

# Community Based Eco-Tourism as a Biodiversity Conservation and Livelihood Option in Rural Ethiopia: A Case Study on Mountain Abuna Yosef and Its Surrounding Area, North Wollo

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**Abstract** *Different studies have been take place related with community based eco-tourism development, community perspective on ecotourism site, value of community based eco-tourism for biodiversity conservation and sustainable economic development in Ethiopia, accordingly this thesis were aimed at investigating with the objectives of exploring how community based eco-tourism can be used as a biodiversity conservation and livelihood option in rural Ethiopia; the case of Mt. Abuna Yosef, and its surrounding area of North Wollo Zone. In order to achieve the objective of the study, both primary and secondary data were generated by employing qualitative (using case study, focus group discussion, in-depth interview and on-spot observation) and quantitative (mainly using household survey and visitor survey questionnaires) methods. Purposive and simple random sampling techniques were used to select three community based eco-tourism sites in the study area and 80 representative sample households respectively. The quantitative data were analyzed using frequency, percentage, standardization and mean when appropriate while qualitative data were used to triangulate and substantiate the study. The finding result shows that Mt. Abuna Yosef and its surrounding area is highly potential area of biodiversity, natural and cultural tourism resources with limited infrastructural development. The study also identified several potentially adverse effects that can limit project implementation of biodiversity conservation and community based eco-tourism business development. The paper concludes that community based eco-tourism in the area has not currently moved towards as a biodiversity conservation and livelihood options. In addition the potential to contribute as a form of sustainable livelihood for people living adjacent to the mountain protected site will be utilized when there is an effective collaboration between government and indigenous people is created.*

**Keywords:** *Community, Eco-Tourism, Sustainable Livelihood, and Biodiversity Conservation*

## INTRODUCTION

Recently tourism is a large global industry that is expanding rapidly in developing countries. It comprises 11% of world GNP if related activities 'tourism and general travel' (Roe *et al.* 2004) are included. Tourism is also growing faster than global output, so its share of the global economy is increasing (UN World Tourism Organization, 2005). Critically, from a development perspective, the market share of tourism in developing countries is also increasing significantly.

By 2003, 35.6% of all international tourists arrived in developing countries – a movement of almost a quarter of a billion of some of the richest people to some of the poorest countries (World Bank 2005). Developing countries now account for 14 of top 20 long-haul destinations (DFID 2004).

Because tourism now makes up such a large part of the world's gross national product, it is no longer possible to ignore the effects that tourism has upon local environments and peoples. In recognition of this reality, on, representatives from the United Nations Educational, Scientific and

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Cultural Organization (UNESCO) and the World Tourism Organization (WTO) signed an accord pledging to cooperate: in the areas of environmental protection and nature-based tourism or ecotourism, and in promoting cultural tourism and the protection of historical sites (Steele-Prohaska, 1996), What exactly is meant then by the term ecotourism? The definition most commonly accepted as correct is that given by The Ecotourism Society (TES):

Ecotourism is responsible travel to natural areas which conserves the environment and improves the welfare of local people (Western, 1993). Furthermore, ecotourism should directly promote biodiversity conservation (Brandon and Margoluis, 1996). To further accentuate the ecotourism focus on local peoples and their relationship to biodiversity and environmental conservation, a new term, community based ecotourism (CBET) is being used. Community based eco-tourism is defined by The Nature Conservancy definition adopted in 1996 by the World Conservation Union (IUCN) which describes community base ecotourism as: Environmentally responsible travel and visitation to natural areas, in order to enjoy and appreciate nature (and any accompanying cultural features, both past and present) that promote conservation, have a low visitor impact and provide for beneficially active socio-economic involvement of local peoples (IUCN, 1996).

Community based ecotourism is a specific type of ecotourism that focuses not only on improving communities “welfare but also on community ownership and participation in ecotourism. Communities discover that protecting the environment and their own cultures can generate income from visitors. Visitors, in turn, decide to visit communities to experience communities” cultures and their local environment (Sproule, 1996).

Besides, Ethiopia has aplenty of potential to develop community based eco-tourism and let it contribute in the effort to develop sustainable livelihood in the country, and it is great necessity to find out community based eco-tourism sites. Amhara National Regional State is one of the nine regional states of Ethiopia. The region is a home of abundant and diversified natural and manmade tourist attractions. Three of the eleven Ethiopian world heritage sites registered by UNESCO are found in the region. These are the SMNP (Simen Mountain National Park), the Eleven Rock Hewn Churches of Lalibela and the Castles of Gondar.

Among the three known world heritage sites of the region one of the sites is found in North Wollo zone. It is an areas of Wuchale treaty signed site; Mersa and Worgesa irrigated fruit farms and mosaic scenic landscape; and is the home of the eleven rock hewn church of Lalibela. Abune Yosef is a prominent mountain near the eastern escarpment of the Ethiopian highlands. At 4,260 meters it is the 6th tallest mountain in Ethiopia and the 19th highest of Africa. It is

located in the Lasta massif of the North Wollo zone and 41km away from the town of Lalibela.

