

Ecotourism Potential and its Role for Sustainable Development and Livelihood in Awash National Park, Ethiopia

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Abstract: *The potentials of ecotourism for sustainable use of natural resources, poverty alleviation and food security was assessed in Awash National Park (ANP), Ethiopia using survey questionnaires and field observation between January to September 2013. The analyses of the study revealed that natural and cultural resources such as abundance and diversity of large wild mammals, bird, scenic landscape, hot springs, cultural and historical attractions and hotels or lodges at nearby areas are the main ecotourism potential in ANP. Deforestation, overgrazing and expansion of farming, coupled with conflicts between park and local communities are detected as the major problem contributors to the degradations of natural resources of the area. The study also revealed some income generating alternatives or ecotourism potentials which could help to reduce the present degradations of natural resources of the park. About 77.5% of sampled households expressed their interests for diversified livelihood or ecotourism activities. Offering tourist facilities and services and creating job opportunities for members of local communities are the positive impacts of the ecotourism activities whereas cutting trees, occurrences of seasonality and leakages are the negative impacts. The negative impacts might be able to aggravate poverty and consequent deterioration of ecotourism resources/natural resources. Reinforcing existing off-agricultural livelihoods, introducing additional alternative options or ecotourism are important strategic directions for sustainable management of natural resources for ANP and related protected areas.*

Keywords: Ecotourism, natural resource, management, wildlife, Park and Poverty alleviation

1. Introduction

Ecotourism has become one of the economic sectors that generates substantial income and maintains conservations of protected areas. In case of Ethiopia because of the majority of its population are engaged in agricultural activities instead of on off-farm activities like ecotourism, natural resources are exposed to extreme degradations (EFCOT, 2003). Dagnachew et al. (2003) stated the Central Ethiopia Rift Valley (CERV) areas that endowed with a number of lakes and huge potentials of natural resources used for recreation are affected by excessive land degradation, deforestation, and over-irrigation. EFCOT (2003) also indicated alternative means of income generations and off-farm activities to minimize degradations pressure on endangered environments in rural areas of Ethiopia. Ecotourism could be as a good example of alternative income generation and off-farm activities which benefit local communities while achieve the conservation goals of natural resources. Scwenk (2002) indicated development of ecotourism does not need more facilities and depends on locally obtained facilities or natural capital of the poor that can be managed locally. In order to make tourism sustainable in Ethiopia case there was an attempt to introduce ecotourism to rural areas as component of natural resources management through creating diversified livelihoods for local people (Van Ter Beek, 2001). Moreover, natural resources can provide economic potential through ecotourism beside other uses (Couralet, 2004). Ecotourism could be a link between protected areas and local communities by generating income for local communities while conservation goals of protected areas achieved. Brodnig (2006) also stated that ecotourism could be very important where the ecosystem is fragile and

other forms of natural resource management might be impossible. Accordingly, the purposes for the study was in order to assess ecotourism potentials as solutions in a way to manage the destructions of natural resources by sustainable use while local communities are being benefited.

Even though natural resources have a certain contribution for development of tourism in Ethiopia in addition to its major contribution to livelihoods of the majority of Ethiopians, large of attractive natural resources are exposed to degradations or threats due to negligence (EPA, 1997). The well-being of every population in Ethiopia is fundamentally and directly dependent on ecosystem services. The Ethiopian's poor, particularly in rural areas, depend on biological resources for as much as 90% of their needs, including food, fuel, medicine, shelter and transportation. People living in extreme poverty, maintaining ecosystem goods and services is critical for daily survival. Ethiopia is home to diverse biological resources including 284 species of mammals (Sintayehu et al., 2012). Despite this, the social, cultural, ecological and economical importance of those resources is low compared to neighboring countries. One of the main reasons is the lack of effective conservation and sustainable utilization. Conservation and sustainable use of natural resources creates opportunities for reducing poverty and for improving human well-being.

