Article

Ecotourism potentials and its challenges in Dhati Walal National Park, West Ethiopia

Alemayehu Mamo, **Yohannes Shifera**, **Kenasa Degefa**, **Zelalem Telila**
Department of Natural Resource Management, Dambi Dollo University, Dambi Dollo, Oromia, Ethiopia
E-mail: yohannes.shifera@dadu.edu.et

Received 2 April 2024; Accepted 10 May 2024; Published online 15 May 2024; *Published 1 September 2024*

Abstract
Ecotourism is visiting nature-based attractions, with an emphasis on learning, education, environmental protection and sustainability. This study was conducted to identify the potentials and challenges of ecotourism development in Dhati Walal National Park (DhWNP). This park is one of the protected areas of Ethiopia that have unique natural and cultural tourist attractions. Western Oromia is a home for ruminant natural resources of the country and hotspot of biodiversity. Nevertheless the resource is not promoted. In order to achieve the objective of the study both primary and secondary data were used. Moreover, purposive and simple random sampling methods were used to select three districts surrounding the study area and 396 sample respondents were selected. The collected data was analyzed using frequency and percentage and displayed with tables and figures. The results indicated that DhWNP had huge ecotourism development potentials such as attractive flora and fauna varied in types with attractive cultural resource like cultural dance, cultural food and drinks, coffee ceremony, dressing style and traditional ways of conflict resolutions mechanisms. Although it had these potentials, the ecotourism establishment is constrained by lack of awareness, basic infrastructures, illegal hunting, lack of integrations between local community and licensed tour operator and government organizations, activity of community like illegal Settlements within the park, over grazing, fire and conversions of forest lands to agricultural lands. To allow the establishment of ecotourism, awareness creation, resource promotion activity, filling gap of community social infrastructures should be needed.

Keywords challenges; development; ecotourism; potentials.

Proceedings of the International Academy of Ecology and Environmental Sciences
ISSN 2220-8860
URL: http://www.iaees.org/publications/journals/piaees/online-version.asp
RSS: http://www.iaees.org/publications/journals/piaees/rss.xml
E-mail: piaees@iaees.org
Editor-in-Chief: WenJun Zhang
Publisher: International Academy of Ecology and Environmental Sciences

1 Introduction

The tourism sector has shown significant growth over the years contributing considerably to the Growth Domestic Product (GDP) of both developed and developing countries worldwide (Lenzen et al., 2018). With double the growth rate of industrialized markets, this sector exceeds every other sector in terms of job creation and wealth spread (Blake et al., 2008; Rivera and Gutierrez, 2019). It has been described as a "clean industry"

which has no antagonistic effect on the environment compared to other industrial sectors and other business activities (Kim et al., 2013). Ecotourism is a form of tourism, which offers market-based tourism development approach that ensures improvement of the welfare of rural people while conserving the natural environment (Vaghefi, 2019; Serenari et al., 2020). It is considered as a solution for decreasing environmental and socio-economic problems and as a sustainable development tool in ecologically sensitive areas (Vaghefi, 2019). Ecotourism is a market-based conservation strategy which strengthens household economies and improves attitude of local people towards conservation efforts (Das and Hussain, 2016). Ecotourism offers a significant opportunity for Africa, whereby African countries can base their tourism development on using their natural assets on the condition that the rules of sustainable development, base of ecotourism, especially when involving local communities living within and adjacent to the assets (Bello et al., 2017; Beza and Berhan, 2017). Participatory development approach would be choices to achieve sustainable tourism since, participation emphasizes its ability to handles numerous perceived issues (Byrd, 2007; Koens et al., 2022). Moreover, this can facilitate the implementation of sustainable tourism development by creating better opportunities for local people so as to allow them to gain a relatively larger and more balanced benefit from tourism development taking place in their localities (Kask et al., 2018; Ariyani and Fauzi, 2022).

The Ethiopian tourism activity always involved a structure of ecotourism (Teshome et al., 2021). Over 85% of the Ethiopian population is rural based and have agricultural-based livelihoods and very low levels of income derived from farming (Hanjra et al., 2009; Eshete et al., 2020). EFCOT (2003) stated that Ecotourism is an alternative means of income generations and off-farm activities to minimize degradations pressure on endangered environments in rural areas of Ethiopia (Dejene et al., 2014; Asefa, 2020). Ecotourism could be as a good example of alternative income generation and off-farm activities which benefit local communities while achieving the conservation goals of natural resources. However, in Ethiopia particularly in the south western part of the country, the abundant resources are not yet fully promoted and utilized and the tourism industry is still at its infancy. Dhati Walal National Park is one of the newly established protected areas of Ethiopia containing the high diverse habitat in the country. The park was established in 2010, this supports high levels of species richness and endemism. Dhati Walal National Park has contains several mammalians and birds that have been recorded by different investigators. Moreover, the park has vital source for more rivers and endemic plants. The park has harbors' huge amount of diverse large, medium, small and mammals' including (threaten and endemic), birds and a variety of different plant species. Furthermore, the park is unique in its wetland from Ethiopia as well as from Africa. Unfortunately, the park has inviting different challenges such as; deforestation, overgrazing, illegal hunting and illegal settlement. However this important diversity of natural resource is not well investigated and promoted, as well as the challenges are not got attention from different stakeholders. Hence, this study was designed to identify the potentials of tourist attraction and challenges of ecotourism development in Dhati Walal National Park, Oromia regional state, western Ethiopia with the following specific objectives: (1) To assess the natural tourist attraction sites of Dhati Walal National Park, (2) To assess the cultural tourist attraction features of Dhati Wolel National Park, (3) To identify the challenges of ecotourism development in Dhati Walal National Park, and (4) To assess local communities' attitudes towards ecotourism development.