The focus and attention of this study came up with the need to investigate the potentials of Mt. Abune Yosef for Biodiversity conservation and community based eco-tourism development. It is clear to envisage the Mt. Abune Yosef as a protected area with beautiful landscapes, rare wildlife, and traditional lifestyles, and cultural values, spiritual, architectural, artistic, aesthetic, historical, archaeological, political, economic and symbolic values. The forestry and the landscape are attractive features of the area and it is apparently a home of various flora and fauna and is a significant site for the study of biodiversity.

Yimrehane Kirstos church situated on a mountain ridge with the intention that to maximized the potential benefits and the sites have left a rich harvest for various professionals such as historians, architects, archaeologists, palaeontologists, geologists, civil engineers, hydrologists, botanists, chemists, anthropologist and limited agricultural potential leads the small emerged economic gain and has profound impact upon biodiversity conservation and sustainable community development.

The mountain geological and physiographical formations and precisely delineated areas which constitute the habitat of threatened species of animals and plants of outstanding universal value from the point of view of science or conservation. The cultural, historical and biodiversity values of Mt. Abune Yosef are undisputed. It offers excellent opportunities both for nature conservation and ecotourism practice to generate sustainable livelihood to the local community in particular and the Amhara national regional state in general.

Community based eco-tourism (CBET) has become a popular tool for biodiversity conservation; based on the principle that biodiversity must pay for itself by generating economic benefits, particularly for local people (Agnes Kiss, 2004). There are many examples of projects that produce revenues for local communities and improve local attitudes towards biodiversity conservation. But the contribution of community based eco-tourism to biodiversity conservation and local economic development is limited by factors such as the small areas and few people involved, limited earnings, weak linkages between biodiversity gains and commercial success, and the competitive and specialized nature of the tourism industry (Gebeyaw, 2010).

Investment in community based eco-tourism might be justified in cases where small changes and benefits can yield significant conservation and socio-economic benefits. In Ethiopia there is a potential for tourism industry development mainly for ecotourism. But with less attention the expected benefit of the sector stay in limited amount throughout the country. The long-term vision of the Government is to make

Ethiopia one of the top ten tourist destinations in Africa by the year 2020, with an emphasis on maximizing the poverty-reducing impacts of tourism, and utilizing tourism to transform the image of the country. To position tourism as a key economic sector recently it is given due attention from the government as a strategy of using tourism for poverty alleviation. On the other hand, community based eco-tourism still remain with less consideration as the country's potential.

In Mt. Abune Yosef there is a community based eco-tourism practices for biodiversity conservation and to improve the livelihood of local communities as of 2010G.C. Community based eco-tourism development mostly can serve as a biodiversity conservation and livelihood option for the people which have a decline in productivity of land. The studies is about the practical tasks that is carried out for the existed development of community based eco-tourism as a biodiversity conservation and livelihood option, and the real challenge is how can this natural resource achieving to benefit humans and nature in the study area.

The Abune Yosef massif of North Wollo suffers from diverse levels of human intervention mainly from agricultural activities and livestock grazing which dramatically modified the natural landscape. The future survival of wolves in Northern Ethiopia especially in Mt. Abune Yosef is in question (Ash, 2000; Marino, 2003). In view of persistence human impact on the massif, it needs immediate action. To run and develop the existed community based eco-tourism for biodiversity conservation and, livelihood option properly research is needed to investigate the current economic and natural potential of Mt. Abune Yosef. In the city of Lalibela, placed on the western slope of the Mt. Abune Yosef massif, tourism is already developed as the area holds one of Ethiopia's top tourist attractions. With this background the existed community based eco-tourism of the Mt. Abune Yosef can have a chance to help to benefits mountain communities.

Yet there have been a number of research works that focused on biodiversity conservation and other issues of Mt. Abune Yosef (Ash, 2000; Marino, 2003; Girma, 2010; Tekilu, 2008 and field survey carried out by EWCP from 1997 to 2000) but there has not been community based eco-tourism and sustainable livelihood paper until now. Consequently, the study was explored how community based eco-tourism (CBET) can be used as a biodiversity conservation and livelihood option in Mt. Abune Yosef and surrounding area.

## MATERIALS AND METHODS

### Research Methodology

The general reason that necessitates for selecting Mt. Abune Yosef is the presence of community based ecotourism

development taking place since 2010 G.C all the way through the support of Frankfurt Zoological Society (NGO) that can take place to upgrade community based eco-tourism in the area for the principal reasons of biodiversity conservation. There are five sites of community based eco-tourism found in the study area, this are Abune Yosef site, Zigit site, Abi Jacula site, WedebiyeAbbo site and Yimrihane site. The study focused on three representative community based eco-tourism sites namely Abune Yosef site, Yimrihane site and WedebiyeAbbo, this were selected with non-probability sampling technique purposively because of the existed tourism activities and community participations and those NGOs working on these area to make it economically viable. Moreover, this mountain ecosystem is very fragile at the same time there is increasing number of tourist so as a need of sustainability, this mountains is the home of two rare, endemic and endangered species, the community around the mountain is also venerable for poverty, for this reason the area were selected as a study site to identify whether community based eco-tourism can serve as a biodiversity conservation and livelihood option or not.

