



# Developing Community Based Ecotourism to diversify livelihood and assure environmental conservation in Haramaya and Gurawa Districts, Ethiopia

\*Samuel Syraji<sup>1</sup>, Alem Mezgebo<sup>2</sup>, Abdibeshir Said<sup>3</sup> and Mulu Brhanu<sup>4</sup>

<sup>1</sup>Samuel Syraji, Tourism and Hotel Management Program, Haramaya University  
Email: fereja2009@gmail.com, or samuel.syraji@haramaya.edu.et

<sup>2</sup>Alem Mezgebo, School of Agricultural Economics and Agribusiness, Haramaya University

<sup>3</sup>Abdibeshir Said, Tourism and Hotel Management Program, Haramaya University

<sup>4</sup>Mulu Brhanu, Gender and Development Department, Haramaya University

Corresponding author\*

## Abstract

The main objective of this study was to reveal the potentials of Haramaya and Gurawa districts for developing community based ecotourism (CBT) to diversify livelihood and assure environmental conservation. The data was gathered through questionnaires, interviews, site visits/observations and document analysis. The collected data was analyzed using both qualitative and quantitative data analysis procedures. Econometric models such as the Spike model to estimate parametric mean of willingness to pay for community based ecotourism development and Bivariate Probit model to determine factors affecting willingness to pay were used in the study. The study has identified potential ecotourism resources of the districts inter alia caves, lakes, century old mosque, church and royal prison with distinctive relics and architectural designs, various marriage types and a host of bird species. The major problems investigated are lack of awareness on the part of the local communities about the tourism resources and absence of integrated works between tourism stakeholders. Using these potential resources and the local community's (86%) willingness to pay, the article argues that, community based ecotourism should be developed in the study sites to diversify livelihood and assure environmental conservation. In addition, significant community works have to be undertaken so as to increase the local communities' awareness. The government should create a promising environment where different stakeholders of tourism can work together to make the area sustainable from a tourism perspective.

**Keywords:** Community based ecotourism, environmental conservation, livelihood diversification, Ethiopia

## Introduction

Tourism refers to the activities of persons traveling to, and staying in places outside their usual environment for not more than one consecutive year for leisure, business and other purposes not related to the exercise of an activity remunerated from within the place visited (Juul, 2015). It is a labour-intensive industry that provides a wide range of employment opportunities (UNDP, 2011).

Ecotourism as a form of tourism deals with the activities of visiting natural areas including the task of needing to learn or participate in activities that do bring effects to the environment and it potentially empowers the local community both socially and economically (Eco Tour, 2007). It is an environmentally friendly means of bringing development and protecting natural areas and their wild inhabitants in remote locations (Weaver, 2001). Ecotourism has the responsibility to unite the community, conservation and sustainable travel. Similarly, Himberg (2006) stated that unlike other segments of tourism, ecotourism is well expressed by its sustainable development



results, i.e. conserving natural areas, educating visitors and benefiting the local communities. It is a sound manner in which to empower local communities to fight against poverty and secure sustainable development (TIES, 2015). It is also a growing niche market in the 'womb' of the larger travel industry where it is considered to be a tool for aiding sustainable development initiatives (Wood, 2002).

By hastening capacity building and employment opportunities, ecotourism is a sound choice through which to empower local communities and alleviate poverty while securing sustainable development (TIES, 2015). Tourism, especially ecotourism, has thus emerged as a 'striking chord section' of tourism that seems to be the remedy for the prevailing socio-cultural and environmental challenges bedeviling the planet (Mawere and Mubaya, 2012). The different social benefits of ecotourism are the creation of employment opportunities, enhancing community wellbeing and increasing availability of social services (electricity, access to healthcare and education) (Vellas, n.d). Community wellbeing, which refers to the quality of life and level of sustainability, is shaped by a number of psychological, cultural, economic and environmental factors that outline how people are thinking and acting in their daily lives (Simpson, 2007). TIES explained the role of ecotourism in conserving and preserving natural endowments as:

With an emphasis on enriching personal experiences and environmental awareness through interpretation, ecotourism promotes greater understanding and appreciation for nature, local society, and culture. Offering market-linked long-term solutions, ecotourism provide effective economic incentives for conserving and enhancing bio-cultural diversity and help protect the natural and cultural heritage of our beautiful planet (TIES, 2015).

Community based ecotourism (CBET) requires a sound relationship between the locals and the tourists and has positive economic and conservation merits for both the locals and the environment (Mountain Institute, 2000:8). It is an approach to tourism where the interests of local communities are considered in the planning and development processes (Medlik, 2003). According to Beeton (2006), CBET is a form of tourism which is controlled and administrated by the community. CBET with its focus on small-scale, locally designed products and the active involvement of the communities, can be part of sustainable development strategies (Mountain Institute, 2000).

It can bring positive livelihood impacts, i.e. create economic and employment opportunities for individuals, decrease vulnerability, improve skills and provide access to information, increase infrastructure growth and markets, provide greater food security and effective social institutions (Simpson, 2007).

It is clear that the conservation of both natural and cultural resources has to be given due attention since they attract tourists to the destination. Eco-travelers should be aware of the environmental issues and continue to behave in an environmentally conscious way (Eco-Tour, 2007). This is because development through conservation fosters collective actions and strengthens the institutional capacity needed for sustainable development (Tai, 2007). Involvement of local communities in conservation activities is crucial for the long lasting existence of both natural and cultural resources. Brandon (1996) argues that if conservation efforts miss the active participation of the locals, it is more likely that the resources on which tourism depends will be destroyed, and the investment will be lost (cited from the Mountain Institute, 2000). Thus, sustainable conservation projects need to invest in efforts of capacity building, bringing intra-community trust and consensus. These capacity building activities could be based on organizational and technical capacity to deliver specific services, infrastructural and community capacities (Beeton, 2006). This is imperative for decisions and actions



introduced by external agents which cannot be the best alternative to the traditional decision making systems (Farrelly, 2011). Beeton (2006) further elaborates on the importance of community empowerment and 'self-determination' saying that various 'empowered' tourism and community development initiatives have failed due to the failure of communities to maintain them.