Within the ecotourism industry in the country, wildlife are an important tourist attraction. The benefits of wildlife within the ecosystem from ecotourism perspective include direct income to households through employment, ownership, or equity in ecotourism-linked businesses, as well as foreign exchange earnings for the country, and

country income through taxation of individual earnings, sales taxes and corporate taxes. Accordingly, the lowland areas like ANP, where people suffered from food insecurity and other related social problems it evident that the local people in these areas are depending on natural resources for their subsistence economies that in turn led to severe degradations of natural resources. On other hand, natural resources of the area damaged severely unless immediate action to be taken to prevent further loss of the natural habitat (Zinabu and Elias, 1989). In ANP, conservation of wildlife and wildlife habitat should be a priority for development of ecotourism and improve the livelihood of the local peoples. Limitation or problem how natural resources of ANP and surroundings being manage insustainable way related to ecotourism is the main difficulties of the area while huge potentials of underdeveloped ecotourism is available. Therefore, the study focused in assessment of potentials of wildlife conservation,

ecotourism potential and alternative options of income generating for local people and sustainable management of natural resources in ANP and surrounding areas.

2. The Study Area

Awash National Park (ANP) is located in the eastern lowlands of Ethiopia (Figure 1). The Park is situated at about 211km from Addis Ababa (capital city of Ethiopia). When the Park was established in 1966, it covered about 756km². Rainfalls period is between March, April, June, and September, averaging 650 mm (CPI, 2000). Average annual temperature is 18.10 C°; with a mean maximum of 28.10 C° and mean minimum of 19.50 C° and the Pastoralism is mainly dominating the socio-economic conditions in ANP and the surrounding areas.