### Sampling Technique

The number of household representative sample size is 80 using the following sample size determination formula adapted from Israel (1992).

$$n = \frac{N}{1 + N(e)^2}$$

Where; N = the total population

n = the required sample size

e = the precision level which is = ( $\pm 10\%$ ) Where Confidence Level is 95% at  $P = \pm 5$  (maximum variability).

The communities within the study site are 394 households i.e. Abune Yosef site has 173, Yimrihane site a few kilometers away from the village of Bilbala 122, and WedebiyeAbbo 99, household found from this number the researcher establish from the above formula 79.757 sample size, so researcher were take 80 households as a sample and the distributions of sample size of the three sites were proportionally selected based on their households size i.e. 34.6 (35), 24.4 (25) and 19.8 (20) sample households were taken respectively.

The sample consisting of 80 households representatives for questionnaires, key informants for interviews were selected from the total population in the study area and study site that includes all bodies to have a household representatives, tourist from the study area, tourism officials and organizations working on tourism businesses in Mt. Abune Yosef. Tourist representatives (20) were selected based on purposive sampling technique that is based on their willingness and language.

Tourism officials (8) were selected based on purposive sampling technique through their knowledge and experience. Organizations working on tourism businesses in the study area (12) i.e. tour operators representatives (4), souvenir sellers (4), hotels (4) were selected using convenience sampling technique that is based on their knowledge, experience, and date of existence. The sampling technique on the study area and the study sites were selected with non-probability sampling technique purposively because of the existed tourism activities and community participations and those NGOs working on these areas to make it economically viable.

The representative sample households were identify using probability sampling technique, based on the name list of member households in each community based eco-tourism sites and the representative household were selected using systematic random sampling technique.

## DATA SOURCES AND DATA COLLECTION INSTRUMENTS

Research methods is by Ringdal (2007) described as procedures and techniques to answer scientific questions and problems. There are two types of research strategies - qualitative and quantitative methods. Qualitative methods aim to go deeper and emphasize the importance, while quantitative methods focused on the distribution and number (Thagaard, 2003). Primary and secondary data were used by employing both qualitative (focus group discussion, in depth interview and on spot observation) and quantitative (household survey and visitor survey questionnaires).

## METHOD OF DATA ANALYSIS

After data gathering all information were coded and entered into Statistical Package for Social Science (SPSS) version 16.0 for analysis. The results of analysis were interpreted and discussed using descriptive statistics (frequency, mean, and standard deviation).

The household data on perception towards community based eco-tourism were analyzed by logistic regression and potential obtained tourism resource from Mt. Abune Yosef were analyzed using descriptive statistics and the significance was tested by chi-square test at ( $P < 0.05$ ) significance level.

## RESULTS AND DISCUSSION

### Means of Income of the Sample Households

In marginal rural areas of Ethiopia such as Mt. Abune Yosef and surrounding community are found with limited agricultural potentials, consequently community based eco-tourism can help as a source of livelihood option and poverty alleviation. As ecotourism represents a direct link between conservation and economic development it can have a profound impact upon community development, an aspect that will be further discussed below, shows that ecotourism can also be a source of funding to protect biodiversity and natural resources.

**Table 4.1: Source of Income of the Sample Households**

Answers	CBET Site						TOTAL	
	Abune Yosef Site		Yimrihane Site		WedebiyeAbbo Site			
	Count	Percent	Count	Percent	Count	Percent	Count	Percent
<b>Source of Income</b>								
Agriculture	23	65.7	14	56.0	7	35.0	44	55.0
Trade	6	17.1	4	16.0	4	20.0	14	17.5
Sales of Craft	1	2.9	2	8.0	-	-	3	3.8
Daily Wage	3	8.6	2	8.0	3	15.0	8	10.0
Salary	1	2.9	1	4.0	3	15.0	5	6.2
Others	1	2.9	2	8.0	3	15.0	6	7.5
Total	35	100	25	100	20	100	80	100

Source: Own survey, April 2016.

Many tourists voluntarily contribute amounts above and beyond the actual costs of their trips to support the community in the CBET areas they visit. As displayed in table 4.1 above, the main source of income for the sample household's survey is agriculture where about 55.0% of the

respondents find income from agriculture. On the other hand, other sources of incomes account little numbers of HHs i.e. trade, and sales of craft, daily wage, salary and other means of income are reported at the same time as 17.5%, 3.8%, 10.0%, 6.2% and 7.5% respectively.

To consider the support of agricultural productivity and production to the livelihood of the sample household's survey as it has been indicated in the following table 4.2 below, that the sample household was responded about

the status of agricultural income to support their living or not. Most of the households in the study site do not have adequate food production through their agricultural product as a means of income to support their living.