As globalization makes local economic control increasingly difficult, ecotourism seeks to reverse this trend by empowering local communities (Wood, 2002). Community- based natural resource management is appreciated from time to time as a means to handle the environmental problems and realize community empowerment in developing countries (Himberg, 2006). By scrutinizing the positive impacts tourism has on the economy, environment and social life of the community, many countries stimulate tourism development to enhance their national economies (Amelung *et al.*, 1999). Almost all countries of Africa are striving to create favorable conditions for gaining the necessary benefits from tourism. They are doing their best to be among the popular worldwide tourist destination areas (Christie *et al.*, 2013). Ethiopia devotes much time to work against poverty and seeks to furnish the necessary infrastructures for tourism to enhance its role in its development endeavors (Samuel, 2013). The country has many precious natural, cultural and historical tourism resources that can attract tourists from different corners of the world (Little, n. d). With the objective to make the country one of the top five tourist destination areas in the continent by the year 2020, the incumbent Ethiopian government (FDRE) has given due attention to tourism as one of the tools in poverty reduction and a means to change the image of the country (Markos, 2012). To realize this goal, in 2014, the FDRE government has set up a Tourism Transformation Council presided by the Prime Minister, who is the chief executive of the country (Ministry of Culture and Tourism, 2015 & Solomon, 2016).

Ecotourism in Ethiopia creates opportunities for tourists and other visitors to experience the country's ecology and natural endowments as well as the unique features of its archaeology, history and culture (Henze, 2007). Oromia State is a region blessed with many priceless natural, archaeological and cultural/historical tourism resources. Though the region is rich in resources, the development of tourism and its contribution for economic development is not yet viable or remotely sound.

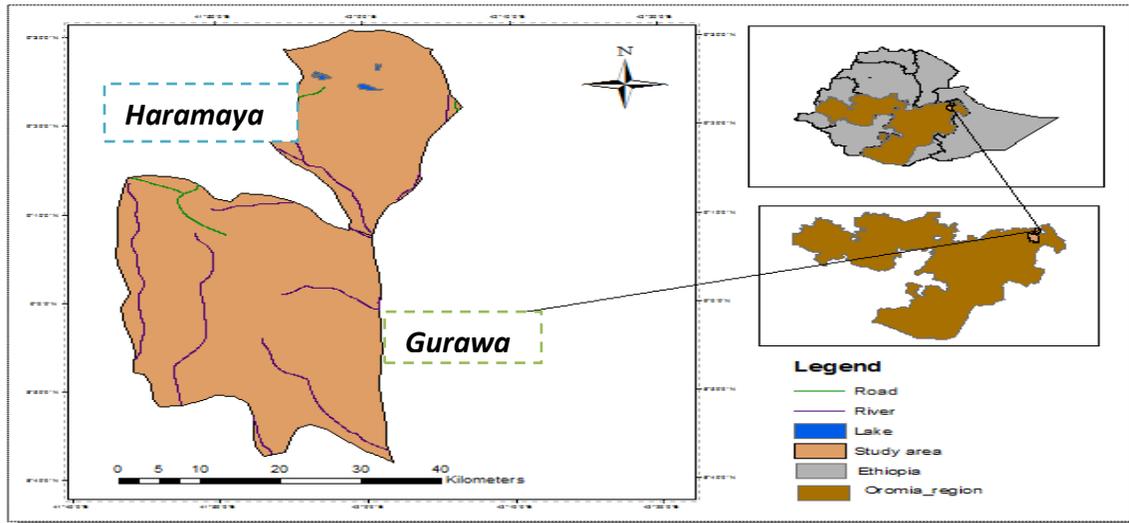
## **Research Methods**

### **Description of the Study Area**

Haramaya and Gurawa districts are two of the 18 districts found in East Hararghe Zone, Oromia Regional State, Ethiopia. Haramaya district is bordered on the south by Kurfa Chele and Fedis, on the west by Kersa, on the north by Dire Dawa (a federal city), on the east by Kombolcha, and on the southeast by Harari Regional State. On the other hand, Gurawa is surrounded by Gola Odana on the south, Bedeno on the west, Kurfa Chele on the north and Fedis on the east. The study areas, Haramaya and Gurawa districts, have midland and lowland agro-climatic zones. Their average annual rainfall and temperature ranges between 118 mm & 9.4<sup>o</sup>c and 866 mm & 24<sup>o</sup>c respectively. The altitude of Gurawa district, specifically, ranges from 500 to 3230 meters above sea level. Geyle and Mount Gara-Muleta are the highest peaks in the area. From the total area of Gurawa district, 54.3% is arable or cultivable, 4.4% is pasture, 1.2% is forest, 21.8% is built-up, and the remaining 18.3% is considered to be degraded or unusable (Mengistu *et al.*, 2016, Mohammed 2015 & Nigussie *et al.*, 2014).

The districts' geographical advantages are their proximity to Harar city, a UNESCO registered World Heritage Site; Dire Dawa, where there is an international airport, Qulubi Gebriel Church, a

famous church in Ethiopia celebrated twice a year, Harla village, the medieval historical site and Haramaya University.