2 Study area and Methodology

2.1 Study site

Dhati Walal National Park was established in 2010 and it is located in western lowlands of Ethiopia, about 647 km from Finfinne, the capital city of Oromia and Ethiopia (Tsegaye and Gadisa, 2016), the park lies between the coordinates of 67° 55' 49" to 72° 45' 03" E and 10° 05' 25" to 10° 51' 01"N, and covers an area of about

1035 km^2 (103500 ha) (Fig. 1) (OFWE, 2012). The elevation in the Park ranges from 1390 m around Dhati River to 1500 m at the peak of mount Walal. There are four major habitat types: wetland, woodland, riverine forest and grassland (Ketema et al., 2022). The mean monthly maximum temperature of the area ranges between 27^{o}C and 29^{o}C and the mean minimum temperature of the area ranges between 15^{o}C and 17^{o}C. The mean annual rainfall of the area is 1350 mm. The park is bounded by seven Districts namely: Gawo Kebe District to south east, Begi District to west, Jimma Horro District to south, Kondala District to north, Gidami District to the west, Babo Gambel District to the east and Mana sibu District to the North. The largest portion of the park is found in Gawo Kebe District (Shanko et al., 2021; Dansa and Tekalign, 2022).

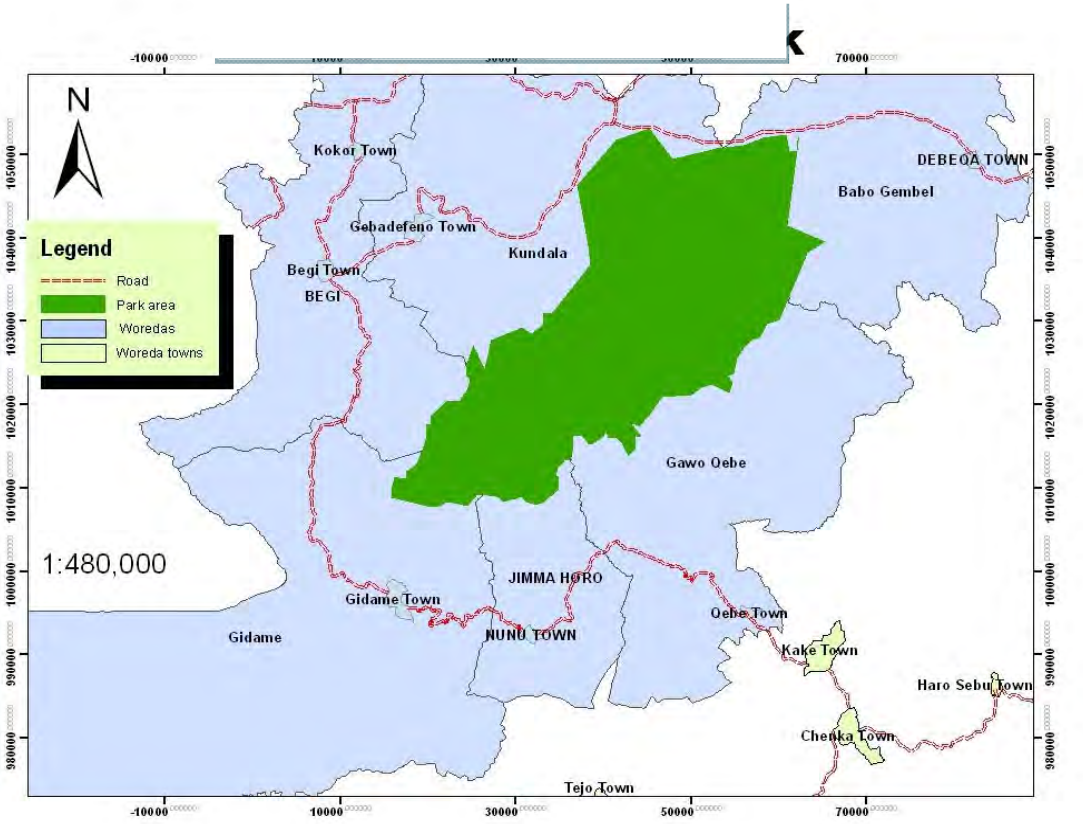

Fig. 1 Geographical location of Dhati Walal National Park.