**Table 4.2: Insufficiency of Income to Support the Livelihoods for the Sample Household**

Answers	CBET Site						TOTAL	
	Abune Yosef site		Yimrihane site		WedebiyeAbbo Site		Count	Percent
	Count	Percent	Count	Percent	Count	Percent		
<b>Income to Support Living</b>								
Yes	14	40.0	8	32.0	8	40.0	30	37.5
No	21	60.0	17	68.0	12	60.0	50	62.5
Total	35	100	25	100	20	100	80	100

Source: Own survey, April 2016.

As it is indicated that 62.5% (50) of the sample households including the three CBET sites (60.0% in Abune Yosef site, 68.0% in Yimrihane site and 60.0% in WedebiyeAbbo sites) and the result shows that their main source of income i.e. agriculture is not sufficient to support their livelihood while about 37.5% of the total sample households react that agriculture is sufficient for their living. The majority of the respondent gives the reasons for its insufficiency to the open ended question of the study and all the way through repeatedly mentioned cases including low productivity of farming lands and its rocky landscape nature of the area, as well as the highly dependency of seasonality made their income powerless to support their livelihood. This will give idea that the current agricultural income of the study site is not well sufficient to support the living of the local society found in the study area.

Besides the agricultural lands of the study area, the community based eco-tourism site has got plenty of tourism potential to further develop as a tourist destination and it will contribute in the effort to develop sustainable livelihood particularly in the rural areas of Mt. Abune Yosef. In developing tourism as a source of income for the Mt. Abune Yosef community, it seeks to use all of the potential attractions in the area which allows them to appeal to as diversified an audience as possible. One matter complicating the establishment of community-based ecotourism in the study area is the issue of user rights governing the natural resource base, especially with regard to protected areas. All of the ecotourism projects surveyed were located inside or near the protected areas. This factor can be both an advantage and a disadvantage for communities because protected areas involve restrictions in the use of natural resources and it may also limit their economic development of the indigenous communities.

However, it is fact that protected areas may provide an opportunity for communities to generate income from nature because of nature attracts tourists. Tourism income in turn may have positive implications for communities' through economic development and the conservation of the protected

areas. These issues can directly affect the approach in which Mt. Abune Yosef ecotourism projects operates. In the case of the mountain community based eco-tourism, the people of the community were the owners of the site and tourists were entering and leaving protected areas according to the regulations governing the site. The ecotourism projects' installations (such as accommodations, guiding etc.) are located on owned property from the locals. Therefore, now a day's tourism related access to the resources is try to arrange by the communities themselves.

## POTENTIAL TOURISM RESOURCES OF THE MOUNTAIN CBET

### Natural Tourism Potential of Mt. Abune Yosef and Surrounding Area

The natural tourism potential site of the Mt. Abune Yosef and surrounding area has been evaluated in terms of attractiveness and unique landscape, variety of animals, variety of plants, attractive tracking route and eye-catching roadway to the CBET site. In such regards it is possible to see the result that attractiveness and unique landscape were found as it is high ( $M=4.40$ ,  $S.D=.6808$ ); and variety of animals which is less in number ( $M= 3.45$ ,  $S.D= .5101$ ); as the same way the variety of plant is high in number ( $M= 4.40$ ,  $S.D= .50262$ ); and the attractive tracking route which is poor and uncomfortable accounts as of ( $M= 3.45$ ,  $S.D= .51042$ ); while the eye-catching roadway is attractive ( $M= 4.40$ ,  $S.D= .68056$ ).

The result revealed that the mountain have natural tourism potentials in which the existed CBET can attract tourists to the area. In this case, it would be interesting to combine the visit to the afro-alpinehabitats with the savannah habitats in the lowlands and a complex mosaic of ecosystems where

bush lands, woodland, Montana dry forests and afro alpine grasslands are represented.

The diversity of birds and the few remaining Ethiopian wolfs can attract birdwatchers and animal lovers to the Mt. Abune Yosef, as the area that does not appear in the important bird areas catalogue for Ethiopia (EWNHS, 1996). In the mountain the montane, savannah-woodland, the montane dry forest and the afro alpine ecosystem, which are sorted in altitudinal belts ranging from 2,000 to 4,280 m of height of the Mt. Abune Yosef: Table (4.3) below contains the survey information as follows:

**Table 4.3: Mean of Natural Tourism potentials of Mt. Abune Yosef Tourist Survey**

	Natural Attraction	N	Min.	Max.	Mean	Std. D
1	Attractive and unique landscapes	20	3.0	5.0	4.40	.6806
2	Variety of animals	20	3.0	4.0	3.45	.5104
3	Variety of plants	20	4.0	5.0	4.40	.50262
4	Attractive tracking route	20	3.0	4.00	3.45	.51042
5	Eye catching roadway	20	3.0	5.0	4.40	.68056

Note: Std. D=standard deviation, Min. =Minimum, & Max. =Maximum M. = mean

Source: Own survey, April 2016.