Map of Haramaya and Gurawa Districts in Ethiopia (Source: the Authors)

### Research Design, Sample Population and Data Gathering Procedures

The study was conducted using a mixed research methodology with a descriptive design. Two different sampling techniques, i.e. purposive and simple random sampling were used when selecting sample kebeles (Wikipedia states that: A kebele [Amharic: ቤቃ, qäbäle, "neighbourhood"] is the smallest administrative unit of Ethiopia, similar to a ward, a neighbourhood or a localized and delimited group of people and respondents). Whereas purposive sampling was deployed to nominate potential and relevant 10 kebeles with different resources found in dissimilar distances; simple random sampling procedure was followed to obtain the proportional amount of respondents. The total number of households in the districts was 56,540 (FDREPC, 2008). The sample size for the study was determined based on the sample size formula developed by Yemane (cited from Israel, n.d).

$$n = \frac{N}{1 + N*(e)^2} \quad \text{Where } n = \text{sample size, } N = \text{total population and } e = \text{level of precision}$$

Thus, the sample size for the study at a 95% confidence level with a 0.05 level of precision was calculated to be 397 households. However, only three hundred questionnaires (prepared in English & Afan Oromo) were distributed to and collected from the respondents due to the homogeneous nature of the respondents after obtaining their consent to be involved. The questionnaire was pre-tested and amended before the actual questionnaire survey was made. Key informant interviews were held with community elders, religious fathers and district and zone culture and tourism office workers to gather basic information related to the available resources. Observation (site visit) was used to enumerate and make an inventory of tourism resources and products of the study area. It was during this site visit that most of the resources were photographed. Similarly, several written materials like books, journal articles, reports, magazines, newsletters, leaflets and recorded audios and video files (obtained from the districts' culture and tourism offices) were intensively utilized to analyze the tourism resources of the study areas.



## Methods of Data Analysis and Interpretation

The gathered data were analyzed through both qualitative and quantitative data analysis procedures. The qualitative data were analyzed using content analysis techniques. The data were analyzed both at manifest (descriptive) and latent (interpretive) levels. On the other hand, the quantitative data were analyzed through descriptive statistics such as using frequency and percent, and using different econometric models like the Spike model, used to estimate parametric mean of willingness to pay (WTP) for CBET, and Bivariate Probit model, applied to determine factors affecting WTP for CBET.

To distinguish between genuine and protest zero responses, in a contingent valuation method (CVM) survey, it is advised to adopt an appropriate framework of analysis (Strazzera *et al.*, 2003). The Spike model was proposed by Kriström (1997) and it explicitly allows for the possibility that some portion of the respondents are indifferent to the good being valued, i.e. this model assigns a non-zero probability to zero WTP responses. Following Kriström (1997), the simple spike model was used in the study to allow a better handling of the zero responses that are common when using the dichotomous choice referendum format. A respondent was asked whether or not he or she is willing to contribute to a trust fund that will be used for CBET development. The WTP for development from  $Z^0 \rightarrow Z^1$  can be expressed as:

$$V(y - WTP, z^1) = V(y, z^0) \quad (1)$$

Where  $V(y, z)$  is an individual's indirect utility function and  $y$  is income. If there is a continuum of individuals who associate different values to the development of CBET, the probability that an individual's WTP does not exceed an amount  $A$  is given by:

$$\Pr(WTP \leq A) = F_{wtp}(A) \quad (2)$$

Where  $F_{wtp}(A)$  is a right continuous non-decreasing function. As a result, the expected WTP can then be expressed as:

$$E(WTP) = \int_0^{\infty} 1 - F_{wtp}(A) dA - \int_{-\infty}^0 1 - F_{wtp}(A) dA \quad (3)$$

To be able to estimate  $F_{wtp}(A)$  when binary valuation questions are used, three amounts of  $A$  (30, 70, 100 birr) was presented to each sub-sample. The spike-model assumes that the distribution function of WTP has the following form:

$$F_{wtp}(A) = \begin{cases} 0 & \text{if } A < 0 \\ p & \text{if } A = 0 \\ G_{wtp} & \text{if } A > 0 \end{cases} \quad (4)$$

Where  $p$  belongs to  $(0, 1)$  and  $G_{wtp}(A)$  is a continuous and increasing function such that  $G_{wtp}(0) = p$  and  $\lim_{A \rightarrow \infty} G_{wtp}(A) = 1$ . This creates a jump-discontinuity or a spike at zero.

In this study, two valuation questions were offered for the spike model after the contingent valuation scenario was presented to the respondents. These valuation questions include:

1. Whether the respondent is willing to contribute to the trust fund for CBET, and
2. Whether the respondent is willing to contribute Birr\_\_\_\_ per year for CBET.

For each respondent,  $i$ , an indicator  $S_i$  was defined to determine whether the respondent is "in-the-market" or not.

$$S_i = \begin{cases} 1 & \text{if } WTP > 0 \\ 0 & \text{if } WTP \leq 0 \end{cases} \quad (5)$$



The respondent was “in-the-market” if the additional amount that he/she was asked to contribute to the trust fund is lower than his/her willingness to pay. To identify the effect of respondent’s socio-economic characteristics on their WTP for CBET nonlinear model was used. The model is specified as:

$$S_i = \gamma_0 + \gamma_1 V_{1,j} + \gamma_2 V_{2,j} + \dots + \gamma_k V_{k,j} + \varepsilon_{S_{i,j}} \quad (6)$$

Where  $V_{S_i} = \{V_1, V_2, \dots, V_K\}$  is also a vector of explanatory variables not necessarily distinct of (to?)  $X_{T_i}$  below;  $\gamma =$  unknown parameters of the model. Analogously, one can assume that behind the decision to participate in the hypothetical market ( $S_i = 1(\text{yes})$ ) the latent variable  $T_i$  was used to indicate the respondent’s WTP the suggested prices A, or

$$T_i = \begin{cases} 1 & \text{if } WTP > A \text{ and} \\ 0 & \text{otherwise} \end{cases} \quad (7)$$

This latent variable  $T_i$  is specified as:

$$T_i = \alpha + \beta A_i + \gamma_1 X_{1,i} + \gamma_2 X_{2,i} + \dots + \gamma_M X_{M,i} + \varepsilon_{T_{i,i}} \quad (8)$$