The respondents from households of local communities were selected by simple random sampling from three districts surrounding Dhati Walal National Park, whereas these districts are selected by purposive sampling from the seven districts surrounding the park which are mentioned above because large part of the park is found in Gawo Kebe district and the other two districts are the representative for the other four districts. Before sampling of households from local communities, the sampling frame, from the target groups and the sample size from sample frame will be determined. In additions one expert and four elders from each District of key informants (KIs) were selected purposively. Key informants are persons that live in the areas for at least 20 years and having knowledge of ecotourism potentials of the area. Structured and semi-structured questionnaires was designed and distributed to interviewees.

The study area has surrounded by seven districts; from these; three districts; namely Gawo-Kebe, Gidami and Begi districts were purposively selected to conduct the present study. The respondents of the study area were both male and female from the host community of the selected sites. The total sample sizes were 396

households. Based on the formula according to (Yamane, 1967 cited in Israel, 1992) with 95% confidence levels the total samples were calculated as follows

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

where n = sample size, N = is the population size, and e = the level of precision.

The selected study sites had a total of 32,094 household heads (HHs); out of which, Gawo Kebe 11475 HHs, Beghi 10765 and Gidami has 9854 total HHs (selected Districts' Agricultural Office, 2020). By using the above formula, the sample sizes were 396 households. The distributions of sample size across the three selected districts were selected by simple random sampling based on their size of the households. Accordingly 142133 and 121 sample households were taken from Gawo Kebe, Beghi and Gidami districts respectively.

2.2 Data collection

A questionnaire survey, focus group discussion (FGD) and key informant interview (KII) were used to assess the potentials and challenges of ecotourism development of the study area. According to Kicheleri et al. (2018) these are one of the common tools used in conducting a survey data. It can be easily administered and can gather sufficient information given that if it was properly constructed. The survey questionnaires was prepared in English language and translated into Afan Oromo since, the majorities of the communities were Afan Oromo speakers, then after distributed to the respondents.

2.3 Analysis of data

The data gathered from household survey, FGDs and key informant interviews on potentials and challenges of ecotourism development were analyzed by descriptive statistics using R-statistical software program.

3 Results and Discussion

3.1 General characteristics of the sample households

3.1.1 Age category of respondents

About (17.7%) of the respondents were in the age category between 18-30; 35.4% were in age group of 31-40, while 37.9% were 41-60 and 9.1% were in age group above of 61 years.

Table 1 Age group of the respondents.

No	Age category of the respondents	Percentage (%)
1	18-30	17.7
2	31-40	35.4
3	41-60	37.9
4	>61	9.1
5	Total	100

3.1.2 Gender of the respondents

Of the overall sample population (396), 356 (89.9%) of them were male head households and the rest 40 (10.1%) were female head households.

Table 2 Gender of the respondents.

No	Gender of the respondents	%
1	Male	89.9
2	Female	10.1
3	Total	100

3.1.3 Educational background of the respondents

According to the information gathered from the respondents during questioner survey, 36.3% of respondents were unable to read and write, 30.8% of respondents acquired primary education (1-8), 30.1% of respondents were attended secondary school and 2.7% of respondents were tertiary level (College and University) graduates (Table 3).

Table 3 Educational background of the respondents.

No	Educational background of respondents	%
1	Unable to read and write	36.3
2	Primary education	30.8
3	Secondary education	30.1
4	College/University	2.7
5	Total	100

3.1.4 Major source of livelihood of the respondents

The respondents source of livelihood assessment during field data collection showed that, for about 23.2% of the respondents' major means of income is only crop farming, for about 49.6% of respondents' source of income was mixed farming and 10.1% of respondents' source of income was daily labour, 9.1% of respondents was charcoal making, while 8% of respondents income was logging (Table 4).

Table 4 Livelihood source of the respondents.

No	Source of livelihood of the respondents	%
1	Only crop farming	23.2%
2	Mixed farming	49.6%
3	Daily labour	10.1%
4	Charcoal making	9.1%
5	Logging	8 %

3.2 Potentials of ecotourism development in Dhati Walal National Park (DhWNP)

3.2.1 Natural ecotourism development potentials of the park

The survey result of ecotourism development resources indicated that DhWNP is endowed with natural and cultural tourist attractions resources. Accordingly, 113 (28.54%) of the respondents were reacted that wild animals are more attractive, 52 (13.13%) of the respondents were responded indigenous culture are very

attractive, 42 (10.6%) of the respondents were indicated that scenic beauty of the area are best attractive of the area, whereas 34 (8.6%), 73 (18.43%), 82 (20.7%) of the respondents were replied that historical site, natural forest and wetland of the Dhati Walal was the most tourist attractions of the area.

