

Full Length Research Paper

Wunania Kosoye natural attraction, Ethiopia: Conservation values and their relevance to community- based ecotourism

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Community based ecotourism is one of the most rapidly growing industries in the world, and also an economic activity that can encourage local people in developing countries to protect and preserve natural resources. This study aimed to evaluate the potential of Wunania Konoye for conservation and community-based ecotourism development. Cross sectional study design with both quantitative and qualitative methods was used to describe the existing situations. A total of 200 participants completed a questionnaire and interviews were conducted with key informants. Data were analyzed by using SPSS Version 20. The three kebeles in the study area (Chirambezo, Kosoye Ambarasa and Gunda Chugie) were rich in natural and cultural attraction, though there was significant difference between Chirambezo and Kosoye Ambaras in this respect. In terms of accessibility, there is significant difference among the three kebeles. The human resources, accessibility and infrastructure were sufficient to develop and promote an ecotourism destination. The area has huge potential to develop community-based ecotourism, but amenities were either poorly developed or nonexistent. Therefore, amenities such as electricity, water supply, security and information centers should be developed based on ecotourism standards.

Key word: Conservation, ecotourism, Ethiopia, tourism resources, Wunania Kosoye.

INTRODUCTION

Community based ecotourism is a rapidly growing industry in the world (Asker et al., 2010). This kind of tourism bases travelers' leisure activities on conscious visitation of natural attractions and relating cultural and spiritual experiences to the location (Rezvani, 2001). Community based ecotourism (CBET) is the most sustainable and compatible type of tourism (Soltani et al., 2013).

From a tourism perspective, Ethiopia is an exciting country because of its rich culture and eye-catching attractions such as the mountainous topography, rivers, lakes, waterfalls, wild animals, birds and ecological diversities (Bolton, 1976). This is particularly true in Wunania Konoye natural attraction. The natural attractions together with cultural attractions have placed Ethiopia as one of the top ten tourist destination in Africa

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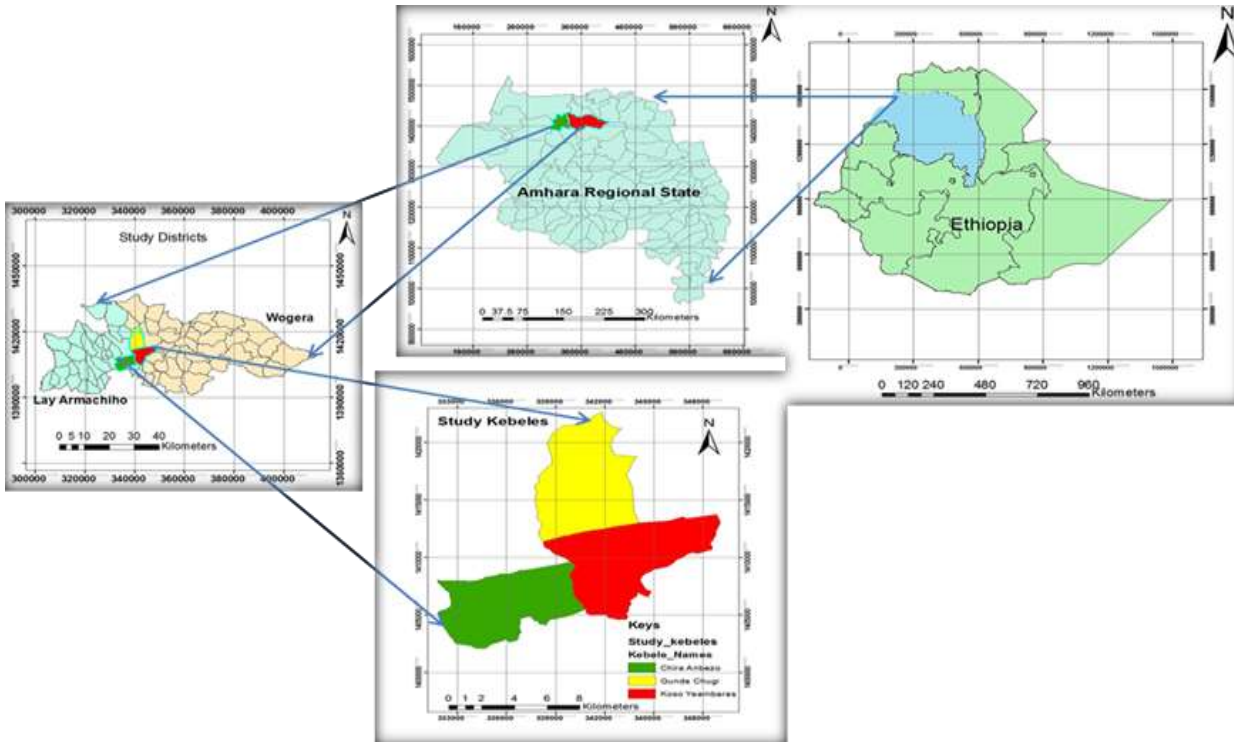


Figure 1. Location Map of the study area.
Source: Own computation from Ethio GIS Database.