Mt. Abune Yosef is the highest peak of North Wollo zone, and offers spectacular and scenic views over rugged deeply incised mountain landscape. The Afro-alpine habitats and escarpment provide both spectacular scenery and natural values with unusual animal life offer great opportunities for the existed CBET of the area. The endemic and rare species of the ecosystems and the diversified culture and heritage of the highlanders have immense potential for tourism. Generally the Afro-alpine ecosystems provide various attractions such as the scenery, wildlife and a wilderness appeal to potential visitors. In Ethiopia the Bala Mountain National Park and the Simen Mountain National Park are the two Afro-alpine national parks serve as a tourist destination for wildlife and highland visitors. Since 2010 E.C nature based eco-tourism guided by local communities are emerged around Guassa and Mt. Abune Yosef, Afro-alpine ecosystems as a potential method of livelihood diversification and income generation for supporting the biodiversity conservation management of the areas. Such type of community based tourisms is growing especially around Afro-alpine areas of Mt. Abune Yosef by NGO working with local community for the improvement of community livelihood through environmental friendly tourism.



Source: ESP, 2016

**Fig. 1.1: The Endemic Giant Lobelia, from Afro-Alpine Ecosystem and Cliffs in the Mt. Abune Yosef**

The Mt. Abune Yosef complex is mentioned in the regional conservation strategy as a key area for biodiversity conservation and with potential for ecotourism development. Afro-alpine vegetation types and the associated wildlife occur in only 10 areas in Ethiopia. The one in Mt. Abune Yosef and it is characterized by extensive and dense giant lobelia forests of exceptional size, a relative high density of the Abyssinian wolf (an indigenous and protected species) and high avifauna diversity.

The presence of 19 wolfs according to local community estimation does make a great trek through the beautiful mountain and wolfs have been seen here in the past couple of years. Nearby is the holly spring water traditionally said to have sprung up from the blood of Monk Abune Yosef who cut his leg when the devil pushed him over and well distribution of ecosystem indicate the existing status and potential of Mt. Abune Yosef.

## Cultural Tourism Potential of Mt. Abune Yosef

Mt. Abune Yosef also harbor various churches, hidden in centuries such as the monolithic church of GenataMareyam, near the source of the Tekeze River, 41 km from Lalibela, lies Geneta Maryam. It is thought to have been built in around 1270 by YekunoAmlak, who restored the Solomonic line.

With its rectangular shape and 20 massive rectangular pillars that support it, it has more resembles to Bet MedhaneAlem in Lalibela. It is also known for its remarkable 13th century painting. Mechina Maryam hours walk from GenataMareyam is the remote church's found near Mt Abune Yosef. The church is said to have traditionally, to have been constructed by three virgins during the reign of King GebreMeskel in 537 AD.

There are many bricked up tombs in the church. Bodies buried under the rock are said to be preserved forever. The church is little visited, but is well worth the long. It is also possible to have a visit to the nearby mountain village that always have a cloth of got skin. Taking in to consideration the potential of the cultural tourism attractions, it is a unique as it is described in the history, thereby maintaining also very important cultural values to the people of the study area in particular and the regional people in general. To evaluate such cultural attractions of the mountain an efferent is also made to know the cultural features of the Mt. Abune Yosef which is close to important historic attractions accounts (M= 4.550, S.D= .51042); and the traditional life style that attracts tourist to know and to visit is (M= 4.250, S.D= .63867); in addition attractive and traditional dressing style of the locals (M= 3.750, S.D= .78640).

**Table 4.4: Mean of Cultural Tourism potentials of Mt. Abune Yosef**

	Cultural Attraction	N	Min.	Max	Mean	Std. D
1	Close to important historic attractions	20	4.0	5.0	4.550	.51042
2	Traditional life style, attractive to know and visit	20	3.0	5.0	4.250	.63867
3	Attractive and traditional dressing styles (got skin), food and drink of locals	20	3.0	5.0	3.750	.78640

Note: Std. D=standard deviation, Min. =Minimum, & Max. =Maximum  
M. = Mean

Source: Own survey, April 2016.

## Infrastructural Potential of Mt. Abune Yosef

It is the role of the public sector to ensure that the infrastructure supports the development competitiveness of the tourism industry. Accordingly, the infrastructure investments of Mt. Abune Yosef have been surveyed to identify its overall role for the CBET development. Based on the responses of the tourists shown in table 4.5 below, tourism resources are helpful in evaluating the levels of various infrastructure provisions in Mt. Abune Yosef which is the availability of water is very poor as it shows (M=1.100, S.D= .30779); and the availability of electricity is also unthinkable which is (M=1.100, S.D= .30779); availability of exist roadway as of (M=1.850, S.D=.58714); existence of campsites, lodges and other accommodation facilities availability as of (M=3.050, S.D=.22361) finally the transport access is (M=3.250, S.D=.44426).

**Table 4.5: Mean of Infrastructure Existence of Mt. Abune Yosef**

	Infrastructure Potentials	N	Min.	Max.	Mean	Std. D
1	Availability of water	20	1.0	2.0	1.100	.30779
2	Availability of electricity	20	1.0	2.0	1.100	.30779
3	Available roadway exist	20	1.0	3.0	1.850	.58714
4	Campsites, lodges and other accommodation facilities availability	20	3.0	4.0	3.050	.22361
5	Transport Access	20	3.0	4.0	3.250	.44426

Note: Std. D=standard deviation, Min. =Minimum, & Max. =Maximum  
M. = Mean

Source: Own survey, April 2016.