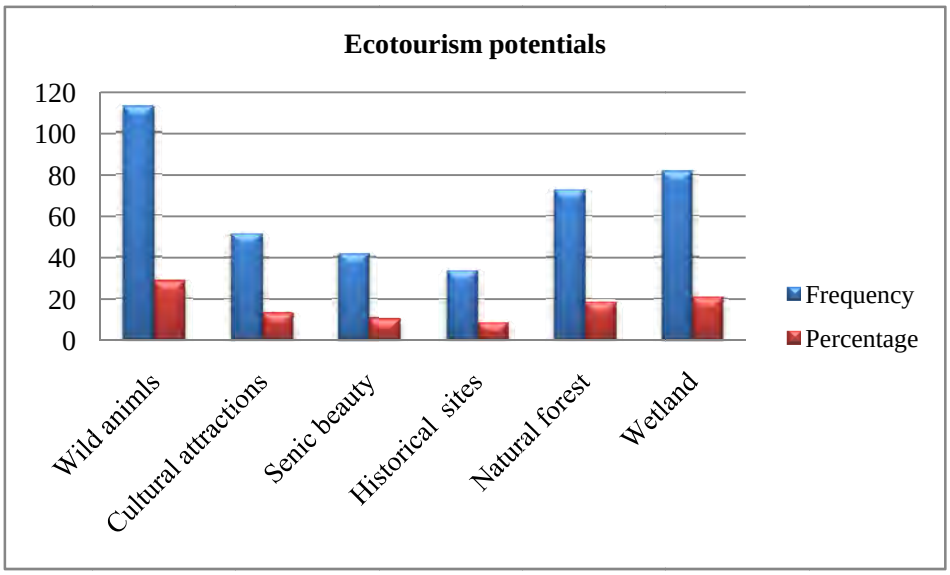

Fig. 2 Ecotourism development potentials of the area.

Fig. 3 Some of Dhati Walal National Park wildlife.

The result of this finding indicated that DhWNP has abundant tourist attractive natural resources which include; a variety of mammals, birds, scenery of landscape, unique wetland, very attractive natural forest, attractive indigenous culture, local handicrafts and indigenous knowledge nearby areas. According to Rabira et al. (2015), DhWNP park has tourist attractive four habitat types (wetland, woodland, riverine forest and grassland). Moreover, the responses of experts from DhWNP office and Kellem Wollega zone culture and tourism office were revealed that in addition to numerous species of large and small mammals, attractive birds' species, the new unidentified animal species also found in this park. Therefore Dhati Walal National Park is a

place of conservation concern with one of the highest wildlife diversities, different endemic bird species and large and endangered mammal's species which have high value for ecotourism development. In line with this Rabira et al. (2015) were recorded and reported 28 mammalian species in Dhati Walal national park and this park is unique in harboring the highest number of mega herbivores specially the African buffalo and hippopotamus relative to any of the parks in the country. However, as the information gathered from the Kellem Wollega zone culture and tourism office and DhWNP office, showed, the study conducted before by Russian researchers describes that more than 58 mammals and more than 120 bird species are found in this park. Our survey result incorporated that the hippopotamus living in this park are known to live in groups from African hippo and more than five hundred hippos can be found in group at one place in different parts of the park. When estimated, the number of Buffalos in the park is increasing although illegal hunting of buffalo is still practicing in the park. Furthermore, fishes are also known in the parks and still there are peoples living by fishing activity.

During our field data collection we have observed that, DWNP provided the last home for the larger mammal species listed as vulnerable by IUCN, such as Hippopotamus (*Hippopotamus amphibius*), African buffalo (*Syncerus caffer*), and Lions (*Panthera leo*). These species once has been frequent in western Ethiopia, but nowadays considerably diminished as the result of excessive hunting. Herds of African buffalo, and groupings of Hippopotamus swim in the river and their ochre mass looks like a floating huge black rocks, are the largest amazing groupings one cannot experience elsewhere. The extensive grassland surrounding the wetland may contribute to the abundance. Some mammalian species like Warthog (*Phacochoerus africanus*), Vervet monkey (*Chlorocebus aethiops*), Olive baboon (Papio Anubis), and Common jackal (*Canis aureus*) including the African buffalo (*S. caffer*) were considered more adaptive and recorded from all habitats in the study area. Moreover, our respondents reviled that in addition to large mammals, the multitude of birds and the variety of their plumage is one of the remarkable things in the area. The largest wetland existing in this park is the habitat for a wide and diverse range of vertebrates and invertebrates animals and water birds, frogs, and fish species. Tsegaye and Gadisa (2016) were confirmed this result that they were recorded a total of 124 avian species belonging to 18 orders and 50 families. According to key informants report, the swampy grassland, the wetland forest, and the surrounding savannah woodland provided habitat for different wetland forest and lowland woodland bird species.