(Teshome and Demissie, 2018).

According to the North Gondar Culture and Tourism Office (North Gondar Zone Culture Tourism, 2010), there are about 62 species of higher plants and about 15 different species of large animals, while as various reptiles, amphibians and butterflies, in their respective habitats. Alongside the natural attractions, area has important cultural and historical heritages such as Chugie Mariam monastery and the campsite of United Kingdom royal visits (Atnafu et al., 2010). However, the continuous use of degraded hill sides, deforestation for charcoal and fuel wood, and over grazing are prevalent threats to natural tourism resources.

Even though only 20% of Wunania Kosoye area is suitable for farming cultivation, more than 47% of the total area is cultivated (North Gondar Zone Culture Tourism, 2010) leading to serious erosion due to agricultural pressure (Teshome et al., 2015; Zerie et al., 2014). The fragile mountain ecosystem is used as a communal grazing ground, particularly in dry season when there is less feed for their domestic stocks (Shimeles personal com). Environmental degradation in the study area is closely related to food insecurity due to declining farm productivity (Moreda, 2012; Zerie et al., 2014). In order to minimize agricultural pressure and other related threats to natural resources, community-based tourism can be an alternative source of income (Bekele et al., 2017; Teshome, 1999). CBET is also an economic activity that

encourages local communities to protect and preserve natural resources (Tooman, 1997; WWF, 2002), while creating small scale business opportunities (Breugel, 2013; WTTC, 2017). The aim of this study was to evaluate Wunania Konoye's potential for conservation and community-based ecotourism development.

MATERIALS AND METHODS

Study area

Wunania Kosoye is situated at 12° 45'02.8" N latitude and 37°32' 26.4"E longitudes in the northwestern highland with altitudes ranging from 1500 to 3200 m absi. It extends from Chirambezo Kebele in Lay Armachiho district to Kosoye Ambaras Kebele in Wogera district (Teshome et al., 2015). The area is found along the historical tourist road from Gondar to Simen Mountains National Park (Figure 1).

Study design

Cross sectional study design was used to describe the existing situations and events; both quantitative and qualitative methods were employed. When research is conducted in natural settings, supplementing quantitative data with qualitative method helps to investigate, interpret and measure the complex socio-cultural aspects of

livelihoods and the impact of development on the local communities from their own perspective (Neth, 2008).

Target population

The target population of the study was local communities residing in Chirambezo, Kosoye Ambaras and Gunda Chugie kebeles of the Wunania Kosoye natural attraction site. Moreover, professionals from the district culture and tourism office; the district environmental protection and land management authority office; the North Gondar zone environmental protection and land management department; the North Gondar zone culture and tourism department; and local guides were the key informants. The study area contained 4369 heads of household (Layarmachiho, Wegeraworeda Environmental, and Protection Land Management Authority Office, 2012). All are engaged in agricultural activity.

Sample and sampling techniques

Both probability and non-probability sampling methods were employed. The selected sampling techniques are stratified, simple random and purposive samplings. These techniques are considered appropriate for complex situations of Wunania Kosoye natural attraction site.

Sampling techniques for quantitative method

In order to select respondents to complete the questionnaire, stratified and simple random sampling techniques were used. The three kebeles in the study area (Chirambezo Kebele in Lay Armachiho district and Kosoye Ambaras and Gunda Chugie Kebeles in Wegera district). Each is dominated by one of three agro-climatic zones. For a balanced representation of the population from each agro-climatic zone, all kebeles are taken as the focus of this study. Target population of the study area is 4369 head of households (Chirambezo 1567, Kosoye Ambaras 1695, and Gunda Chugie 1107). Each kebele has a different number of participants in order to ensure equal representation as each sample kebele has a different number of households. The sample size for quantitative data gathering is determined using Cochran's formula as indicated by Barlett et al. (2001).