It is fact that Mt. Abune Yosef is placed at the top of the hill with the majority of up and down arrangements. Such kind of rural topography demands the expansion of various level roads so as to provide different social services to the residents properly and the potential tourist as well. Besides to this, the presence of the established rural road to the mountain provides the chances to the tourists to visit the area properly and also encourage new investors who are in need of making their investment on those tourism related businesses. The expansion and development of the roads has remained on its stage only and this may bring difficulty to facilitate the tourism industry and development in the study area.

The road needs upgrading projects for the contributing of the CBET investment which is attracting endeavors in relation with its tourism potentials. These trials in one or other way could contribute for the growth of tourism industry.

Because, as the nearby town of Lalibela become interlinked with other urban areas by asphalted road, keeping other

contributing factors constant, the number of tourists who demand to visit the mountain by public bus transportation or by their own vehicles and tour operators' car had face some difficulties. Accordingly, this may limit the CBET development of the mountain with identified places only.



Source: ESP, April 2016.

**Fig.1.2: Established Road to the Mt. Abune Yosef**

Generally, it is possible to say that Mt. Abune Yosef has very high potential for CBET development in terms of its natural ( $M=4.02$ ,  $S.D=.3400$ ); and cultural features ( $M=4.183$ ,  $S.D=.48895$ ). The mountain has also moderate potential for CBET development in terms of site infrastructure ( $M=2.07$ ,  $S.D=.15631$ ). The infrastructure has relatively low potential to further expand CBET of the site and is in need of upgrades to its present situations. In order to facilitate and pointed out those secreted tourism potential sites found near to the study site. By pointing out those tourism potentials of the area it may help to maximize the benefits gained from existing tourist attractions and can assist properly to bring about the desired livelihood needs of the locals.

In the ever more rapidly changing and globally competitive market of tourism industry the desire of tourists to constantly find new places to visit, the fierce completion is growing. The existing destinations and the growth of new destinations as well as change in technology are the reason to maximize the potential benefits of those sites as well as for the conservation of the natural resources. It can also enhance foreign investment thereby obtaining the potential benefits from the CBET activities in an integrated, collaborated and coordinated manner with stakeholders.

### **Attitude of the Local Community towards CBET**

In response to the question 'what was your feeling when CBET started in your locality i.e. Mt. Abune Yosef site' key

informants which is in the study area and study site from guides, tourism official representatives, and organizations working on tourism businesses on the mountain has get responsibilities in the CBET sites and quickly answered that "most community members had been happy in the times when community based ecotourism was started in their locality i.e. Mt. Abune Yosef site". 80% to 90% of people who were invited for interview come to inform such attitude towards the existed CBET site.

These results support by the quantitative findings of respondents and 88.8% claimed that they are happy to the coming of visitors in the CBET sites of the Mt. Abune Yosef but the other 11.2% had not.

These findings indicate that people of the mountain, regardless of other factors like, age or degree of involvement in ecotourism, were willing to have a positive attitude in the development of the CBET. This result would suggest that the reason was that they are motivated to participate in any aspects of CBET related involvement is due to the sake of its income as a livelihood option. Moreover, the FGD result shows that they are happy to the CBET development.

When another question asked 'do you think that tourism in your village is really community-based?' some key informants paused and answered "not all" This was likely because the local people had limited tourism related knowledge and information about the CBET development process. As a result, they would not fully understand the context of the CBET implementation and development. Informant of the FGD indicated this issue by saying:

*“Most of our community members do not get enough information and knowledge related with community based ecotourism development process, and how we get involvement on the main task.”*

These results exposed that the local community found that a lack of awareness leads to a low level of community participation. This finding would agree that the attitude and feeling of the indigenous to the existed CBET is positive but they had a lack of clear knowledge and awareness. Communities are the most important factor to develop CBET which means that local's participation is a critical for the development and biodiversity conservation task.

Therefore it makes sense to investigate the community's interest in CBET. The sample households question asked that 'do you think you can survive without farming?' the result states 40.0% of sample households have negative feelings about the new means of livelihoods while 60.0% of sample households express their interest for other livelihood. Generally, the households' responses prove that most of the sample households were interested about the new alternative livelihood option of CBET of Mt. Abune Yosef.

## Level of Community Participation on CBET

From the total sample of the three CBET site 55.0% of the sample households give their idea that they are involved in community based ecotourism of Mt. Abune Yosef and it is possible to learn that 11.2% of the survey participated on trading of souvenirs (e.g. art and craft shops) and they also mentioned that guiding, producing souvenirs activity, employee in the community lodge, transport (e.g. supplying mules), Food and beverage (e.g. restaurants, bars, cafes) and other tasks account 6.2%, 7.5%, 5.0%, 10.0%, 8.8%, 1.2% respectively.