DhWNP is a unique from the country because few species of central/western African origin species highly uncommon for any other areas in Ethiopia, mammals endemic to Ethiopia and species not included in any protected area else in Africa are found here. According to DHWNP offices experts and Kellem Wollega zone culture and tourism office report, in addition to mammals and birds, a variety of plant species are found in the park which used for several purposes by local peoples such as; medicinal plants, edible plants, timber plants, grazing plants, bushes and others. Also, features like size, life span, appearance, presence of flowers, habits, food and medicinal requirement may be used to describe these plants as they are vary from each other (Legese et al., 2019) were reported that elephant grass and some shrubs are important floristic components of this habitat. Numerous streams, springs and swamps at the edge of the wetland provided suitable condition for wetland adapted and wetland associated tree species include; *Ficus sycomorus*, *Tamarindus indica*, *Aningeria altissima*, *Fagaropsis angolensis*, *Syzygium guineense*, and *Albizia* spp. The rest is much more to explore. The woodland forest remained on some areas around the wetland and on ridges surrounded by wetland contained species of trees and shrubs of typical vegetation of Sudan-Guinea savanna biome characterized in Ethiopia.

The DhWNP Park contains the largest extent of wetland habitat in Ethiopia (900 km^2) approximately more than 85% of the area of the park is swamp, where mostly flooded in the year forming important source of water for Blue Nile (Abay). The extensive Dhati floodplain retain and act as storage and groundwater recharge

area for streams originating, crossing and join together in the park. So that its effect in delaying runoff made it an important hydrological feature area in Blue Nile that play critical role in dry season flow of Blue Nile (Conway, 1997; Sutcliffe and Parks, 1999). The Dhati wetlands is the largest source of Blue Nile (Abbay-10% of flow) an average annual flow of 7200 Mm^3 known for its sustained flow even during the dry season, which is attributed to the presence of large swamp. Moreover it is a home for different wild animals such as Hippos, aquatic birdlife such as; herons, storks, pelicans, ibises, gees, jacanas, ducks, fish eagle, etc.

The landscape of DHWNP is very fascinating and attractive with highly rough, heaving to rolling plains, hilly and mountainous land which are covered by vegetation the whole year and plains with incised rivers and perennial streams, valleys, and gorges. The rivers are lined by dense forests, which provide habitat for the Buffaloes as well as forest birds like trogon and turacos. The park is also relatively untouched and recently discovered as well as rich wilderness areas but the least visited and known national park.

3.2.2 Cultural and historical tourist attractions of the park

The field assessment of cultural and historical ecotourism resources from key informants and elders 'interview showed that there are a variety of handicrafts, tools, storytelling, cultural songs, local arts, wedding ceremony, cultural dressing and lifestyle of the indigenous community, the Oromo cultural foods and drinks, which could be potential attractive to tourists . According to Bunruamkaew and Murayama (2012), the local products of tourist destination areas will complement the major facilities of ecotourism. In south-western and west Oromia, there are different types of cultural cuisine that peoples use at different times. Some of the traditional food commodities in the study area are; Anchote, Qocqoca, Chachabsa, Chumbo, Chororsa and Ukamsa are some of the known traditional food.

3.3 Challenges of ecotourism development in Dhati Walal National Park

The result of this study indicated that even though, the DhWNP park has very huge tourist attraction potentials, however, the majority (32.8%) of the respondents showed that there is infrastructural problem for ecotourism development (18.7%) of respondents response showed that there was awareness gap on the role of ecotourism development and wildlife conservation in DhWNP for the local communities and the value of ecotourism (13.9%) showed that there was strong overgrazing problem (10.6%) them were revealed that illegal settlement and agricultural land expansion, while 12.6% and 11.4% of the respondents response showed that there was the problem of fire and illegal hunting respectively.

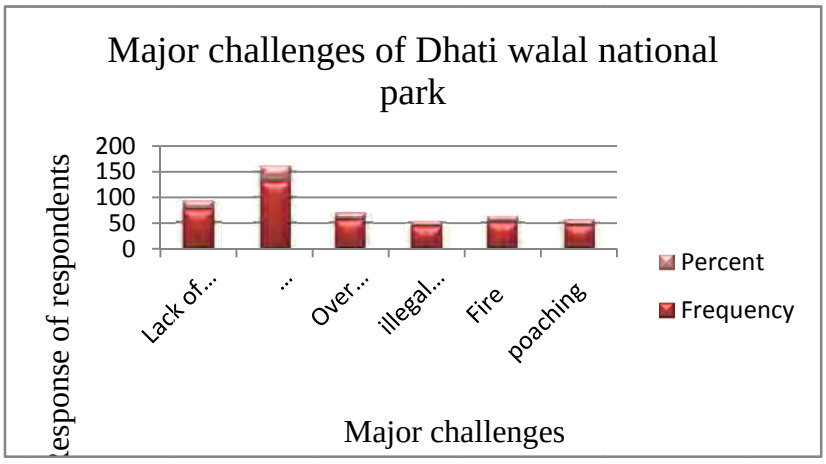

Fig. 4 Major Ecotourism development challenges of DHWNP.