This study uses the following formula to calculate sample size:

$$n = N / 1 + N (e)^2$$

where n designates the sample size the research uses; N designates total number of households in all sample Kebeles assuming that all households are affected by the issue; e designates maximum variability or margin of error 5% (0.05); 1 designates the probability of the event occurring.

Therefore using the formula ($n = N / 1 + N (e)^2$), researchers computed a required sample population of 366 heads of household from all kebeles. However, some factors like rugged terrain, inaccessibility, scattered settlement and time restricted the study to only 200 samples (154 men and 46 women), which were proportionally allocated to each selected kebele (Chirambezo 71; Kosoye Ambaras 78; and Gunda Chugie 51).

Sampling techniques for qualitative method

In qualitative method, non-probability sampling was chosen due to its usefulness of identifying relevance to the focus of study rather than representativeness of the population (Neth, 2008). Purposive

sampling succeeded in selecting key informants: experts and professionals, local community leaders, and elders.

All three groups of key informants were selected purposely with respect to their roles in the land administration process, resource management activities, conservation works and ecotourism development activities, as well as their knowledge and experience on the subject of tourism potential resources. The selection of samples for the interview stressed the quality of respondents and their ability to answer the questions with rich and relevant information.

Data analysis

The qualitative data were analyzed using techniques based on procedures in qualitative data analysis (Bunly, 2011). The qualitative data and free responses from open-ended in-depth interviews were categorized based on identified commonalities and analyzed thematically in line with research questions. The quantitative information was analyzed first using descriptive and then inferential techniques of data analysis. In the process, the completed questionnaires were coded and the data was analyzed using SPSS Version 20.0 and interpreted to show a detailed picture of the existing situation on the study area. In descriptive analysis, the frequency distribution, percentage and average mean were used. ANOVA was used to determine the difference in accessibility, amenity, and human resource and in concentration of natural attraction resources for the three kebeles.

RESULTS AND DISCUSSION

Potentials for ecotourism development in the site

Natural beauty

The natural beauty of Wunania Kosoye natural attraction site was evaluated. The result showed that 85.5% of the sample (186) believed that their kebele has an abundance and variety of faunal species, different endemic bird species and mammals including the Gelada baboons (*Theropithecus gelada*) that can be easily observed by visitors (Table 1). The result has also shown that 94.1% of respondents agreed with the existence of diverse plant species, an abundance of flowering plants, and untouched micro wildlife habitat in their kebele. These diversified resources have huge value for wildlife tourism as they provide opportunities for tourist recreation activities such as game-viewing and bird-watching within natural habitats, leisure tracking of wildlife, photographing and videotaping, sport or trophy hunting, and mountaineering (Amare, 2015). The stunning natural beauty of the site amongst the forest is crucial.

The occurrence of diverse geographic features (escarpments, cliffs, waterfall and scenic views) in the kebele had a mean average of 4.58 from a five-point likert scale, signifying strong agreement of the respondents. The cumulative mean agreement level of respondents on the presence of spectacular scenery in their kebele and its adjacent areas was 4.25. Stunning bio-physical features and beautiful mountainous scenery contribute to the international significance of and attract

Table 1. Natural attractions of the site for ecotourism development.

Natural beauty	Relative agreement										Mean average
	SDA		DA		N		A		SA		
	F	%	F	%	F	%	F	%	F	%	
Geographic features	0	0.0	1	0.5	0	0.0	76	40.9	109	58.6	4.58
Wildlife	5	2.7	9	4.8	13	7.0	100	53.8	59	31.7	4.07
Biodiversity	3	1.6	4	2.2	4	2.2	90	48.4	85	45.7	4.34
Level of spectacular scenic	3	1.6	3	1.6	9	4.8	100	53.8	71	38.2	4.25
Traveling touch experience	1	0.5	4	2.2	14	7.5	119	64.0	48	25.8	4.12
Potential value of ecosystem	1	0.5	8	4.3	24	12.9	113	60.8	40	21.5	3.98
Total (natural beauty of the area for ecotourism development)											4.225

The scale used was Likert scale, SDA: Strongly disagree, DA: disagree, N: neutral, A: agree, SA: strongly agree. Source: Survey Result (2012).

many tourists to the Simien Mountains National Park (Teshome and Demissie, 2018). Sharing similar features, Wonania Kosoye natural attraction has huge potential for establishment of community-based ecotourism.