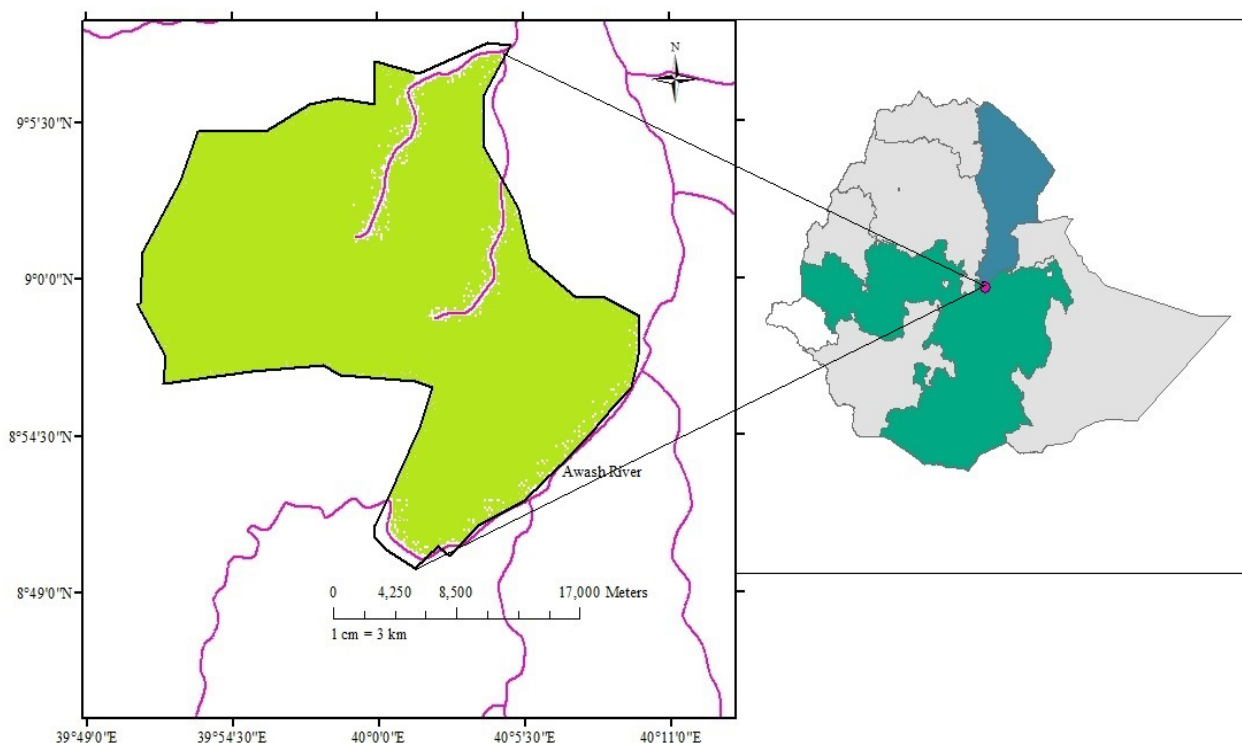


Figure 1: Location of the study area with the map of Ethiopia in box

3. Methods

The major activities of the study were started by conducting a preliminary reconnaissance in and around Awash National Park. After a preliminary reconnaissance was done, sampling design for household survey, hotels or loges, tourists' survey and other concerned stakeholders were undertaken. Questionnaires were designed to collect relevant information. The respondents from households of local communities were selected by systematic sampling from four sub-districts in the ANP whereas these sub-districts were selected by purposive sampling in and around buffer zones of the Park. A total of 100 households, 13 international tourists, 35 local tourists, 5 researchers and 11 travel agents were selected for collecting information. Socio-economic survey based on households responses regarding to annual agricultural product as indirect willing to Accept

Compensation (WTAC) estimate Contingent Valuation Method (CVM) was used as alternative options to reserve sensitive areas of ANP. As part of the assessment of ecotourism potentials of ANP and surroundings, Contingent Value Method (CVM) was conducted to estimate Willingness to Pay (WTP) the entrance fee for ANP. Questionnaires were also used to collect information from ANP office, Afar and Oromia Agricultural and Rural Development Bureau, Afar and Oromia Cultural and Tourism Bureau, Ministry of Culture and Tourism of Federal Government of Ethiopia, hotel or eco-loge workers and persons from 12 cultural handicraft association were interviewed by purposive sampling. Descriptive statistics was used to analyze responses to the questionnaires.

4. Results and Discussion

4.1. Ecotourism Resource in ANP

The survey indicated that natural resources are the main ecotourism attraction in the area. These resources include bird, wild animals, scenery of landscape, hot springs, Awash fall, attractive culture, local handicrafts, indigenous knowledge and accommodation facilities at nearby areas. Therefore, it is possible to say that ANP is one of potential ecotourism site in Africa. Moreover, it is observed that its ecotourism resource in and around ANP can attract tourists and may contribute to conservation of natural resources if they are developed.

4.1.1. Wildlife Resources

More than 450 species of birds and 72 species of mammals are found in the area. East African Oryx, Soemmerring's Gazelle, Dik-dik, and the lesser and greater Kudus, Hamadriababoon, Anubis baboon and Water buck are commonly observed wildlife in the area (Table 1). The park is the richest conservation area in its bird and mammals diversity. Lappet-faced vulture (*Torgotracheliotus*), Imperial eagle (*Aquila heliaca*), Lesser kestrel (*Falco naumanni*), Basra reed warbler (*Acrocephalus griseldis*), Yellow-throated seedeater (*Serinus flavigula*), near-threatened species: Lesser flamingo (*Phoenicopterus minor*), Pallid harrier (*Circus macrourus*), Sombre rock chat (*Cercomeladubia*), endemic species: Wattled ibis (*Bostrychia hagedash*), Abyssinian woodpecker (*Dendropicos abyssinicus*), Banded barbet (*Lybius undatus*), White-winged cliff-chat (*Myrmecocichlas semifufa*) and Thick-billed raven (*Corvus crassirostris*) are found in the Park.

Table 1: List of large wild mammals and their status in the IUCN Red List of species in ANP

No	English Name	Scientific Name	Status on IUCN Red List**
1.	Beisa Oryx	<i>Oryx beisa beisa</i>	Near Threatened
2.	Soemmerring's gazelle	<i>Gazella soemmerringi</i>	*
3.	Defassa waterbuck	<i>Kobus defassa</i>	*
4.	Lesser Kudu	<i>Strepsiceros imberbis</i>	Near Threatened
5.	Greater Kudu	<i>Strepsiceros strepsiceros</i>	Least Concern
6.	Cordeaux's dikdik	<i>Madoqua cordeauxi</i>	*
7.	Salt's dik-dik	<i>Madoqua saltiana</i>	Least Concern
8.	Chanler's Reedbuck	<i>Redunca fulvorufa</i>	*
9.	Klipspringer	<i>Oreotragus oreotragus</i>	Least Concern
10.	Bush buck	<i>Tragelaphus scriptus</i>	Least Concern
11.	Warthog	<i>Phacochoerus aethiopicus</i>	Least Concern
12.	Ethiopian hare	<i>Lepus abessinicus</i>	Least Concern
13.	Hippopotamus	<i>Hippopotamus amphibius</i>	*
14.	Baboon	<i>Papio anubis baboon</i>	*
15.	Baboon	<i>Papio hamadryas</i>	Least Concern
16.	Vervet monkeys	<i>Cercopithecus aethiops</i>	Least Concern
17.	Tortoises	<i>Testudo pardalis</i>	*
18.	Lion	<i>Panthera leo</i>	Vulnerable
19.	Leopard	<i>Panthera pardus</i>	Near Threatened