Where  $X_{T_i} = \{X_1, X_2, \dots, X_M\}$  is a vector of explanatory variables,  $A_i$  is the initial bids, offered to the respondent in order to enjoy the development from  $Z^0 \rightarrow Z^1$ , in the case of this study, CBET. And  $\alpha, \beta$  and  $\gamma$  are unknown parameters of the model. The disturbance terms are assumed to have a bivariate normal distribution with a correlation parameter,  $\rho$ . That is,  $(\varepsilon_{S_i}, \varepsilon_{T_i}) \sim BVN(0,0,1,1,\rho)$ . Therefore, with the introduction of these decision rules, the spike model becomes a bivariate specification with sample selection:

$$\left\{ \begin{array}{l} S_i = 0 \text{ if } S^* \leq 0 \\ S_i = 1 \text{ if } S^* > 0 \rightarrow \begin{cases} T = 1 \text{ if } T^* > 0 \\ T = 0 \text{ if } T^* \leq 0 \end{cases} \end{array} \right\} \quad (9)$$

The log likelihood for the sample is then given by:

$$L = \prod_{S_i=0} P(S^* \leq 0) \prod_{S_i=1} [\prod_{T_i=1} P(S^* > 0, T^* > A) \prod_{T_i=0} P(S^* > 0, T^* \leq A)] \quad (10)$$

which implicitly contains the joint probability of  $S^*$  and  $T^*$  and the marginal probability of  $S^*$ .

## Result and Discussion

The study includes 300 respondents selected using simple random sampling methods; of which 52.2% were males whereas the remaining 47.8% were females. In terms of age composition, about 44.2% of the respondents’ age was between 31-35 years. Whereas, about 29.9% of the respondents’ age fell in the middle of the years 26-30 years, the age range of 7.6% of the respondents was greater than 40 years old.

Identifying the marital status and educational level of the respondents were vital to determine respondents’ understanding of the economic, social, cultural, historical and environmental aspects of the areas under study. Accordingly, 62.1% of the respondents were married and the remaining 37.2% and 0.7% of them were single and divorced respectively. About 37.2% and 26.6% of the respondents have attended primary and high schools respectively.



## Ecotourism Potential Resources of Haramaya and Gurawa Districts

### Gara Muleta Rayal Prison

The tradition of putting power successors into custody was a practice started during the medieval period in Ethiopian history (1270-1855). Photius has explained when and why a royal prison was started as follows:

In 1285 Yekuno Amlak was succeeded by his son, Yagba Siyon (reigned 1285-94). His reign and the period immediately following were marked by constant struggles among the sons and grandsons of Yekuno Amlak. This destructive conflict was resolved sometime around 1300, when it became the rule for all males tracing descent from Yekuno Amlak (except the reigning emperor and his sons) to be held in a mountain top prison... When that monarch died, all his sons except his heir were also permanently imprisoned.

The prison constructed in Gurawa is called Lij-Eyassu Prison since it was meant to jail him there (Barruu Gaaraamul'ataa, 2004). Lij Eyassu Prison is found in Gurawa Town which is 76km away from Harar city and 600km far from the Country's capital city, Addis Ababa. Lij-Eyassu ruled Ethiopia from 1913-1916. When Ras Teferi (the latter Emperor Haile Sellasie I) became an heir in the dual power of 1916-1930 with Zewditu by a full-fledged support of the Shoan nobility, Lij-Eyassu was dethroned and put into prison, first in north Shoa, Selale and later at Gurawa, where his life was cut short. This wonderful edifice was constructed by an Armenian female engineer named Emalia by the order of His Imperial Majesty, Emperor Haile Sellasie I in 1931 (Barruu Gaaraamul'ataa, 2004). The building has three parts and several classes built for different purposes such as a holding area, a reception area, a kitchen, restrooms, and offices. The prison is an interesting destination for tourists and historians. Currently, however, this historic heritage is on the verge of collapse for it is not well kept and maintained.



Picture 1. Gara-Muleta Royal Prison, the date when it was constructed and the chain used to chain Lij Eyassu, (Photos: the Authors)

### **Mesgida Biyo Guda (Biyo Guda Mosque)**

Biyo Guda Mosque is an old mosque which is around 800 years of age (according to the local elders) found in Gurawa district and particularly those in Mudana Qurquroo village. It is made up of well carved stone blocks except for the water spout (in Amharic *ashenda*) which is prepared from a curved half tube-like piece of wood. There is another building next to the mosque with four rooms. According to our informants, while one room was used as a restroom, the remaining three rooms were reserved for *medresas* (rooms to undergo Islamic education). The mosque is located at an elevation of 1500 meter above sea level. Today, there is no any house or any resident living around the mosque. However, it is protected and managed by a person called Sheik Abdulhamid Sheik Umar.



Picture 2. Biyo Guda Mosque (Photo: the Authors)

### **Rakoher Zala Cave**

The cave has flowing water in it. So far, no one has discovered where it comes from or where it goes. The locals, however, use the flowing water for three purposes based on its access. The first part of the water body, which is found immediately when entering the cave, is being utilized for animal drinking; the second part, which is found next to the first part, serves the purpose of being a washing area. The last part of the flowing water, which is located much deeper than the former two, is used for human drinking purposes. Our informants have told us the story (kept in their minds and hearts) about how they started to use this underground flowing water.

Once the water was found, the local elders gathered and had discussions on how to use it. They agreed to test the water by giving it, first, to aged animals like dogs and donkeys. Once they realized that nothing harmful had happened to those who imbibed it, they gave it to aged cows and oxen. Finally, seeing that no bad thing happened to the animals, the elders conducted final tests by giving it to the elderly. Knowing that those who drink the water faced no problem, the elders publicly declared that the water was potable.