Respondents (82%) believed that traveling through this area is a visually inspiring experience even to the domestic tourist. While only 2.7% of the total respondents do not agree and the remaining 7.5% were not. 82.3% of the respondents agreed that Wonania Kosoye ecosystem has the ability to absorb a manageable level of visitors without damage. The ecosystem diversity is a great attraction for tourists and community-based tourism can support the local community economy.

The triangulated qualitative data obtained from the key informants and field observation on natural attraction corroborated the potential of the site for community-based ecotourism development. Some of the most prominent natural attractions identified were:

(1) Topographic features: They are characterized by 17.35% valleys, 18.3% plain on the top and foot of the escarpments, 25% hills, and 39.4% rugged escarpments. Particularly, Aba Adane and Kedada Amba caves; a natural bridge on Aquash River; Sanja, Jibruh and Wenbedu streams; seasonal falls; and panoramic view points from Kosoye queen's village, Wunania-Atatber and Kezkazit. These physical tourism resources have huge value for mountaineering, rock climbing, paragliding, hiking and trekking visitors like in the Simien Mountains National Park (Teshome and Endalew, 2018).

(2) Natural vegetation: Mainly evergreen trees hanging from the cliffs of the escarpment including endangered species such as *Hygenia abyssinica*, *Olea europaea*, *Cordia africana* and *Juniperus procera*.

(3) Faunal species: Abyssinian black and white colobus (*Colombus abyssinicus*); Leopard (*Panthera pardus*); Hamadryas baboon (*Papio hamadryas*); Klipspringer (*Oreotragus oreotragus*); the endemic Gelada baboon (*Theropithecus*); and different beautiful birds including the rare *Lammergeyer* and other birds of prey. Watching

wildlife is a popular ecotourism activity in many countries. In Ethiopia, watching the male bachelor Gelada baboon (*Theropithecus*) fight with the troop leader is quite entertaining. The fighting display is one of the most preferred wildlife view in the Simien Mountains National Park (Teshome and Endalew, 2018).

Figure 2 shows the mean values of natural beauty in each kebele. Chirambezo revealed the highest concentration (4.384), followed by Gunda Chugie (4.180) and the least at Kosoye Ambaras (4.106). In this case, Chirambezo kebele will be more preferred by ecotourists than other two kebeles in this particular destination area.

As shown in Table 2, there is significant difference between Chirambezo and Kosoye Ambaras ($P < 0.000$) and between Chirambezo and Gunda Chugie kebeles ($P < 0.014$) in terms of natural attractions. However, there is no significant difference between Kosoye Ambaras and Gunda Chugie ($P > 0.05$). This is because the landscape and the biodiversity of the natural attraction site are almost similar in the sampling kebeles.

Cultural and historical attractions

According to Table 3, 69.3% of the respondents recognized that their kebele has historic villages and buildings. However, 16.2% of the respondents did not recognize their kebele as having rich historic settings, and the remaining 14.5% were not sure. On the other hand, a significantly high number (90.3%) of respondents recognized their kebele's rich cultural fabric and village religious sites (places of worship, burial grounds, caves, holy-water, and indigenous sacred sites). Similar results were reported for Ethiopia (Fiseha, 2012). 3.8% respondents did not perceive a rich cultural fabric and the remaining 5.9% of the respondents were not sure (Table 3). From a five-point likert scale, the mean average of respondents ($M = 4.04$) identified the following potential elements of Wunania Kosoye cultural attraction for