20.	Cheetah	<i>Acinonyx jubatus</i>	Vulnerable
21.	Caracals	<i>Caracal caracal</i>	*
22.	Wild cats	<i>Hystrix cristata</i>	Least Concern
23.	Spotted hyena	<i>Crocuta crocuta</i>	Least Concern
24.	Striped hyena	<i>Hyaena hyaena</i>	Near Threatened
25.	Golden backed Jackal	<i>Canis aureus</i>	*
26.	Black backed Jackal	<i>Canis mesomelas</i>	Least Concern
27.	Crocodiles	<i>Crocodylus cataphractus</i>	*
28.	Porcupine	<i>Hystrix cristata</i>	Least Concern
29.	Grey duiker	<i>Sylvicapra grimmia</i>	Least Concern
30.	Mongoose	<i>Viverricivetta</i>	*

* no data on IUCN Red List (IUCN 2008)

During assessment of ecotourism resources, the responses of sample households and warden of the park indicated the disappearances of some birds. Their responses also indicated that disturbed habitat by interferences of human beings could be reasons for disappearances.

4.1.2. Other Tourist Attraction

To the north at Filwoha lies the hot springs oasis in its groves of palm trees and Mount Fenatale is spectacular tourist attraction. The Awash River gorge in the south of the park has some spectacular waterfalls near the park headquarters.

4.2. Tourist Facility and Services

The Awash falls, the lodge offers viewpoints to enjoy the tranquility of the falls and the wildlife moving below. Inspired by Ethiopian tradition and constructed with local materials, the lodge has an intimate feel to it and is ideal for individuals, families, and couples on their honeymoon. The eight comfortable cottages come with king size or twin beds, private veranda, full bathroom, electricity points, mosquito nets, ceiling fans and are serviced daily. Also on offer are small conference facilities and a two storey fully licensed bar and restaurant where guests can enjoy the stunning views with a great meal, drinks and traditional coffee ceremony. A caravan lodge, called Kereyu Lodge, on the edge of the gorge, provides accommodation. The caravans are very basic no running water, just a bucket but there is a restaurant and beautiful view is outstanding. In Awash town the Buffet de la Gare (also known as the Buffet d'Awache) provides accommodation and good food at reasonable rates. A small bar and museum are conveniently near the camping site. The occurrences of seasonality was due fluctuation of tourists coming to these hotels or lodges seasonally. The creation of leakages indicated purchasing of almost all the raw materials required for hotels or lodges from urban centers such as Addis Ababa rather than from surrounding local farmers or local markets.

4.3. Household Livelihood Resources

According to the respondents sampled households most of them were engaged in mixed farming depend only on livestock production leaving no scope for other livelihood options. The estimated livestock owned by livelihood linkages of the local people to the ANP households'

responses confirmed that farming land, grazing land, fuel-wood and constructions materials are the necessity resources by which the livelihood of the local people linked to the park. Tesfaye Hundessa (1997) confirmed that the Ethiopian rural poor depend on natural resources in repose of their basic needs.

4.4. Ecotourism Resource Conservation Problems

Accordingly, responses of respondents during households or socio-economic survey relating to management or conservation problems of natural resources of ANP indicated that 45.7%, 32.4% and 21.1% respondents responded that deforestation, overgrazing, and expansion of farming, are the major causes of degradation of natural resources in ANP. On the other hand, 34.8%, 29.3%, 15.9% respondents also responded that soil erosion, vegetation degradation, and wildlife depletion respectively are the effects of these above causes. Uncontrolled free grazing might be the main management problems of the park, which exposes natural resources for severe degradation. From this estimation, large part of the park was devastated by expansion of grazing land in addition to other factors.