As showed on (Fig. 1), the major challenges of ecotourism development in DhWNP were as follows.

3.3.1 Lack of basic ecotourism infrastructural and facilities

Different study showed that basic ecotourism facilities such as accommodation, transportation, health services and other support facilities are essential to enhance the satisfaction of eco-tourists and to maximize the length of stay of tourists to the destination area (Alemayehu, 2011; Cheung and Jim, 2013; Lee, 2019). However, the findings of this study indicated that DhWNP is devoid of these facilities and services. Similar study was conducted on Wenchi Crater Lake by Ketema (2015) reported that the absence of well-designed trekking passes, parking services, camping sites and effective land use planning alongside in this study site. He has also mentioned that there is a lack of transportation and comfortable roads, and there are no eco-lodges and catering facilities, and lack of basic facilities such as electricity, an effective road network to and from Borena Saint National Park and health stations (Eshetie 2012) were the major problems for ecotourism development.

3.3.2 Lack of awareness and limited participation

It is obvious that the central ide of ecotourism development is to encourage a local community's participation and they also benefit in sharing in activities, and also enhance their understanding about the natural and cultural resource conservation initiatives. Nevertheless, according to response from the respondents DhWNP is not in line with the principles of ecotourism development. Because the local communities have no have any awareness about ecotourism development and its importance for the host communities as well as protected area conservation and management. Similar study was conducted by Eshetie (2012) was reported that most of the local people in his study area had no awareness about either ecotourism tourism, and they did not participate at any stage in park management and planning decisions.

3.3.3 Illegal settlement and agricultural land expansion

According to information gathered from the respondents, before 2005, the area was largely uninhabited except few native peoples called Ma'o tribes whose life style had less pressure on natural resources. But now a day wildlife hunting and fishing is practicing. The first resettlement land allocation especially to migrants from Hararghe carried out in 2005 and the second round in 2010. Starting from this time large area of woodland forest around the wetlands has been cleared for farmlands particularly for 'Salit' (sesame) production which is a lucrative oil crop while, Maize and Sorghum for food as well as commercial purposes. Moreover, the ongoing the so called formal allocation of land to jobless peoples and the increasing illegal expansion and occupation of forest land largely shrunk the woodland vegetation to the edge of wetlands.

The increased human encroachment in the wetland surrounding areas led to ecosystem disturbances, increased human-wildlife conflict, competition between livestock and wildlife. As a result of this the larger wildlife has essentially disappeared from the woodlands, and can only be found in the core of the wetlands. Lions have been forced to disappear; nowadays very small populations are rare to see in the eastern and western relatively undisturbed side of the park. From most direction of the park the area was cultivated to the edge of wetlands, severely in few places draining the wetland for maize cultivation already started. One of the agricultural production increase strategy known as dry season production, which is only driven by government leaders encouraged farmers to dry up and cultivate wetlands. Almost all the wild animals are living in wetland, not because the wetland is favorable habitat for them, but using it as the last option to hide themselves from human impact.

The increased conversion of surrounding area to agricultural land taking over most of the land previously used for grazing, has also led to pastoralists to invade the wetlands in large numbers. The situation resulted in to wetlands degradation and increasing competition between livestock and larger herbivores, particularly impacting Hippo's foraging sites. The situation highly impacting the water birds and Hippos, and if continued to be ignored, it can escalate and result in to further degradation of wetland resources and wildlife loss.

Currently we observed diminished flow of Dhati River, overpopulated by Hippos. Some of the Hippos swim in water, but many of them roll in mud at the edge of river where water is shrunk from. The back skin of all Hippos observed cracked and bleeding as the result of small water flow that cannot cover them from sun temperature.

3.3.4 Illegal hunting

Recently, hunting pressure particularly for bush meat needs exceedingly threatened the wildlife population in the DHWNP. Buffalos, waterbuck, and bush pigs are among the species largely hunted. Our respondents specially, elders stated that traditionally people used to kill buffalo for the purpose that the killer respected in the community as a hero and superior, and his wife also attain distinction among other women in the community. Amazingly women themselves oblige their husbands to kill buffalo in order to attain distinction and superiority among other women in the village. The killer of buffalo keep trophy (skull with horns, and tails) in his home during his life, and when the man/killer die his relatives display the trophy outside specially to road side hanging over poles. It indicates that the man was hero and protagonist during his life. Poles are produced from species of tree named “Dambi” which can regenerate over there and help as natural living monument. The culture still exists however, nowadays it deteriorated and hunting purpose is mainly for consumption either for home use or sale. Especially demand for meat on social ceremonies like wedding is fulfilled by hunting buffalo in this study area.