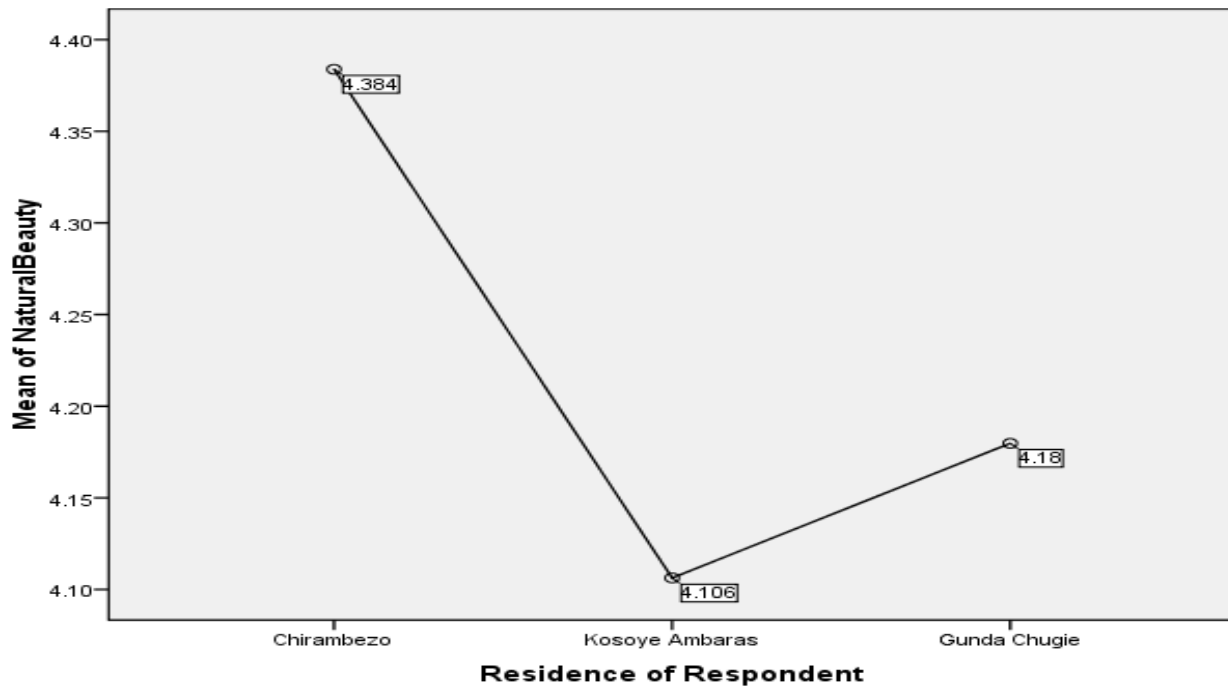


Figure 2. Plotted means of natural beauty for each kebele.
Source: Own Computation from Field Survey (2012).

Table 2. Difference in availability of natural attraction resources among the three kebeles.

Natural beauty of the kebele LSD			Multiple comparisons			
(I) Residence of respondent	(J) Residence of respondent	Mean difference (I-J)	Std. Error	Sig.	95% Confidence interval	
					Lower bound	Upper bound
Chirambezo	Kosoye Ambaras	0.27756	0.07594	0.000	0.1277	0.4274
	Gunda Chugie	0.20410	0.08223	0.014	0.0419	0.3663
Kosoye Ambaras	Gunda Chugie	-0.07346	0.08145	0.368	-0.2342	0.0872

Source: Survey Result (2012).

community-based eco-tourism activities: local religious celebration, cultural festivals, traditional costume, music, dance, and unique indigenous ways of life. Currently, the annual religious festivity of Chugie Mariam monastery attracts domestic tourists and could be promoted to foreign tourists in the study area (Tadesse, 2010).

Triangulated data obtained from key informants and collected on field observation likewise recognized the availability of diverse cultural and historical tourist attractions in Wunania Kosoye. Among the historical sites are Kosoyequeen's village; religious building (that is, Chugie Mariam monastery, Giramta Mariam, Aleg Giorgis and Serdagela Medhanialem); Maye Yordanos spa;

mummified dead body of goats in Aba Me'amene Dingle cave; religious movable heritage (that is, cross and parchments); religious festivals (pilgrimage to Chugie Mariam monastery); traditional ways of life in the rural community; burial and marriage ceremony in rural area; and bartering at Alegmuna local market.

Regarding the impact of tourism on indigenous culture and traditions, 74.8% of respondents did not observe any obvious threats to the indigenous culture and traditions; but 14% of the respondents did observe some threats. The remaining 11.3% were unsure. Findings from key informants also noted that there is tourism impact on local culture unless the industry is managed properly.

Table 3. Cultural and historical attractions of the site for ecotourism development.

Cultural and social characteristics	Relative Agreement										Mean average
	SDA		DA		N		A		SA		
	F	%	F	%	F	%	F	%	F	%	
Availability of historic settings	2	1.1	28	15.1	27	14.5	83	44.6	46	24.7	3.77
Availability religious history	3	1.6	4	2.2	11	5.9	67	36.0	101	54.3	4
Indigenous asset of sites	14	7.5	32	17.2	37	19.9	76	40.9	27	14.5	3.38
Celebration of religious and cultural festivals	1	.5	9	4.8	34	18.3	79	42.5	63	33.9	4.04
Threats to the indigenous culture and traditions	5	2.7	21	11.3	21	11.3	87	46.8	52	28.0	3.86
Total (cultural and social characteristics of the site for ecotourism development)											3.888

The scale used was Likert scale, SDA: Strongly disagree, DA: disagree, N: neutral, A: agree, SA: strongly agree.