Picture 3. Rakober Zala Cave (Photos: the Authors)

### The Mountain of Gara Muleta

Gara Muleta Mountain is the highest peak of all mountains found in East Hararghe Zone of Oromia Regional State with heights over 3500masl. The mountain is shared by four districts, i.e. Gurawa, Kurfachelle, Kersa and Bedeno. In the local language /*Afan Oromo*/ Gara-Muleta means “a mountain that can be seen from different directions”. It has interesting remnant forests largely the dense Afro-Alpine vegetation cover, several birds and wild animals of different kinds. Teketay (1996) has summarized the general wildlife resources of the mountain as follows:

The vegetation at the bottom of the northern side of Gara Muleta mountain is dominated by the two conifers, *Juniperus procera* and *podocarpus gracilior* associated with *Ekebergia capensis*, *Erythrina abyssinica*, *Gnidia glauca*, *Hagenia abyssinica*, *Maesa lanceolata*, *Olea africana* and *Schefflera abyssinica*. Some of the wild animals found in the forests of Gara Muleta and Kundudo mountains include Bush-buck, Leopard, Ibex, Oryx, Hyena, Baboons (three kinds), Grivets, Colobus monkey, Jackal, Antelope, Bush pig, Genet, Civet, Crested porcupine, Wart dog, Francoline, Guinea fowl and a variety of birds and reptiles (p.347).



Picture 4. Gara Muleta Mountain (Photos: the Authors)

### Natural Lakes

The site has three different natural lakes namely Haramaya, Tinike and Adele. Lake Haramaya has disappeared. However, strong efforts are being made by the government and also Haramaya University, to recover it. The Haramaya Lake Rehabilitation Project provides community awareness training and is engaged with the locals in soil and water conservation works. The major significant resources found in and around these lakes are various aquatic bird species like Lesser Flamingo, Cattle Egret, Hamerkop, Sacred ibis, White pelicans, Wattled ibis, to name a few. In addition, the dominant aquatic plant species in this area are Typhabeds and Papyrus.





Picture 6. Natural Resources of Haramaya District (photos: the Authors)

### Gole Gaya Cave

The cave is found in Gurawa District specifically in a place called Gofra Burqa, which is 75km away from Harar city. Pictures of various home animals are depicted on the walls of the cave. Though everyone who paid a visit to this cave wonders about who painted them and when, which has to be left to historians and archaeologists to deal with. The rock painting techniques used and the inks selected for painting hold secrets that need to be told. It is one of the most wonderful attractions of the districts.



Picture 7. Gole Gaya Cave (Photos: the Authors)

### Abdullahi Ibro Cave

Abdullahi Ibro Cave is located in East Hararghe Zone Gurawa District in Mojo-sade Kebele. According to the local elders, the cave has been used by the local community for several purposes. First, it served as an ideal place to celebrate the major Islamic religious holiday (Eid). Because the immediate six days after Eid Al-Fitr are the days of fasting (*Shewal soum*), the locals prepare different things in common for one day consumption. Next, it was used as a cache by the local community to hide themselves and their belongings in several periods of war, more specifically, during the clash between the locals and Central Ethiopian Government (1890s), Italo-Ethiopian war (1935/36) and Ethio-Somalian war (1970s). Finally, the cave, even to this day, is serving as a shelter for the local cowboys or shepherds to escape from heavy rainfall. The cave has a narrow gate, but its internal part is large and has several rooms. Due to ease of access, the locals usually conduct their ceremonies only at the first section of the cave. It is advisable to have a flashlight when visiting this cave.



Picture 8. Abdullahi Ibro Cave (Photos: the Authors)

## Marriage Types

Inhabitants of the site have their own culture and value systems passed down from generation to generation mainly through oral transmission. Some cultural elements of the people are the culture of tolerance, marriage ceremonies, producing and using cultural tools, foods, folklores, music, etc. More importantly, the different types of cultural marriage arrangements among these people are quite impressive. The minimum appropriate age limit to get married is 18 and 15 years for male and female respectively. There are around five possible ways of arranging marriage:

1. **Kaadhimmachuu/ through fiancée**:- this type of marriage arrangement requires the male families to send elders to the female families to ask their willingness to be married. Here, the two families of the individuals need to reach consensus concerning the date of marriage and the duration the male families should wait before marriage is finalised.
2. **Wellin De'amu**: In this approach, marriage is arranged based on the interests of the partners. The couple would sit down and discuss the date of their wedding and arrive at a mutual decision.
3. **Butilabduction**: this approach is in two forms. The first is conducted without the consent of the girl, and may result in severe conflict between the two families. However, the second one is conducted with full interest of the lady concerned and abduction may be arranged by the couple so as to obtain the good will of her parents.
4. **Chebsa/Accidental**: in this process the male families together with elders go to the girl's parents' home without informing them. They may stay there for one or two days, and they will not go back until they are allowed to take the bride with them.
5. **Asse'ena**: in this kind of marriage arrangement the female, who falls in love, will go to the house of her beloved partner. At this juncture, the male parents have only two options; either to accept her request for marriage or see her off with a gift, i.e. cow, goats etc. Culturally, the latter is considered to be the best option, so as not to psychologically affect the girl.

## Community awareness levels of Tourism Resources of the two districts

Community involvement and participation in leisure and tourism planning has become increasingly popular, not only to ensure that the right planning takes place, but also on a local scale to ensure a sense of community and civic pride in the new developments (Sadd, 2006). Local communities are involved in reasonable participation whenever they acquaint themselves with what they have in and around their areas. The local communities of Haramaya and Gurawa



districts have come to know their resources through personal observation and word of mouth/ table 1.

Table 1. Which source of information most acquaints you with the tourism resources of your district?

	Frequency	Percent (%)
Data base inventory	33	11.3
Folders, brochures and leaflets	10	3.3
Broadcast media/ TV, Radio, Internet	53	17.6
Word of mouth	102	33.9
Personal observation	102	33.9
Total	300	100.0

Source: survey data, 2015

### Households WTP for CBET

The result shows that while 86% of the respondents were willing pay, the remaining 14% of them were not willing to pay for CBET. The descriptive statistics of households' responses from the single bounded dichotomous choice format shows that 60.3% of the respondents' were willing to accept the initial bids. Whereas the remaining number of respondents' rejected the initial bids (Table 2). The average initial bids assigned to the respondents were computed at 66.67 ETB per year.

Table 2. Households' responses on initial bids

Response to initial bids	Frequency	Percent (%)
No	119	39.7
Yes	181	60.3
Total	300	100.0

Source: survey data, 2015

Using the Spike model the mean annual willingness to pay for CBET of the sample respondents was computed at 95.67 ETB per year per household for ten years horizon (Table 3).

