, and management provide important insights into the protection of various forest types and tree species, contributing to the conservation of biodiversity.*

Conclusions: *Understanding, the current KOBO culture of forest allocation, benefit sharing, and management practices could substantially enhance sustainable forest management and social and economic development of the Sheka people.*

Introduction

Traditional ecological knowledge and forest management forms a central part for existence of forest resource. Traditional ecological knowledge of people can influence the culture of forest conservation (Berkes et al. 2000, ICSU, 2002, Parrotta and Agnoletti 2007, Parrotta et al. 2008). This can be seen in forest allocation, benefit sharing and management practice to conserve forest resources. Traditional ecological knowledge is important for designing effective forest allocation (Castella et al. 2006, Nguyen 2008, Clement, 2009), benefit sharing (Crouch et al. 2008, Cock 2010, Mason, 2013), and management practice to conserve forest resources (Berkes et al. 2000, ICSU, 2002, Parrotta and Agnoletti 2007, Parrotta et al. 2008). The involvement of the local people in decision on forest allocation, benefit sharing can result towards forest conservation (Berkes et al. 2000).

Different management strategies such as forest allocation and benefit sharing were reported. Forest benefits have featured many people globally. For example, global case studies have obtained forest-related benefits in tropical areas across the world (Biber-Klemm, 2014). Forest allocation, benefit-sharing and management practices are important for many societies (CBD 2016). Forest related benefit have been used for various purposes across the world. For example, there is a growing interest in the intrinsic

and consumptive values human attached to forest resource (Lammerts et al., 2003; Arias-Arévalo et al. 2017; Masiero, 2019).

These associated benefit and conservation practices have resulted in reverence of forest across cultures. Sheka people dependency on the Sheka forest has made the people of Sheka create various techniques and strategies that are used to manage the Sheka forest. This is clearly reflected in the KOBO forest conservation and management culture. Locally, these forests are known as KOBO. Large tracts of dense and well-protected patches of traditionally managed forests can still be seen in many parts of the Sheka zone. This can be attributed to the traditional forest-related knowledge and management practices of the Sheka people.

Among the Sheka people in southwestern Ethiopia, a relationship with forest is cultivated in the societies' traditional values and beliefs. For instance, Sheka people allocate the KOBO forestland (economic forest) based on clan. KOBO forestland (economic forest) owned by individuals who belong to a particular clan, which is found very far from the village owns the KOBO economic forest. The KOBO forest managed and used according to the requirements and wishes of the owner.

Considering that no current conservation approach fully addresses these emerging challenges to the Sheka forest, there is a need to consider the potential role of traditional forest allocation, benefit-sharing, and management practices in conserving the Sheka forest. Cultural value of forest allocation, benefit-sharing, and management practices can strongly influence conservation decisions. Understanding these cultural values and management practices can present a new socio-economic perspective in forest conservation. This paper assesses the values of forest allocation, benefit-sharing, and management practices among the Sheka people in south western Ethiopia and discusses how this traditional knowledge can be intergraded in forest conservation.

Methods

Study area

The Sheka Zone is located at about 670 km from Addis Ababa. It is found in the South Nations Nationalities and Peoples Regional State. The Sheka zone shares boundaries with the Oromia Regional State in the North, Bench Maji Zone in the South, Gambella Regional State in the West, and Kefa Zone in the east. The total area of Sheka was 2175327 ha. Geographically, the Sheka Zone lies between 7°24'-7°52' N latitude and 35°31'-35°35'E longitude. The Zone has three woredas namely: Masha, Andracha, and Yeki. In the Zone, there are 56 rural and seven urban peasant associations (Pas) in three woredas.

Data Collection And Analysis

The study made used both qualitative and quantitative data. Quantitative data were collected through administration of questionnaires to the head of the household and interviews with key informants within

the selected area. Qualitative data were collected through key informant interviews (KIIs) and focused group discussions (FGDs). Data for this study were obtained through an interview conducted over 4 weeks in July and August 2019. The first aim of the survey was to explore respondents' knowledge and practice of traditional forest-related knowledge of KOBO (economic enterprise) forests and investigate their awareness of KOBO (economic enterprise) conservation culture, and forest allocation, benefit-sharing, and management practices in the KOBO community forest. Second, respondents' perceptions of the KOBO (economic enterprise) and management practices of the KOBO (economic enterprise) were explored.

Data Analysis

Data obtained were analyzed using descriptive statistics and presented in tables, means, percentages and frequency. This was based on the information provided by the respondents. Furthermore, computer software, known as statistical package for social sciences (SPSS) version 21.0, was employed in analyzing the data.