Source: Survey Result (2012).

Table 4. Infrastructure available for ecotourism development in the area.

Infrastructure	Relative agreement										Mean average
	SDA		DA		N		A		SA		
	F	%	F	%	F	%	F	%	F	%	
Accessibility	18	9.7	18	9.7	27	14.5	88	47.3	35	18.8	3.56
Access for medical services	17	9.1	42	22.6	22	11.8	84	45.2	21	11.3	3.27
Security and safety for visitors	10	5.4	24	12.0	28	15.1	80	43.0	44	23.7	3.67
Friendly people	3	1.6	16	8.6	24	12.9	106	57.0	37	19.9	3.85
Amenity (toilet and park)	34	18.3	64	34.4	32	17.2	41	22.0	15	8.1	2.67
Water availability	10	5.4	19	10.2	38	20.4	74	39.8	45	24.2	3.67
Total (infrastructure available for ecotourism development in the area)											3.445

The scale used was Likert scale, SDA: Strongly disagree, DA: disagree, N: neutral, A: agree, SA: strongly agree.

Source: Survey Result (2012).

Tourism may force communities to maintain their current livelihoods at risk of having nothing to exhibit as cultural attraction.

Infrastructure

According to Table 4, 66.1% of the respondents

believed that their kebele is accessible by transport services (public bus, private cars, rental horses and mules), while 19.4% indicated that their kebele is not accessible; the remaining 14.5% were not sure. Regarding accessibility, respondents and key informants believe the almost all travelers from Gondar to Debarq pass the Wunania Kosoye entrance gate (Tafesse,

2016), and to visit other areas far from the main campsite, walking or mules are available for travel. 56.5% of respondents approved that the health and wellbeing of eco-tourists can be ensured by local medical services and facilities. 31.7% of respondents, however, indicated that medical services in their kebele are not sufficient to ensure the health of eco-tourists; the remaining

Table 5. Accessibility of the site for visitors.

Accessibility	Relative agreement										Mean average
	SDA		DA		N		A		SA		
	F	%	F	%	F	%	F	%	F	%	
All weather roads	21	11.3	48	25.8	19	10.2	78	41.9	20	10.8	3.15
Closeness to other attractive tourist destinations	6	3.2	15	8.1	13	7.0	103	55.4	49	26.3	4
Accessibility in seasonal	19	10.2	34	18.3	18	9.7	84	45.2	31	16.7	3.40
Government initiatives developing transport system	12	6.5	28	15.1	20	10.8	99	53.2	27	14.5	3.54
Public transportation	12	6.5	21	11.3	13	7.0	74	39.8	66	35.5	3.87
Total (accessibility of the site for visitors)											3.579

The scale used was Likert scale, SDA: Strongly disagree, DA: disagree, N: neutral, A: agree, SA: strongly agree.
Source: Survey Result (2012).

11.6% were not sure. One researcher observed that health facilities may not be a significant problem because the major Gondar Referral Hospital is located only 20 km away.

Additional infrastructure facilities were poorly developed in Wunania Kosoye natural attraction site. A total mean average $M = 3.445$ level of agreement was observed for the six questions assessing infrastructure facilities of the area, signifying the inefficiency and unavailability of infrastructure facilities in each kebele (Table 4). Product development for ecotourism business can be understood in the many ways a visitor comes in contact with the location, including infrastructure, service personnel, places of lodging, attractions and activities, facilities, and amenities (Mehiret et al., 2017).

Quantitative data collected on security and safety shows that 66.6% of the respondents agreed that their kebele can provide adequate community police and porter services to maintain the security and safety of residents and visitors. 17.4% of the respondents did not agree and 15.1% do not have a clear idea.

Another significant point in providing tourist

facilities is the availability of friendly people to welcome visitors in the area. The study reveals that 76.9% of the respondents thought the residents in their kebeles are friendly to visitors. 10.2% did not agree and the rest (12.9%) were not sure. The result of this finding was similar the finding in the Simien Mountains National Park (Teshome and Demissie, 2018). Although like most Ethiopians the residents are welcoming to visitors, they are very conscious of their own culture and lifestyle. A few respondents were scared that tourists' lifestyle may affect their culture in the near future.

Unlike other cases, more than half of respondents (52.8%) perceived a scarcity of public areas like parking, highway rest stops and toilets in their kebele. Almost a third (30.1%) recognized an availability of public areas in their kebele. 64% of respondents indicated an availability of sufficient water sources for the development of lodges and other local accommodations in their kebele, while 15.6% of the respondents did not recognize such availability. The remaining respondents did not agree. According to key informants, water sources

are available in the three kebeles but the quality and the quantity of the water is inadequate to support tourism infrastructure.