Table 3. Parameter estimates of spike model for CBET

	Coef.	Std.err	Z	P> z
Eq1				
B	0.020	0.002	10	0.000
S				
_cons	1.80	0.16	11.25	0.000
A: $1/(1+\exp(_b[s:_cons]))$				
wtp: $1/(_b[eq1:b])*\log(1+\exp(_b[s:_cons]))$				
	Coef.	Std.err	Z	P> z
A	0.14	0.02	7	0.000
Wtp	95.67	6.88	13.91	0.000

Log likelihood= -268.10

Number of Respondents= 300

Wald chi2(1)= 102.4

Prob>chi2= 0.000

The mean WTP of the respondents from open-ended questions was computed to be at 56.17 ETB per households per year. The total WTP of the sample respondents was estimated at 16851.00 ETB per year with minimum 0 and maximum 150 ETB. The maximum WTP of the sample households' is presented in Figure 1 below.

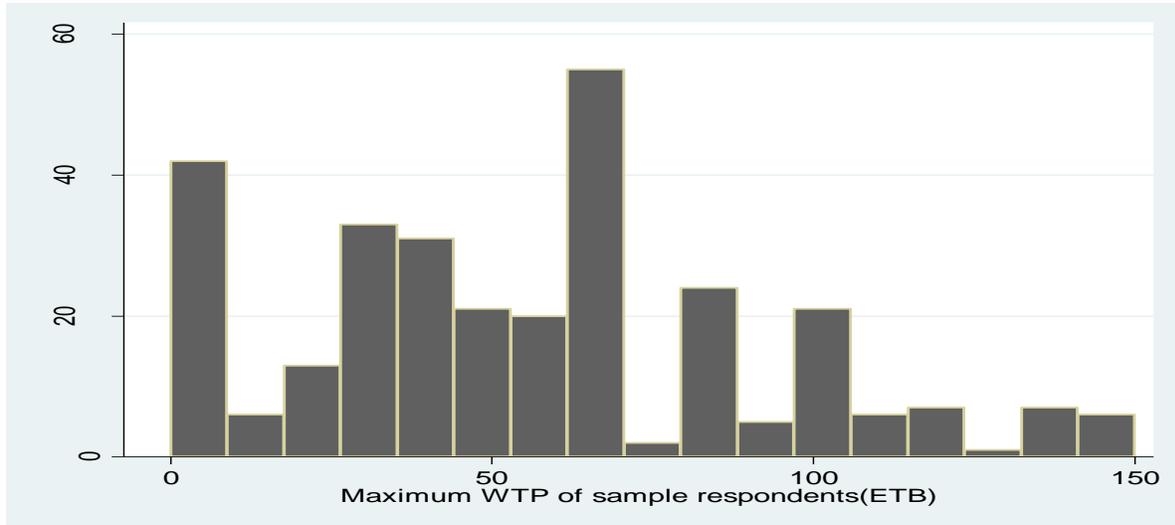


Figure 1. Sample Households Maximum WTP (survey data, 2015)

The respondents provided different reasons for their maximum WTP. That is, about 52% of the respondents reported that they could not afford more than what they stated because of an inadequate income. On the other hand, it is fair and others should pay and this is also a reason identified for their willingness to pay the maximum (Table 4).

Table 4. Reason for maximum willingness to pay

Reason	Frequency	Percent (%)
No response (zero WTP)	42	14.0
I think it is adequate	78	26.0
Others should pay	24	8.0
I could not afford more	156	52
Total	300	100.0

Source: survey data, 2015

However, about 14% of the sample respondents' were not willing to pay for CBET and provided a zero response. About 3.3% of the sample households responded by a 'protest' zero<sup>1</sup>. The respondents provided different reason for not willing to pay for CBET (Table 5).

<sup>1</sup> NOAA panel guide on Arrow *et al* (1993) was used as criteria for selecting protest zero bidders.



Table 5. Reason for not Willing to Pay for CBET

Respondents reasons for zero bid	Frequency	Percent (%)
None (for the willing households')	258	86.0
We do not believe that the money we pay will actually be used for CBET	8	2.7
We believe that CBET is unnecessary	10	3.3
Lack of money	24	8.0
Total	300	100

Source: survey result, 2015

### Determinant of Households WTP for CBET

The bivariate probit model was used to analyse the determinants of households' WTP for CBET (Table 6 below). The result shows that annual income of the respondent has positive and significant relationship with the households' WTP. This positive effect indicates that respondents with higher annual income were more likely willing to pay than households with lower income. The education level of the respondents is also positively and significantly related to WTP for CBET. Besides, the sex of the respondent was also measured as a dummy variable taking the value of 1 for male respondents and 0 for female respondents. The result shows that coefficient of sex has positive sign and significant at 5% level of significance. The positive sign of the coefficient indicated that male respondents were willing to contribute to CBET more than female respondents. This might be due to the high involvement of women in home activities and they might face money shortages that restrict them from contributing to CBET.

Households which have familiarity with potential tourism resources were expected to have high WTP. The result had similar findings. The coefficient of this variable was significant at a 1% level of significance. Married respondents were more likely willing to pay for CBET than single respondents. The coefficient of this variable was positive and significant at 5%.

Furthermore, the result of the bivariate probit model shows that respondents with large family sizes were less likely to be willing to pay for CBET than respondents with a small family size. The coefficient of starting bids has a negative sign and is significant at a 1% level of significance. The negative sign and the significance of this coefficient indicated that as the starting bid price increases, the probability of household's WTP decreases. This may indicate there is income scarcity or cash poverty.