Results

Forest allocation

The KOBO forest managed and used according to the requirements and wishes of the owner. The majority of the respondents (86%) stated that allocation of the KOBO forest conservation culture is fair and the common cultural practice of the Sheka people. Talking about the KOBO distribution, an interviewee said: "The KOBO economic forest is owned by individuals who belong to a particular clan and which are found very far from the village.

In one village, there may be one particular clan and own an area of a large tract of forestland, for example, the Wollo clan owns the DEDO and GUDO sacred forests located inside the clan territorial and political unit. The same thing holds true for KOBO. In his accounts of the management of the KOBO economic forest as one interviewee put it: "The KOBO economic forest was allocated and administered by that particular clan. All members of the clan are entitled to get a share of the benefits, which are derived from the use of KOBO forests. The management and conservation of economic forest (KOB) is the responsibility of the clan leader" (KI-4, 23 Jan. 2019: Masha Town).

Another interviewee, when asked about the distribution and allocation of KOB, said:

"KOB forest is a large plot of forest far away from the village were put under the category of KOB forest. The clan leader (Gebi tato) divided forests into each member of the clan in the village. The allocation of the KOB forest is not equal to the member of the clan. Not all member of the clan in the village has KOB forest. In a village where there is relatively less forest, the farmers may be engaged in other economic activities like livestock and farming, than the production of honey. Even among the KOB forest holders, there is no equitable distribution of KOB forests among households. As the number of

village households had increased from time to time, the KOBO forest holding also decreased. Another reason for the unfair distribution of KOBO forest is that previous KOBO holders only share the KOBO forest to their family and those non-KOBO forest holders do not have KOBO forest at all (FGD-4, 25 Jan.2019 Gecha Town).

The management of the KOBO forest is the responsibility of the individual KOBO holders. A common view among interviewees on the management of the KOBO forest shows that access to the KOBO forest and collection of forest products only for households belonging to the particular KOBO holder. No individual can enter and make use one's KOBO holding for his own consumption. The collection of forest products by people other than the owners' family members is strictly prohibited. The clan leader (Gebi tato) deals with decisions that need to be taken regarding KOBO allocation and administration. The KOBO forest is well protected and is never converted to other land uses and the owner of the KOBO has a birthright to transfer the KOBO holding to the next generation (KI-4, 20 Jan. 2019: Gecha Town).

In the Sheka zone, the KOBO forest conservation culture is implemented in two different ways. According to the REED + PFM project coordinator in the Sheka zone, there are two KOBOS this is forest-based KOBO and area-based KOBO. In the forest-based KOBO, trees are counted and given to each member of the village; this is very common in a place where there are a high number of populations. The clan leader (Gepi tato) does allocation of trees to the village members. The second one is area-based KOBO system, in which the KOBO forest conservation culture, forest is allocated based on demarcating some geographic feature like rivers, hills or mountain. Based on this unique geographic feature, the KOBO forest are allocated to different KOBO holders. This is also done under the auspices of the clan leader (Gepi tato) (KI-4, 20 Jan.2019 Masha Town).

Benefit Sharing

The KOBO forest is the principal source of honey for the Sheka people. The majority of the respondents (84%) said that there is economic importance of the KOBO forest conservation culture and the Sheka people traditional belief system. The Sheka traditional forest conservation and management practice is not only used for conservation of biodiversity but also serve for the production of quality honey that creates a huge market demand within and outside the Sheka zone. Participants of FGD on Masha woreda consolidated this fact: "the Sheka people traditional forest conservation and management practice there are forests which are used mainly for productions of honey" (FDG3, 25 Jan. 2019: Masha woreda). One-KOBO holder may have up to 120 bee hives. In addition to the production of honey, the KOBO forest is used for extraction of trees for house building and another household consumption" (KI-4, 22 Jan. 2019: Masha Town).

The majority of the trees are used for the production of quality honey. Kinds of honey are produced from different tree species. The types of honey produced depend on the tree species. Due to this traditional knowledge, the Sheka people have identified different tree species. According to the Masha Woreda department of forest and Environment protection, the Sheka people through their indigenous knowledge

have been able to identify seventeens tree species during their growing season. This traditional knowledge of honey production was accumulated through the culture of KOBO. The KOBO holder in the Masha woreda stated that

There are two growing seasons for the production of honey in the Sheka zone. One is the month of April and the second one in December. In all villages, there are abundant honey plants and the Sheka people through their traditional forest-related knowledge to identify the types of tree species from which honey is produced (FGD-4,28 Jan.2019 Masha Town).