On the other hand 45.0% of the sample households did not involve on it and they mentioned that the reason for not participating is due to lack of awareness, busy with farming, lack of skill, lack of opportunity, lack of market and lack of finance: account 15.0%, 11.2%, 3.8%, 13.8%, 3.8%, 2.4% respectively (see on table 4.7).

The degree of community involvement and benefit can develop over time. For example, the FZS provides for an employment of 16 scouts from the locals and facilitate training program for them. As such, it may create a sense of ownership all the way through the locals to participate actively.

The community based ecotourism initiatives should be centered on a clear strategy which agreed and understood by the local community and all other stakeholders with an interest to participate in tourism and biodiversity conservation of the

tourism resource. The strategy may enable a comprehensive picture to be formed of needs and opportunities in an area, so that a range of complementary actions can be taken. One of the main benefits from working on a strategy is to provide the community with the tools and knowledge necessary for active participation and decision making process.

It is essential that people of Mt. Abune Yosef which is on the sample survey 93.8% think that community participation in tourism is important while a small number of the sample only 6.2% did not think that community participation in tourism is important. Local people involvement includes representatives of the local community, conservation agent furthermore, 57.5% mentioned that they have been invited to participate in meetings who called by government and organization working on the area on the CBET related meetings of Mt. Abune Yosef while 28.8 % and 13.8% are not participated and do not know whether they attend CBET issue meeting or not.

An effort is also made to assess how many times the locals recall being invited to attend CBET related meetings in Mt. Abune Yosef during the last 12 months, and high number of the respondent state quarterly which is 22.5%. But the respondent also bring the assembly as of fortnightly as 1.2%, monthly 21.2%, twice a year 15.0, yearly 5.0%, never 20.0% and not sure accounts 15.0%.

Brandon (1993 as cited in Ross & Wall, 1999) mentioned that local control and participation in tourism development influences the achievement of the maintenance of a dialogue to permit understanding of and to address, local needs and concerns; avoidance of decisions which may impact negatively on local residents; encouragement of a form of empowerment or decentralization which allows people some control over the decision-making that affects them; creation, clarification and consolidation of stakeholders encouragement of the development of sympathetic community leaders; strengthening links between conservation and development goals, for local benefit; facilitating the local distribution of benefits and providing a local capacity to monitor and evaluate the progress of projects. Likewise, to identify the locals members whether they have equal opportunities to participate on the CBET development related issues of Mt. Abune Yosef or not, the sample household informs that 55.0%, have got a chance to participate on the CBET development related issues of Mt. Abune Yosef while 45.0% sample of respondent think that all community had not equal chance to get involved. This shows that the indigenous are still waiting to get the opportunity to involve. Involving the community is a critically important and complex subject for successful community-based ecotourism.

Opportunities and solutions will vary considerably in different areas and between communities. An important principle is to

seek to work with existing social and community structures even if these can create challenges as well as opportunities, it can also help to identify potential leaders and people with drive in the community.

Community participation has been the most common strategy used to achieve the goal of sustainable development over the last two decade: some people call them participation decade (Botes & Van Rensburg, 2000). While much literature has highlighted the benefits and importance of local peoples involvement (Armitage, 2005; Kellert et al., 2000; Kayat, 2002; Kiss, 2004; Li, 2002; Lise, 2000; Mosse, 1994; Ostrom, et al., 2002; Pollnac & Pomeroy; 2005, Stem et al., 2003). With this fact the level of community participation on

the CBET practice of Mt. Abune Yosef tourism industry has proved with the sample survey on the following table.

The research uses Chi square testing in order to test if there is significant relationship between the levels of education and the level of involvement on the existed CBET of the study area or not. The convention is that if the calculated significance (Sig.) value is less than or equal to 0.05, then the variables are significantly related, if these values are greater than 0.05, then the variables are not significantly related. The following table 4.12 shows the calculated results of the values of Chi square a, b, df (degree of freedom, Asymptotic significance value).

**Table 4.6: Chi-square Test Results**

	Level of Education	Level of Involvement to the CBET
Chi-square	69.100 <sup>a</sup>	.800 <sup>c</sup>
df	3	1
Asymp.sig	.000	.180

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 20.0.

c. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 40.0.

Source: Own survey, April 2016.

With the use of SPSS, the values of Chi square a, b, df (degree of freedom, the calculated and observed values for asymptotic significance value Chi square are as shown and the values in the “Chi square” row are different from 0.000 because the cell frequencies are not equal. As usual, statistically significance results are indicated by “Asymp. Significance” or asymptotic significance chi square values (p- value).

In the above table Asymp. Sig. values of 0.000 and 0.180 imply that the values are above 0.05 (i.e. the preset significance level). Obviously, the result states that there is no significant relationship between education status and level of involvement on the existed CBET site of the area. Moreover, the respondent was asked the question that weather they sell and provide service for the community lodge or not. As a result 50.0% of the total sample answer that they do have service to provide directly or indirectly through the development of the site and product to sell, at the same time as 50% do not.

Findings revealed that community participation in the site includes trading of souvenirs (e.g. art and craft shops), guiding, producing souvenirs activity, employee in the community lodge, transport (e.g. supplying mules), food and beverage (e.g. restaurants, bars, cafes) and others with the local community regarding development of community ecotourism in the area.