Table 6. Bivariate probit regression result

	Coef.	Std. Err.	P> z
<b>s(participation in CBET)</b>			
b(initial bids)	-0.018	0.005	0.001***
familiarity	1.296	0.372	0.000***
Sex	1.903	0.417	0.000***
Age	-0.041	0.022	0.058*
<b>Marital status(base: single)</b>			
2(married)	1.028	0.464	0.027**
3(divorced)	-0.134	2.010	0.947
4(widowed)	-0.583	24.29	0.981
Total familysize	-0.263	0.094	0.005***
<b>Education(base: illiterate)</b>			
1(primary school)	0.671	0.331	0.043**
2(high school)	0.625	0.576	0.278
3(college)	5.356	242350.6	1
Credit	-0.118	0.287	0.681
square rootofincome (sqrti)	0.018	0.006	0.004***
_cons	0.156	0.886	0.86
<b>t(response to initial bids)</b>			
b(initialbids)	-0.022	0.004	0.000***



Familiarity	0.606	0.315	0.055*
Sex	1.004	0.246	0.000***
Age	-0.014	0.016	0.38
Maritalstatus			
2(married)	0.604	0.403	0.134
3(divorced)	-0.597	0.785	0.446
4(widowed)	0.415	0.908	0.647
Totalfamilysize	-0.145	0.068	0.034
education (base: illiterate)			
1(primary school)	0.738	0.258	0.004***
2(high school)	0.593	0.323	0.066*
3(college)	7.349	48595.89	1
Credit	0.093	0.228	0.684
squarerootofincome(sqrti)	0.013	0.005	0.003***
_cons	-1.001	0.723	0.166
/athrho	3.404	65.92	0.959
rho	0.998	0.291	-1
Number of obs = 300			
Wald chi2(26) = 102.66			
Log likelihood = -166.4602			
Prob > chi2 = 0.0000			

### Aggregate WTP for CBET

An important issue related to the measurement of welfare using WTP is aggregation of benefit. Mean WTP was used as a measure of aggregate value of CBET since the good dealt with is not a pure public good. The aggregate WTP was calculated by multiplying the mean WTP by the total number of households in the population. Therefore, the aggregate benefit for CBET of the total population of the study area were computed at 5,409,181.8 and 3,175,851.8 ETB<sup>2</sup> per year from spike model and open ended question respectively.

### Tourism Stakeholders' Role for CBET Development

Table 7. The Government Works with the Local Communities to Develop Tourism in the Area

	Frequency	Percent (%)
Disagree	197	65.4
Neutral	47	15.6
Agree	57	18.9
Total	301	100.0

Source: survey data, 2015

The successful development of a tourism destination relies heavily on a strong coordination of the various and vital stakeholders of tourism. One of the central tourism stakeholders is government and its function has a decisive role either for promoting or demoting tourism activities. Specifically in the study area of this research, the government is not actively working with the locals to develop tourism in the area /table 7.

Table 8. The Local Community is Encouraging to Conserve Natural and Cultural Resources

	Frequency	Percent (%)
Disagree	90	29.9
Neutral	71	23.6
Agree	140	46.5
Total	301	100.0

Source: survey data, 2015

<sup>2</sup> ETB refers to Ethiopian currency



Local people depend on natural resources for their survival and the promotion of their cultural identities. This, therefore, makes them the best partners and constituents for conservation initiatives. It is strongly believed that wildlife and natural resources are most likely to be conserved when they are managed by the people whose wellbeing and sense of self are founded in them. Any conservation effort made by outsiders, no matter how excellent this may be, will not be successful if it does not include the local communities (Wildlife Conservation Society, 2017). The local communities in the study area are not encouraged at all or obtaining the necessary motivation to conserve both cultural and natural resources in their districts (table 8).

## Conclusion

The study has identified the different fascinating tourism attractions of the districts involved. These are historical (Gara Muleta Royal Prison and Mesgida Biyo Guda), cultural (Marriage types) and archaeological (Caves like Abdulahi Ibro, Gole Gaya and Rakober Zala), different aquatic and non-aquatic bird species, lakes, and mountains covered by Afro-Alpine vegetation. The study also ascertained that the local communities (86% of them) are willing to pay for CBET development. The major problems for the development of CBET in the districts are *inter alia* a lack of promotion of resources in the districts, an absence of integrated works between the government and the residents and a lack of encouragement for the locals to pay attention to the conservation of their resources. The study further revealed that the single bounded dichotomous choice is affected by the anchoring/fixing effects (because the annual WTP value of households from the single bound dichotomous choice format was greater than the annual total WTP from the open-ended format). Furthermore, the WTP was affected by the socio-economic characteristics of the different households.

## Recommendations

Based on the findings of the study, the following recommendations are forwarded for the successful development of CBET to result, as alternative non-farm economic activity, and as a means to conserve the environment in the study area. First, adequate promotion should be made about the fascinating tourism resources in the districts. Secondly, there should be an integrated effort between the government and the local communities to drive the initiatives forward. Thirdly, the government and other concerned stakeholders should make the necessary interventions to encourage the local communities to pay far greater attention to the resources. Fourthly, when designing a CBET development policy, decision makers and researchers should give more attention to solving the problem of the anchoring/fixing effect from the single bounded dichotomous choice format. Finally, an understanding of the socio-economic characteristics that significantly affect households' WTP is a necessary first step to achieving successful CBET development that will improve the livelihood of the local populations and assure that greater environmental conservation takes place in both Haramaya and Gurawa Districts in Ethiopia.

## Acknowledgments

We sincerely thank the Haramaya University for its financial assistance in sponsoring the project, thus allowing the study to be successfully completed.

## References

Amelung, B., Beers, P., Rotmans, J., Asselt, M. & Hogervorst, J. (1999). *Global tourism towards an integrated approach*. Maastricht University ICIS.



Barruu Gaaraamul'ataa (2004). *Koree Misooma Hunda Waliinii Aanaa Gurawaatiin Kan Qophaa'e*

Beeton, S. (2006). *Community development through tourism*. Landlinks Press, Australia.