The table below shows the types of tree species in their growing season. This knowledge of the tree species indicates that how the people of Sheka follow traditional forest-related knowledge and forest management practices that have developed over time. There are customary rules regarding forest use. In the past, trees were not bought and sold. If anyone cut down trees, a new tree sibling was planted as a substitute. The Sheka people believe that the forest is a life for the Sheka people. According to the Sheka tradition, if a tree falls down for an unknown reason, the Sheka people express their condolence by staying home for three to four days; which is equivalent to the death of the close relative. This popular belief reflects how the Sheka people used to care and manage the Sheka forest.

Table 2

Correspondence between folk names of indigenous tree species in the Sheka forest and scientific classification with their flowering and fruiting stage seasons.

No	Local name	Amharic name	English name	Scientific name	Flowering stage	Fruiting stage
1	Shao	Kerero	-	<i>Aningeria altissima</i>	February-march	April-May
2	Omo	Tikur enchet	Red – stinkwood frn weed	<i>Prunus africana</i>	December-January	February-March
3	Eto	Shola	Cope fig	<i>Fiscus sur (ficus capensis)</i>	September-October	December-January
4	Yino	Dokima	Water barry	<i>Syzgium gunineense</i>	January-February	March- April
5	Manjo	Geteme	-	<i>Schefflera abyssinica</i>	June-July	September-October
6	Shomo	Bisina	-	<i>Croton macro stachyus</i>	June- July	September-November
7	Yo'oo	Wanza	-	<i>Cordia africana</i>	January-February	March-May
8	Yigo	Zigiba	Podo	<i>Podocarpus falcatus</i>	January-February	March-May
9	Yago	Birbira	-	<i>Millettia ferruginea</i>	January-February	March-May
10	Chato	Sisa	Peacock flower	<i>Albiza gummifera</i>	January-February	March-April
11	Kocho	Korchi	Flam- tree lucky –bean tree	<i>Erythrina abyssinica</i>	January-February	March-April
12	Ororo	Lule	-	<i>Ekebergia capensis</i>	November-February	January-February
13	Yebo	Zemebaba	African fan palm	<i>Borassus aethiopicum</i>		
14	Yeho	Weyira	-	<i>Olea europaea</i>	January-February	March-May
15	Karasha	Ye zingero wenber	-	<i>Polyscias fulva</i>		
16	Wundabo	Donga	White pear wood	<i>Apodytes dimidiata</i>	January-February	March-May

Source: Masha Woreda Department of Forest and Environment Protection.

No	Local name	Amharic name	English name	Scientific name	Flowering stage	Fruiting stage
17	Ho'oo	Kerkeha	Bamboo	<i>Arundinaria alpina</i>		
Source: Masha Woreda Department of Forest and Environment Protection.						

Management Practice

The KOBO forest is a community forest, managed, and conserved by the community. The Sheka people have their own institutional organization for forest management. Through these institutions, the Sheka people manage and conserve the Sheka forest. Previously, the KOBO forest has only customary use rights, but not legal grounds. The majority of respondents (85%) believed that the KOBO forest conservation culture could manage and conserve the Sheka forest. One of the main reasons for the decline of traditional forest conservation culture like the KOBO is the state forest law. At the national level, all community forests that were administered by the local people through their indigenous knowledge was administered under state forest law. The state forest law of the southern nations, nationalities and people's region (SNNPR) put community forest under state forest.

Even if the KOBO forest conservation and management culture have a number of economic and ecological significance, it has no legal grounds to protect this culture before the second forest proclamation of the southern nations, nationalities and people's region (SNNPR) come into practice. The southern nations, nationalities and people's region (SNNPR) has a forest proclamation that was draft in 77/2004 and amended in the year 147/2007.

The first forest proclamation only recognizes state-owned forests and privately owned forest and does not recognize community forests like the KOBO forests. But the second forest proclamation, which came into effect in the year 147/2007, recognizes both state-owned forest, privately owned forest and the community forest and the KOBO forest from the second forest proclamation onwards has got a recognition. Before the second forest proclamation, the KOBO forest was highly exposed to investment expansion in the zone. This is mainly because the first forest proclamation of the southern nations, nationalities and peoples' region (SNNPR) did not recognize the community forest; therefore, the Sheka people did not have the right to claim.