In general, findings indicate that development of infrastructure facilities in Wunania Kosoye natural attraction site was in an infant stage. Even the available infrastructure facilities are concentrated in Kosoye village and Wunania, Atatber and Kezkazit viewpoints, all situated along the main asphalted road. Furthermore, findings suggest improvement of poorly developed infrastructure is essential to make ecotourism viable in this site, a claim true in many destination in Amhara Regional state (Mehiret et al., 2017).

Accessibility

As shown in Table 5, findings indicate a total mean average of $M = 3.58$ for five criteria assessing accessibility of the site. The results reveal that 52.7% of respondents recognized that most parts of their kebele were accessible only with all-weather roads, while 37.1% of them did not agree with the statement. The remaining 10.2% of the respondents were not decided.



Figure 3. Plotted means of accessibility for each kebele.
Source: Survey result 2012

A mean average of M=4 agreement is observed for the proximity of the area to other renowned tourist destinations (that is, Simien Mountains National Park and Fasil Castle) that encourage tourists to visit the site (Mehiret et al., 2017).

The findings show that 61.9% of the respondents replied that there are no seasonal factors, such as high rainfall and winds that can affect the accessibility of Wunania Kosoye. 67.7% of the respondents agreed that existing governmental initiatives help to improve accessibility of the area. Moreover, data collected reflects that 75.3% of the participants believe that their village can be easily reached by public

transportation.

Figure 3, the plotted means of accessibility, displays that Chirambezo Kebele was the most accessible (4.079), followed by Kosoye Ambaras with mean value of 3.481. Gunda Chugie (3.063) was the least accessible of all kebeles. The majority of the villages and viewpoints in Chirambezo and Kosoye Ambaras were situated along the asphalt main road from Gondar to SMNP (Mehiret et al., 2017; Tafesse, 2016), while Gunda Chugie is the remotest and inaccessible by vehicles.

ANOVA was also used to see whether there is a significant mean difference in accessibility among

the three kebeles. There is a statistically significant difference among the three kebeles as shown in Table 6. Community, governmental and non-governmental organizations need to take different interventions to improve accessibility in all the three kebeles.

Activity-oriented entertainment facilities

As it has been seen during field observation, the heterogeneous topographic feature of Wunania Kosoye attraction site encompasses a variety of natural sites viewpoints, wildlife and landforms

Table 6. Difference in accessibility among the three kebeles.

Accessibility LSD		Multiple comparisons				
(I) Residence of respondent	(J) Residence of respondent	Mean difference (I-J)	Std. Error	Sig.	95% Confidence interval	
					Lower bound	Upper bound
Chirambezo	Kosoye Ambaras	0.59763	0.11146	0.000	0.3777	0.8175
	Gunda Chugie	1.01604	0.12070	0.000	0.7779	1.2542
Kosoye Ambaras	Gunda Chugie	0.41841	0.11955	0.001	0.1825	0.6543

Source: Survey Result (2012).

Table 7. Activity oriented entertainment facilities available in the site.

Viewpoint	Variety for ecotourism activities		Ability to provide opportunities for adventurous tourist		Potential to raise consciousness on nature conservation issues		Total mean average
	F	%	F	%	F	%	
SDA	5	2.7	7	3.8	0	0.0	
DA	4	2.2	12	6.5	4	2.2	
N	6	3.2	26	14.0	12	6.5	
A	98	52.7	87	46.8	115	61.8	4.1223
SA	73	39.2	54	29.0	55	29.6	
Total	186	100	186	100	186	100	
Mean average	4.24		3.91		4.19		

Source: Survey Result (2012).

(attractive mountain ranges, escarpments, and flat topped hills, seasonal waterfall, gorges, escarpments, cliffs, and rock formations). These all offer potentially rich activity-oriented entertainment facilities at the site (Table 7).

As shown in Table 7, a grand total mean average of $M=4.12$ agreement is observed among the respondents for the three points assessing the availability of activity-oriented entertainment. For variety of the activities (nature trails, hiking tracks, pony-trekking, bird watching, nature viewing, scientific studies and photography), agreement was 4.24. Since the study area has such diversified tourism potentials, it can attract visitors from all over the world and serve as alternative sources of income to improve the livelihood of the local communities.