4.5. Alternative options or diversified livelihoods

Responses of sampled households indicated the possibilities of some income generating alternatives or ecotourism potentials for creating diversified livelihoods. On the other hand, based on analysis of responses of sampled households 37.2% of were expressed their interest if opportunity of diversified livelihood through ecotourism activities. The results of this finding give clues to say that these possibilities can reduce the present degradations of attractive natural resources of the park. The informal discussion with sampled households during interviews showed that honey production and selling of ripened wild fruits is also the other alternative income diversification options for local people. The issue to be noticed that ecotourism activities cannot be separated from existing local activities or agriculture. The major reason why linking tourism and local agriculture is due to the majority of potential pro-poor tourism beneficiaries subsist from agriculture. As Torres and Momsen (2004) acknowledged that, the production of agriculture or farming for tourism shows an opportunity to build on the existing skills of the poor without requiring a major shift in economic livelihood strategy, lifestyle and tradition. Therefore, agriculture is a significant potential for achieving pro-poor tourism by reducing impacts and maximizing benefits for the poor. This study revealed the possibilities of creating diversified livelihood or potentials for ecotourism development in addition to linking it with existing activities of local communities or agricultural activities.

4.6. Tourist Flow

Number of tourists were recorded from 2002 to 2012, indicated that the tourists of ANP were international tourists, Ethiopians, resident foreigners and students or researchers in total figured 10, 1724. The Ethiopian tourists covered the

largest share (39.35%) whereas the resident foreigners covered the least share (16.45%) of those visited ANP in the past 11 years (Source: Adopted from ANP Headquarter of ANP Office).

4.7. Positive quality of tourist facilities and services in and around ANP

The information obtained from park records, and focus group discussion with park warden and local peoples revealed that the ANP offered ample of tourist facilities such as guiding, camping site, and guest rest house at Awash River areas. As responses of warden of the ANP confirmed during interview, ANP also created some job opportunities for 28 members of local communities from total employee of 37. The responses of the ANP warden also revealed that the villages women at the vicinity of headquarter of ANP, which offered cultural handicrafts to tourists, are other positive aspects of the tourism activities at vicinity of ANP. Moreover, as the nine selected hotels nearby ANP responses indicated 85% of their total employee are members of local people.

5. Conclusion

The assessment of ecotourism potentials revealed some of the natural and cultural tourism resources of ANP and its surroundings. The absence alternative options or ecotourism and sustainable management of natural resources are the major problems of ANP and its surroundings whereas ecotourism potentials are available. The main ecotourism potentials in and around ANP include diverse species of birds, scenic landscape, hot springs, ostrich farm and some mammals, cultural and historical attractions, lakes, beaches, and some hotels or lodges and their recreational activities such as swimming, boating, horse riding etc., at nearer of ANP. The diverse species and abundant bird are residing in ANP that contributed to attract ecotourists or bird watchers to ANP. The hot springs are used for therapeutic and recreational purposes by many local people beside they are one of the attraction attributes for foreign tourists.

The study also revealed that offering tourist facilities and services and creating job opportunities for members of local communities are positive impacts of tourism activities whereas seasonality in tourism and leakages are negative impacts. The negative impacts of tourism might be able to aggravate poverty and consequent deterioration of tourism resources or natural resources whereas the positive impacts contributed to reduce degradation pressures on natural resources. In general, the study attempted to reveal some ecotourism potentials or alternative options, which benefited the local communities while sustainable management of natural resources of the park achieved.

There are some ecotourism potentials and possibilities of alternative options, which are underdeveloped like local handicrafts. Therefore, reinforcing these off-farm diversified livelihoods and introducing additional alternative options is very important for sustainable management of natural resources in and around ANP.

Degradation of natural resources around tourists' destinations sites like hot springs, the seasonality in tourism and leakages in and around are indicators of the negative impacts of tourism. Therefore, the concerned stakeholders are responsible to create alternative options for local communities, create attractive tourist facilities and services, and protect sensitive areas or sites of park and integrating the surrounding tourism activities with local economic development or agricultural activities.

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