In the other hand, the involvement of the local community has also find limitation due to stated reasons. As it is indicated on below table 4.7 below, that lack of awareness has a large position in the locals, busy with farming, lack of skill, lack of opportunity, lack of market and lack of finance is the other mentioned causes to limit the involvement of locals in ecotourism project of the area. There is a need to plan carefully for effective incentives that can enhance local participation in ecotourism by the management committee supported by the two officers in the site. The costs that locals bear should be taken into consideration in all aspects that the community may engage.

**Table 4.7: Challenges of CBET Development and Communities Involvement of Tourism Activities in the CBET Site of the Sample HHs**

Activities	CBET Site						Total	
	Abune Yosef site		Yimrihane site		WedebiyeAbbo Site		count	%
	Count	%t	count	%	Count	%		
<b>Activities Involved Currently</b>								
Trading Of Souvenirs (E.G. Art And Craft Shops)	6	17.1	2	7.7	1	5.0	9	11.2
Guiding	3	8.6	1	3.8	1	5.0	5	6.2
Producing Souvenirs Activity	2	5.7	2	7.7	2	10.0	6	7.5
Employee In The Community Lodge	2	5.7	2	7.7	-	-	4	5.0
Transport (E.G. Supplying Mules)	5	14.3	3	11.5	-	-	8	10.0
Food And Beverage (E.G. Restaurants, Bars, Cafes)	2	5.7	2	7.7	3	15.0	7	8.8
Others	-	-	-	-	1	5.0	1	1.2
Total	35	57.1	12	46.2	8	40.0	40	50.0
<b>Reason for Not Participating</b>								
Lack Of Awareness	6	17.1	6	23.1	-	-	12	15.0
Busy With Farming	2	5.7	4	15.4	3	15.0	9	11.2
Lack Of Skill	-	-	-	-	3	15.0	3	3.8
Not Having Opportunity	5	14.3	3	11.5	3	15.0	11	13.8
Short Of Market	-	-	1	3.8	2	10.0	3	3.8
Be Short Of Finance	2	5.7	-	-	1	5.0	2	2.4
Others	-	-	-	-	-	-	-	-
Total	15	42.9	13	53.8	12	60.0	40	50.0

Source: Own survey, April 2016.



Source: Own Photo, Lalibela, April 2016.

**Fig. 1.3: Lalibela Market Receives Dozens of People for Carrying and Selling of Firewood and Cattle Grazing in the Afroalpine Area**

## CONCLUSION

The major intention of this thesis was to exploring how Community Based Eco-Tourism (CBET) can be used as a biodiversity conservation and livelihood option in Mt. Abune Yosef, North wollo zone. Accordingly, efforts have been made to explore the potential tourism resource of Mt. Abune Yosef and surround area through the evaluation of its natural features, cultural features and infrastructure development. It was a highly potential area of natural and cultural tourism resources with limited infrastructural development.

**Function of CBET:** The CBET assessment of the mountain for the improvement of local community livelihood is currently not yet to move towards as a livelihood options but creates appetency like the emerged generation of new jobs to the local community and the chance that it had provides to the younger generation and to the women in the study area. To this point the locals shows their appealing interest to get other means of income for their livelihoods. The results of this study clearly proved that the level of community participation in the study area and the involvement of the community have been limited due to the following reasons: Lack of awareness is the main factors that limits the participation of the locals with the existed CBET; moreover, lack of skill, lack of opportunity, busy with farming, lack of market and lack of finance is the other mentioned causes of the findings to limit the involvement of locals in the ecotourism project of the area.

The findings of the study have shown that the major challenges for the Mt. Abune Yosef CBET industry are the collection of firewood for fuel production. The forest of the mountain is suffering from a strong deforestation process. As it is indicated that the key problems of the study site including livestock grazing, collecting wood, cutting and carrying firewood, loss of afro alpine habitat and expansion of farm land and hunting. At the same time, the study pointed out that there are a number of challenges to run and develop CBET in Mt. Abune Yosef of these, tourism related personnel lack of essential knowledge and skills to administered the site (incapability to lead the CBET), lack of well-trained MC staff to run the business with professional manner, lack of proper marketing and promotion strategy (the nearby Lalibela woreda culture and tourism branch office give due attention only to the rock hewn church), lack of funds and training for the locals to produced tourism related agricultural product and souvenirs and lack of cooperation between government office and stakeholders to maximized the potential benefits of the area are identified as the obstacles that hold back to run and develop CBET in Mt. Abune Yosef tourism industry.

In the other hand, alternative ecotourism initiatives are needed to empower local people in order to maximize their allotments in economic benefits. Tourism in the study area

is highly insisted due to the nearby Lalibelas demand ability for tourism market. With this background, the priority is that considered as a potential source of economic development and poverty alleviation in the marginal rural areas of Mt. Abune Yosef community with limited agricultural potential. As a result the emerged economic gain has profound impact upon sustainable community development.

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