Respondents (75.8%) indicated that Wunania Kosoye can provide opportunities for travelers to raise consciousness on nature conservation issues. 10.3% responded that their kebele cannot provide these opportunities for travelers and the remaining 14% were not sure. 91.4% of the respondents believe that the area can provide opportunities for adventurous visitors to pursue activities like hang-gliding, rock-climbing and ballooning. These findings imply that Wunania Kosoye has potential to develop for nature-oriented tourists who wish to participate in adventurous activities, bird and game watching, conduct scientific studies and photography (Teshome and Endalew, 2018).

Human resource features/Local community attitude to tourists

As shown in Table 8, there is a mean average of 4.16 for the local communities' receptiveness to visitors. 79.1% of the respondents recognized that there are possibilities of cultural interaction by host family accommodation or community-owned lodges. Experience has shown, however, that local communities' attitude of positive interaction should involve the participation of all community members including women and young people (Asker et al., 2010). Few respondents (7.6%) did not recognize these possibilities. These particular respondents did not have any awareness about community-based ecotourism and tourism business in general. 13.4% did not have a clear idea about these possibilities.

More than half (54.3%) of respondents believed that local communities could be involved in tourism related services in a sympathetic and understanding manner. These respondents may have previous experiences working with foreign tourists in their village or have already provided services to visitors as scout or porter. However, 22.6% of respondents thought that services are not capable enough to cater in such sympathetic and understanding manner. These respondents believe that cultural difference could be a barrier to provide service in sympathetic manner. The remaining 23.1% were not

Table 8. Local community's attitude towards tourists and their interaction with tourists.

Human resource features/Local community's attitude towards tourists	Relative agreement										Mean average
	SDA		DA		N		A		SA		
	F	%	F	%	F	%	F	%	F	%	
Welcoming manner	3	1.6	7	3.8	8	4.3	108	58.1	60	32.3	4.16
Possibilities for visitors to interact with local community	2	1.1	12	6.5	25	13.4	95	51.1	52	28.0	3.98
Service providers serve visitors in a sympathetic manner	12	6.5	30	16.1	43	23.1	83	44.6	18	9.7	3.35
Willingness to interact with eco-tourists	1	.5	2	1.1	16	8.6	120	64.5	47	25.3	4.13
Skills to interpret natural and cultural features of the site	3	1.6	10	5.4	31	16.7	110	59.1	32	17.2	3.85
Total (local community's attitude towards tourists and their interaction)											3.894

The scale used was Likert scale, SDA: Strongly disagree, DA: disagree, N: neutral, A: agree, SA: strongly agree.

Source: Survey Result (2012).

sure.

About 76.3% of the respondents replied that if the community members involved in tourism related services, a majority of local community will be willing to participate on conservation activities for the local environment. Local community perception and willingness to participate in community-based ecotourism development is an important issue in tourism development in developing countries (Asker et al., 2010).

Conclusion

Wunania Kosoye is rich in both natural and cultural resources and has great potential to develop a community-based ecotourism industry. The topographical ruggedness with its steep escarpments, rolling hills in the highlands could make the site unique tourism destination like the Simien Mountains National Park. The rich cultural practices and ancient traditional living style of the people living in this remote area offers similar tourism potentials that can promote community-based ecotourism. The study area is rich in

biodiversity endangered plant species (that is, *H. abyssinica*, *O. europaea*, *C. africana* and *J. procera*) and fauna (Gelada baboon (*Theropithecus*), rare *Lammergeyer* and other birds of prey), providing another source of tourist attraction. Infrastructure facilities expected by tourists such as vehicles, electricity, telecommunications, water, medical services, security and safety, information centers and lodge service are either poorly developed or nonexistent in the site, presenting a major obstacle to establishment of community-based ecotourism in the area. Majority of the local community in kebeles are cooperative, receive visitors in welcoming manner, and are supportive of the industry.

RECOMMENDATION

For effective utilization of Wunania Kosoye tourism potential, stakeholders shall promote the resources through different media, while giving due attention to the site's conservation. Since infrastructure is the base for tourism development,

governmental and non-governmental organizations, private investors, and the local community shall collaborate to develop infrastructure such as electric power, water supply, medical services, security and safety, information centers, and local lodges. In order to improve the livelihood of the locals living in the Wunania Kosoye natural attraction site, Amhara Regional State Culture and Tourism Bureau shall pay special attention to the potential of community-based ecotourism development.

CONFLICT OF INTERESTS

The author has not declared any conflict of interests.

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