After the second forest, proclamation of southern nations, nationalities and peoples' region (SNNPR) and through the efforts of the Sheka zone administration and non-governmental organization like REED + PFM, the KOBO forest conservation culture has recognition and the forest under KOBO holding transferred to PFM. After the collaborative efforts of the above- mentioned governmental and non-governmental organizations, KOBO forest holders have got lots of benefited to defending their rights.

For sustainable forest conservation and management, the forest community must benefit from the forest. For this reason, the REED + PFM works towards forest-based enterprises to benefit KOBO forest holders in the Sheka zone. It is well known that the Sheka zone has a rich potential for non-timber forest products (NTFP). Besides obtaining their legal entity, the KOBO forest under PFM also gained economic benefits from the forest.

In history, Ethiopia never exports food items to the outside world; however, the KOBO forest holder after they are organized under PFM and marketing cooperatives, honey was exported to Europe, North America, and the Middle East. For example, in Masha woreda, there are honey-marketing cooperatives organized from grass root PFM units and are engaged in the production of honey and sell it to the honey processing company. Along with this value, chain the KOBO forest holder exporting honey and obtaining economic benefits from the KOBO forest.

The REED + PFM in Sheka zone works towards the sustainability of traditional forest management practices like the KOBO forest conservation culture. The REED + PFM support the KOBO forest conservation culture by empowering the community to have a legal entity to administer the community forest and to get economic benefits from the forest. There are cases in Uwa kebele, Masha Woreda, which proves the significance of organizing KOBO forest holders under PFM. The REED + PFM project coordinator in the Sheka zone explained this point in the following statements:

In Masha Woreda, KOBO forest holders administered Uwa kebele 990 hectares of community forest. Out of 990 hectares, 200 hectares of forest was given to Sheka Development Association for investment purposes. The Uwa kebele KOBO forest holders, since they are legally registered and organized under PFM, brought the cases to the court to defend their rights. Finally, the 200-hectare KOBO forest was given to the Sheka Development Association (FGD-4, 20 Jan.2019 Masha Town).

There are three types of forest in the Sheka zone this is state forest, forestland for investment and forest under local farmers used for agriculture purposes. In the Sheka zone, both Masha and Andracha woreda, all state forests are under PFM and now all forest in the two woredas are PFM-saturated. According to the REED + PFM, project coordinator in the Sheka zone: by now the REED + PFM works towards the inclusion of the remaining forest cover in the Sheka zone under PFM in the adjacent woreda.

There is a problem of inclusion of all forest cover under PFM. These are boundary problems and conflict over forestland among the clan in the Sheka zone. There is a boundary conflict between forest lands designated for investment and the KOBO forest in the Sheka zone. For example, in Masha woreda Akako kebele, there is a problem of boundary disputes among land designated for investment and the KOBO forest under PFM. Until boundary, conflict settles the inclusion of the KOBO forest under PFM is pending. Another hindrance for the inclusion of the remaining forest cover under PFM is the boundary conflict between clans in the Sheka zone. For example, there is a clan name called Beto and Wello. The conflict between the two clans over the KOBO forestland creates a problem for the inclusion of forest under PFM.

Now through the efforts of the governmental and non-governmental organizations, the KOBO forest can be administered and conserved through PFM. By making demarcation at the village level, the KOBO forest can be administered and conserved in modern scientific ways. Through the efforts of governmental and non-governmental organizations currently, there are 87 forest blocks organized by REED + PFM and the government in both Masha and Andercha woreda organized five forest blocks. The farmer organizes himself or herself to protect the forest and to make a benefit from the forest, but both governmental and non-governmental organizations only give technical and logistic support to the village-level forest block.

Discussion

The socio-cultural attachment of forest among the Sheka people is illustrated by the allocation of KOBO forestland (economic forest) by clans. In one village, there may be one particular clan and own an area of a large tract of forestland. For example, the name of the clan is Wollo which means there is a larger territorial and political unit comprising several villages, in those villages the dominant clan is Wollo. Therefore, the name of the clan leader is Wolasha. If the name of the clan is Abelo, the clan leader's name is Abel tata. The management of economic forest (KOBO) regulations are formulated by the clan leader (Gebi tata) and are well enforced.

The Wollo clan owns the KOBO forests located inside the clan territorial and political unit. Each clan has its own clan leader and the name of the clan leader derived from the clan name. The KOBO economic forest was allocated and administered by that particular clan. All members of the clan are entitled to get a share benefit, which are derived from the use of the KOBO forests. The management and conservation of economic forest (KOBO) is the responsibility of the clan leader.