3.3.5 Fire

The key informants were revealed that farmers intentionally set fire for various activities such as; agricultural land preparation, honey collection, and burning the swampy grassland during dry season to improve forage quality for grazing. In this area, fire is the tool farmers use to clear woodland forest and prepare land for cultivation. The continued burning of the wetlands and increased livestock grazing pressure will negatively impact the natural functioning of the wetlands and some wildlife species.

3.3.6 Over grazing

During our field data collection we observed that the high concentrations of livestock in the boundary of the park, which are grazing in the area. Not only the surrounding farmers, but also cattle herders from distances area are move their large number of livestock to the area during dry season. Thus this activity also threaten the wetland, and at the same time impacting the wildlife by food competition and may be disease transmission.

3.3.7 Unsustainable resource extraction

Rapid population growth in the area has placed acute demands on the area’s natural resource base. In western Ethiopia wetlands play a vital role in the lives of many poor peoples (Feyissa et al., 2019). In and around Dhati-Walal National Park different groups of people interact with the wetlands in the park in different ways and gain diverse benefits. The huge stock of fish in the park’s wetland contributes directly to the food security. In addition many of the poor community around the park obtain the other essential requirements for their life. The Ma’o, people, who are marginalized ethnic group of hunter-gatherer resource extraction such as sand extraction, fishing and grass harvesting, observed in the area. In this area, large areas of land devastated and modified for this purpose. Many peoples observed fishing in the wetlands and others many carrying bundles of fish every day for food and sale purposes. Overall the sustainability of extraction of the resources is unknown. However, it is obvious that in the absence of formal protection and management system, these activities may also threatening biodiversity and wetland functions, and the share of future generation in the area.

4 Conclusions

This study attempted to examine the potentials and challenges of ecotourism establishment in DHWNP. The result of the study was showed that this park has huge attractive diversified natural and cultural potential resources favourable for ecotourism development. These include diversity of wild animals such as (*Hippopotamus amphibius*), African buffalo (*Syncersus scaffer*), and Lions (*Panthera leo*), Warhog (*Phacochoerus africanus*), Vervet monkey (*Chlorocebus aethiops*), Olive baboon (*Papio Anubis*), Common jackal (*Canis aureus*) etc. Moreover, DHWNP is a *unique* from the country because few species of central and western African origin species highly uncommon for any other areas in Ethiopia. However, despite these potential resources there are many challenges that limit establishment of ecotourism in the area which include; lack of well promotion of the recourse, lack of community awareness about ecotourism, lack of community social infrastructures that had lead local community to destructions potential resource of study area, lack of cooperation's among community, governmental and private organizations to discuss on limitations and prospect of the study area, human induced pressure like illegal hunting of wildlife, settlement within the park boundary and conversions of forest land to agricultural land are the hindrances that obstructs establishment of ecotourism development in Dhati Walal national park.

To form the ecotourism and minimizing the challenges; it has to have well awareness creation program for the local communities towards the ecotourism development and its impacts on their lives by providing adequate trainings. Additionally the local communities should get alternative income generating activities in order to reduce community dependence on natural resources depletion through Agricultural expansions and illegal Hunting. Finally, further investigation is needed to identify and promote potential resource of DHWNP since the recourse is very huge and untouched and needs well investigation to dig out the recourses and promotion.

Acknowledgement

The authors acknowledged Dambi Dollo University, for their support to conduct this study and the local communities and experts for their support and give us permission for data collection. We are also grateful to Dhati Walal National Park Office and Kellem Wallaga Zone Culture and Tourism Office for their wholehearted support in data collection.

References

Alemayehu D. 2011. Challenges and opportunities for the establishment of community-based ecotourism in the Awash National Park area. Unpublished thesis. Addis Ababa University, Ethiopia

Ariyani N, Fauzi A. 2022. A Policy Framework for Sustainable Tourism Development Based on Participatory Approaches: A Case Study in the Kedung Ombo Tourism Area-Indonesia. Geo Journal of Tourism and Geosites, 40: 129-135

Asefa G. 2020. Challenges of Community-Based-Ecotourism Development in Gorgora-Ethiopia. Journal of Tourism and Hospititality, 9: 445

Bello FG, Lovelock B, Carr N. 2017. Constraints of community participation in protected area-based tourism planning: The case of Malawi. Journal of Ecotourism, 16: 131-151

Beza ZB, Berhan D. 2017. Challenges and prospects of community based ecotourism development in Lake Zengena and its environs, North West Ethiopia. African Journal of Hospitality Tourism and Leisure, 6: 1-12

Blake A, Arbache JS, Sinclair MT, Teles V. 2008. Tourism and poverty relief. Annals of Tourism Research, 35: 107-126