Christie, I., Fernandes, H. & Twining-Ward, L. (2013). *Tourism in Africa; Harnessing Tourism for Growth and Improved Livelihoods*. International Bank for Reconstruction and Development/ The World Bank, 1818 H street NW, Washington DC 20433

Eco Tour. (2007). What is Ecotourism? Ecotourism Resource Center, Retrieved October 25, 2016, from <http://www.ecotourdirectory.com/ecotourism/>

Farrelly, T. (2011). Indigenous and Democratic Decision-making: Issues from community-based ecotourism in the Boumā National Heritage Park, Fiji, *Journal of Sustainable Tourism*, 19:7, 817-835.

FDREPPC (2008). *Summary statistics and statistical report of the 2007 population and housing census: population size by age and sex*. Addis Ababa, Ethiopia.

Henze, P. (2007). Ecotourism in Ethiopia, IDR/AAU. *An Ethiopian Journal*, Retrieved November 28, 2012, from [http://www.irrob.org/ecotourism\\_in\\_ethiopia.html](http://www.irrob.org/ecotourism_in_ethiopia.html)

Himberg, N. (2006). *Community-based Ecotourism as a Sustainable Development Option in the Taita Hills, Kenya* (Master's thesis). University of Helsinki/Department of Geography.

Israel, G. D. (n.d). *Determining Sample Size*. Retried December 20, 2016, from <http://www.sut.ac.th/im/data/read6.pdf>

Juul, M. (2015). *Tourism and the European Union; Recent Trends and Policy Developments*. European Parliamentary Research Service

Kriström, B. (1997). Spike models in contingent valuation. *American Journal of Agricultural Economics*, 79, 1013-1023.

Little, A. D. (n. d). *A plan for Developing Tourism in Ethiopia*, Volume II, Technical Agency Ministry of Planning and Development, the Empire of Ethiopia.

Markos, B. (2012). Ethiopia envisions to be the top 5 tourist destinations in Africa by 2020. Retrieved October 20, 2012, from [www.ethiosports.com/2012/](http://www.ethiosports.com/2012/)

Mawere, M. & Mubaya, T. R. (2012). *The Role of Ecotourism in the Struggles for Environmental Conservation and Development of Host Communities in Developing Economies: The Case of Mtema Ecotourism Center in South-Eastern Zimbabwe*. Universida de Pedagogica, Mozambique.

Medlik, S. (2003). *Dictionary of Travel, Tourism and Hospitality*. (3<sup>rd</sup> ed.). Butterworth-Heinemann.

Mengistu, K., Degefu, K., Nigussie, D. & Feyisa, H. (2016). *Determinants of Adoption of*



*Potato Production Technology Package by Smallholder Farmers: Evidences from Eastern Ethiopia*. Review of Agricultural and Applied Economics. The Successor of the Acta Oeconomica et Informatica ISSN 1336-9261, XIX (Number 2, 2016): 61–68 doi: 10.15414/raae/2016.19.02.61-68

Ministry of Culture and Tourism. (2015). *The Federal Democratic Republic of Ethiopia Sustainable Tourism Master Plan 2015-2025*. United Nations Economic Commission for Africa

Mohammed, S. (2015). *Determinants of Participation in Soil Fertility Management Practices by Smallholder Farmers: the case of Gurawa and Haramaya Districts, East Hararge Zone, Oromia, Ethiopia* (Master's thesis), Haramaya University, Ethiopia

Mountain Institute (2000). *Community-Based Tourism for Conservation and Development: A Resource Kit*, the Mountain Institute.

Nigussie, D., Mengistu, K., Haile, D., Wole, K., Tamru, A., Olkeba, B., Solomon, A. & Samuel, T. (2014). *Participatory Rural Appraisal Report: Gurawa Woreda, Eastern Oromia Region*, Haramaya University & Wageningenur

Photius, C. (2004). Ethiopia the "Restoration" of the "Solomonic" Line. Retrieved April 20, 2016, from [http://www.photius.com/countries/ethiopia/society/ethiopia\\_society\\_the\\_restoration\\_of~129.html](http://www.photius.com/countries/ethiopia/society/ethiopia_society_the_restoration_of~129.html)

Sadd, D. (2006). Role of community participation in leisure and tourism planning. Bournemouth University. Retrieved December 20, 2016, from <http://staffprofiles.bournemouth.ac.uk/display/conference/14094>

Samuel, S. (2013). *The Potentials of Developing Community Based Ecotourism in Lake Hashenge* (Master's thesis), Addis Ababa University Ethiopia.

Simpson, M.C. (2007). An integrated approach to assess the impacts of tourism on community development and sustainable livelihoods. Oxford University Press

Solomon, T. (2016). *UNWTO Regional Workshop for Africa*. Ethiopian Tourism Organization

Strazzer, E., Scarpa, P., Calia, G., Garrod, D. & Willis, K. G. (2003). Modeling zero values and protest responses in contingent valuation surveys. *Applied Economics*, 35:133–138.

Tai, H. (2007). *Development through Conservation: An Institutional Analysis of Indigenous Community-Based Conservation in Taiwan*. Elsevier Ltd.

Teketay, D. (1996). Floristic composition of Gara Muleta and Kundudo mountains, South-eastern Ethiopia: Implications for the conservation of biodiversity, In L.J.G. van der Maesen et al. (eds.), *The Biodiversity of African Plants*, Kluwer Academic Publishers, 345-350.

TIES. (2015). *What is Ecotourism?* Retrieved October 25, 2015, from <http://www.ecotourism.org/what-is-ecotourism>

UNDP. (2011). *Tourism and Poverty Reduction Strategies in the Integrated Framework for Least Developed Countries*, United Nations Development Programme.



Vellas, F. (n. d). *Monitoring the Costs and Benefits of Ecotourism: WTO/UNEP summary of preparatory conferences and discussion paper for the world ecotourism summit*

Weaver, D. B. (2001). *The Encyclopedia of Ecotourism*. CABI Publishing, UK.

Wood, M.E. (2002). *Ecotourism: principles, practices, and policies for sustainability*, United Nations Publication.

Wildlife Conservation Society. (2017). *Communities*. Retrieved December 21, 2017, from <http://www.wcs.org/our-work/solutions/communities>