Table 3
Example of the name of clan and clan leaders.

Name of clan	Name of the clan leaders
Wollo	Wolasha
Abelo	Abel tata
Ateso	Atese tata
Yepo	Tepi tata
shiwinao	Shewi nao tata
Fao	Farasha
Chahagi	Chagi tata
Humacho	Humachi tata

Traditional forest conservation culture have had largely synergetic coexistence in developing countries like Africa (Barre 2009, Adom 2016, Araia 2019, Israel and Wynberg 2019). These relationships are reinforced through strong norms and institutions, mainly passed on orally from generation to another. Traditional forest allocation, benefit-sharing, and management practices are highly ingrained in the Sheka people's culture, structuring the community's daily interaction with nature (Woldemariam and Fetene 2007). Among the communities of the Sheka people, knowledge and management practices of forest and how to deal with nature are instilled.

The clan leader (Gebi tato) deals with decisions that need to be taken regarding KOBO allocation and administration. The KOBO forest is well protected and is never converted to other land uses and the owner of the KOBO has a birthright to transfer the KOBO holding to the next generation. The vast majority of research participants knew of oral stories and legends told by their ancestors pertaining to the forest. This illustrates a high level of integration of the KOBO forest into traditional Sheka culture. Through oral stories, tells of the KOBO forest, stories of accomplishments or encounters with KOBO forest. Using folk stories, the elders pass the knowledge to the young generation, a key factor in maintaining connection to cultural practices and traditions (Berkes et al., 2000).

There was an overwhelming acknowledgement of traditional forest allocation, benefit-sharing, and management practices, with above 85% of the respondents stating that they used the KOBO forest economic purpose. Despite changes in religious beliefs and the expansion of modern agricultural investment in the study area, the Sheka people maintained strong connections with nature across many aspects of their culture. In traditional societies with strong cultural reference to forests, there is a relatively peaceful coexistence (Parrotta 2007, Parrotta 2008, Berkes et al. 2000, and Soga 2020). While the Sheka people may use forest for different household consumption, unwanted tree cuts in the KOBO forest remain culturally unacceptable. To the contrary, many other people across the world destruct forests for a variety of purposes.

The economic benefits of forest products, such as honey has been observed in Sheka people's culture. For example, the KOBO forest is the principal source of honey for the Sheka people. The Sheka traditional forest conservation and management practice is not only used for conservation of biodiversity but also serve for the production of quality honey that creates a huge market demand within and outside the Sheka zone. The Sheka people traditional forest conservation and management practice there are forests that are used mainly for the production of honey. The One-KOBO holder may have up to 120 beehives. In addition to the production of honey, the KOBO forest is used for the extraction of trees for house building and another household consumption. The importance of the KOBO forest to the Sheka people is directly related to cultural perception.

Even if the KOBO forest conservation and management culture have a number of economic and ecological significance, they have no legal grounds to protect this culture. The cultural importance of KOBO forest allocation, benefit-sharing, and management practices could be integrated into KOBO forest management and conservation approaches. This study opens avenues for exploring justifications for

conserving the KOBO forest within Sheka forests. The people of Sheka could be enlisted in law enforcement activities against KOBO forest destruction. Such integrated conservation efforts with the Sheka people, who are culturally attached to the KOBO forest, are promising tools to effectively manage and conserve KOBO forest in increasingly human-dominated landscapes.

Conclusion

The case study presented on KOBO culture demonstrates that the Sheka people have their own indigenous knowledge, beliefs, and management practices related to forest. This cultural and belief system is inherited from their ancestor since time immemorial and evolving over generation. The culture of KOBO described in this article shows that it still exists in every element of local forest utilization, protection, and management and allocation of forest. As the study clearly shows, the KOBO culture is productive and efficient for forest management, and this useful culture has demonstrated its significance in the protection of various forest types and tree species, contributing to the conservation of biodiversity. Thus, the KOBO forest conservation culture is illustrated in the Sheka people forest utilization, protection, and management provide important insights into the protection of various forest types and tree species, contributing to the conservation of biodiversity.

Declarations

Ethics approval and consent to participate: The study was approved by the CAES Research Ethics Review Committee at the University of South Africa (UNISA) on 10/02/2015 with Ref #: 2015/02/004, name of applicant: Mr GH Shoddo, student #:53342852. Decision: Ethics Approval, Supervisor: Prof Teshome Soromessa Aurgessa, Qualification: Postgraduate degree.