Bunruamkae WK, Murayama Y. 2012. Land use and natural resources planning for sustainable ecotourism using GIS in Surat Thani, Thailand. Sustainability, 4: 412-429

Byrd ET. 2007. Stakeholders in sustainable tourism development and their roles: applying stakeholder theory to sustainable tourism development. Tourism Review, 62: 6-13

Cheung LT, Jim CY. 2013. Ecotourism service preference and management in Hong Kong. International Journal of Sustainable Development and World Ecology, 20: 182-194

Dansa M, Tekalign W. 2022. Primate diversity and species' distributions in Maze National Park, southern Ethiopia. African Zoology, 57: 121-125

Das D, Hussain I. 2016. Does ecotourism affect economic welfare? Evidence from Kaziranga National Park, India. Journal of Ecotourism, 15: 241-260

Dejene SW, Seyoum H, Ready RU. 2014. ecotourism potential and its role for sustainable development and livelihood in Awash National Park, Ethiopia. International Journal of Scientific Research, 3: 792-796

Eshete G, Assefa B, Lemma E et al. 2020. Ethiopia Climate-Smart Agriculture Roadmap. Addis Ababa, Ethiopia

Eshetie W. 2012. Potentials, Challenges and Opportunities for Community Based Ecotourism Development at Borena Sayint National Park, South Wello. Unpublished Thesis. University of Gondar, Addis Ababa, Ethiopia

Feyissa ME, Cao J, Tolera H. 2019. Integrated remote sensing–GIS analysis of urban wetland potential for crop farming: a case study of Nekemte district, western Ethiopia. Environmental Earth Sciences, 78: 1-12

Hanjra MA, Ferede T, Gutta DG. 2009. Pathways to breaking the poverty trap in Ethiopia: Investments in agricultural water, education, and markets. Agricultural Water Management, 96: 1596-1604

Kask S, Kull T, Orru K. 2018. The use of 3D visualization for sustainable tourism planning. Journal of Baltic Studies, 49: 371-385

Ketema T, Lemi G, Liban J. 2022. GIS and Remote Sensing Based Spatiotemporal Analysis of Deforestation in Dati Wolel National Park, Western Ethiopia. American Journal of Agriculture and Forestry, 10: 1-8

Ketema TD. 2015. Development of community based ecotourism in Wenchi Crater Lake, Ethiopia: Challenges and prospects. Journal of Hospitality Management and Tourism, 6: 39-46

Kicheleri RP, Treue T, Nielsen MR., et al. 2018. Institutional rhetoric versus local reality: A case study of Burunge Wildlife Management Area, Tanzania. Sage Open, 8: 2158244018774382

Kim K, Uysal M, Sirgy MJ. 2013. How does tourism in a community impact the quality of life of community residents? Tourism management, 36: 527-540

Koens K, Klijs J, Weber-sabil J, et al. 2022. Serious gaming to stimulate participatory urban tourism planning. Journal of Sustainable Tourism, 30: 2167-2186

Lee JH. 2019. Conflict mapping toward ecotourism facility foundation using spatial Q methodology. Tourism Management, 72: 69-77

Legese K, Bekele A, Kiros S. 2019. A Survey of large and medium-sized mammals in Wabe forest fragments, Gurage zone, Ethiopia. International Journal of Avian and Wildlife Biology, 4: 32-38

Lenzen M, Sun YY, Faturay F, et al. 2018. The carbon footprint of global tourism. Nature Climate Change, 8: 522-528

Rabira G, Tsegaye G, Tadesse H. 2015. The diversity, abundance and habitat association of medium and large-sized mammals of Dati Wolel National Park, Western Ethiopia. International Journal of Biodiversity and Conservation, 7: 112-118

Rivera JPR, Gutierrez ELM. 2019. A framework toward sustainable ecotourism value chain in the Philippines. Journal of Quality Assurance in Hospitality and Tourism, 20: 123-142

Serenari C, Peterson MN, Wallace T, Stowhas P. 2020. Private protected areas, ecotourism development and impacts on local people's well-being: a review from case studies in Southern Chile. Protected Areas, Sustainable Tourism and Neo-liberal Governance Policies. Routledge, USA

Shanko G, Tona B, Adare B. 2021. Species composition, distribution, and relative abundance of medium and large mammals in Guda forest, Southwestern Ethiopia. Ukrainian Journal of Ecology, 11: 40-47

Teshome E, Shita F, Abebe F. 2021. Current community based ecotourism practices in Menz Guassa community conservation area, Ethiopia. GeoJournal, 86: 2135-2147

Tsegaye M, Gadisa T. 2016. Avian diversity in dhati walel national park of western Ethiopia. International Journal of Molecular Evolution and Biodiversity, 6

Vaghefi N. 2019. Ecotourism: A Sector Where Sustainability Is Everything. Penang Institute, Malaysia