Consent for publication: “there is institutional consent form available based on request

Availability of data and materials: All data generated or analyzed during this study are included in this published article (see literature cited).

Availability of data and materials: Data sharing not applicable to this article as no datasets were generated or analysed during the current study.

Competing interests: The authors declare that they have no competing interests

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Table 1

Table 1 not available with this version

Figures

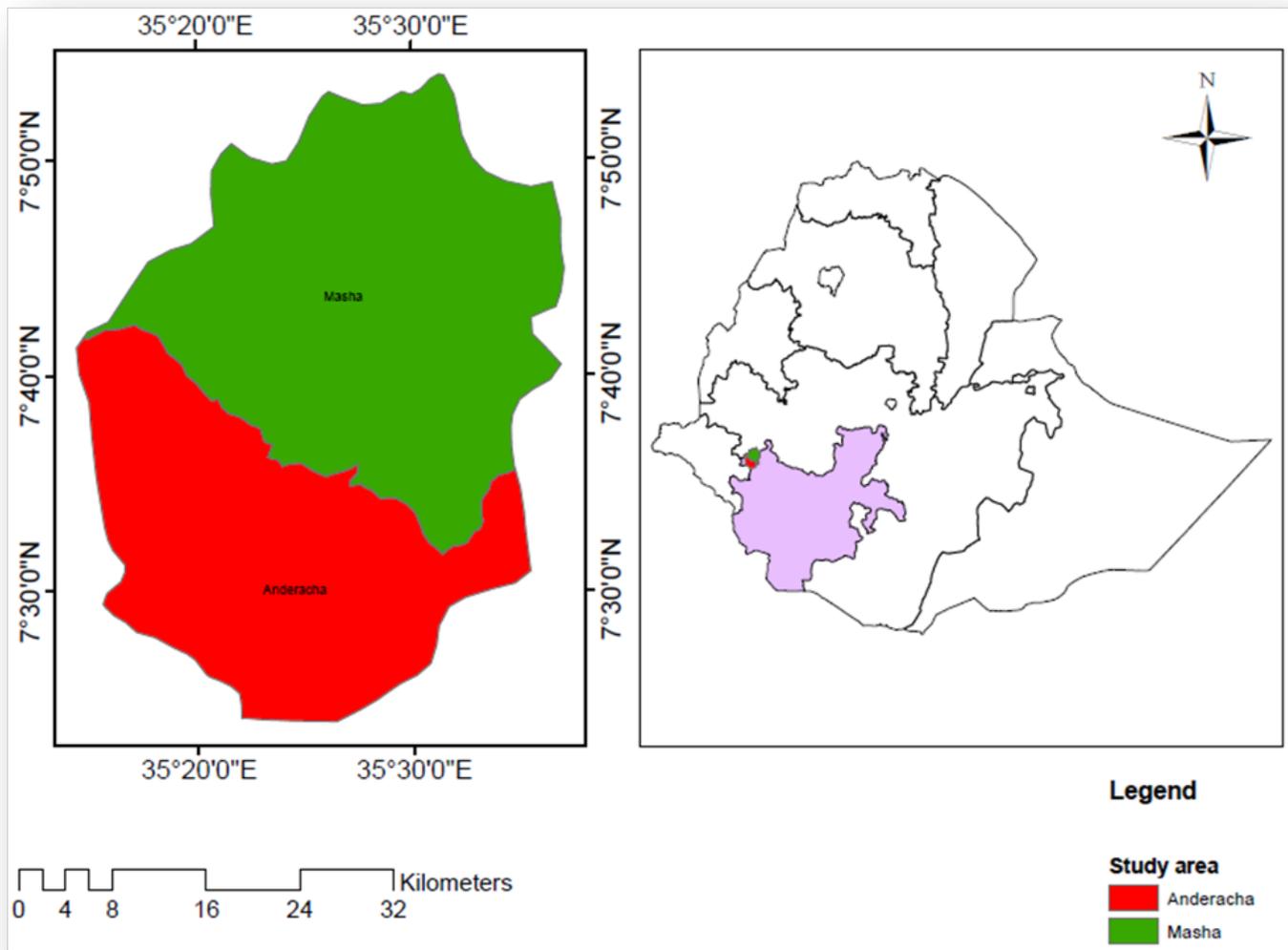


Figure 1

Map of the study area Note: The designations employed and the presentation of the material on this map do not imply the expression of any opinion whatsoever on the part of Research Square concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. This map has been provided by the authors.