



WOLKITE UNIVERSITY

COLLEGE OF AGRICULTURE AND NATURAL RESOURCE

DEPARTMENT OF WILDLIFE AND ECOTOURISM MANAGEMENT

**IMPACTS OF HUMAN ACTIVITIES ON WILDLIFE DEVELOPMENT IN  
GIBE SHELEKO NATIONAL PARK**

BY: WORKNEH TESFAYE

ADVISOR: MEBRAT T. (MSC)

A Senior Research Submitted to Department of Wildlife and Ecotourism  
Management, College of Agriculture and Natural Resource, Wolkite University for  
the Partial Fulfillment the Completion of BSc Degree in Wildlife and Ecotourism  
Management

Wolkite, Ethiopia

June, 2019



# **IMPACTS OF HUMAN ACTIVITIES ON WILDLIFE DEVELOPMENT IN GIBE SHELEKO NATIONAL PARK**

BY: WORKNEH TESFAYE

ADVISOR: MEBRAT T. (MSc)

*A Senior Research*

*Submitted to the Department of Wildlife and Ecotourism Management, College of  
Agriculture and Natural Resource, Wolkite University in Fulfillment of the Requirements  
of BSc degree of Wildlife and Ecotourism Management*

Wolkite, Ethiopia  
June, 2019

## DECLARATION

The researcher conforms that the study in entitled with “**Impacts of Human Activities on Wildlife Development in Gibe Sheleko National Park**” is my original work and is being submitted to Department of Wildlife and Ecotourism management, college of Agriculture and natural resource, Wolkite university in partial fulfillment for the award of Bachelor degree in wildlife and Ecotourism management. This research has not been submitted earlier to this and other institution.

**Name of Student**

Workneh Tesfaye

Signature ----- Date-----

**Name of Advisor**

Mebrat T. (MSc)

Signature----- Date-----

**Name of Examiners**

-----

Signature ----- Date-----

-----

Signature----- Date-----

## **Acknowledgement**

First I would say thanks God for direct help with unconditioned life all time with achievement. I would like to thanks my advisor Mebrat T. (MSc). Next, I would like to thanks my family for their financial, moral and other important gift for my thesis work. Finally, I would like my class mate students and my friends, who are help us by giving information.

## **Abbreviation and Acronyms**

GSNP	Gibe Sheleko National Park
WMA	Wildlife Management Agreement
WMR	Wildlife Management Rules
WWF	World Wide Fund for Nature

## Contents

DECLARATION.....	iii
Acknowledgement.....	iv
Abbreviations and Acronyms.....	v
List of Tables.....	viii
List of Figures.....	viii
ABSTRACT.....	viii
1. INTRODUCTION.....	1
1.1. Background.....	1
1.2 Statement of the Problem.....	2
1.3 Significance of the Study.....	3
1.4. Scope of the study.....	3
1.5 Limitation of the study.....	3
1.6. Objectives.....	3
1.6.1. General Objective.....	3
1.6.2. Specific Objectives.....	3
1.7. Research questions.....	3
2. LITRATURE REVIEW.....	4
2.1. Basic Concepts and Definition.....	4
2.2. Human activity that affect human wildlife development.....	4
2.2.1. Deforestation and forest degradation.....	4
2.2.2. Poaching (illegal hunting).....	5
2.3. Consequences of human activities on wildlife development.....	5
2.3.1. Habitat destruction.....	5
2.3.2. Change in wildlife behavior.....	5
2.4. Conservation Strategies to overcome challenges of Wildlife development.....	6
2.4.1. Conservation awareness.....	6
2.4.2. Community Based Development Program.....	6
2.5. Conservation strategies to human- wildlife- conflict.....	7
3. MATERIAL AND METHOD.....	8
3.1. Description of the Study Area.....	8

3.2 Sample size and sampling techniques.....	9
3.3 Data Collection Methods.....	9
3.3.1 Primary data.....	9
3.3.2 Secondary Sources.....	10
3.4 Data Analysis.....	10
4. RESULT AND DISCUSSION.....	11
4.1 Demographic characteristics of respondents.....	11
4.2 Human activities that affect wildlife Development in GSNP.....	11
4.3 Effects of human activities on wildlife development in GSNP.....	13
4.4. Driving Forces of Anthropogenic Impacts on Wildlife Conservation.....	14
4.5 Conservation strategies to overcome challenges for conservation of the park.....	15
4.6 Discussion.....	16
5. CONCLUSION AND RECOMMENDATIONS.....	18
5.1 Conclusion.....	18
5.2 Recommendations.....	19
6. Reference.....	20
7. Appendices.....	22

## **List of Tables**

Table 1: Demographic Information of Respondents.....	11
Table 2: Driving Forces of Anthropogenic Impacts on Wildlife Conservation.....	15
Table 3: Conservation or mitigation strategies to measure the overcome Challenges for sustainable conservation of the park.....	16

## **List of Figures**

Figure 1: Map of Gibe Sheleko National Park.....	8
Figure 2: human activities that affect wildlife development.....	12
Figure 3: Presence of human activities on wildlife development.....	13
Figure 4: Consequence of human activities on human wildlife development.....	14

## ABSTRACT

*Many protected areas in Ethiopia are threatened due to ever increasing of population, habitat loss and degradation. The purpose of this study was to identify the factors that affect human activities on wildlife and their habitat, consequences, driving forces for anthropogenic impacts on wildlife conservation and also how to minimize those factors to manage the wildlife and their habitat. The data was collected by using both primary and secondary data collection. Primary data was gathering by using questionnaire, interview and filed observation. Secondary data was collected from magazines, journal and unpublished data. 50 respondents were selected purposively. Data was analyzed by using qualitative and quantitative methods. Gibe Sheleko national park has been affected by different human activities such as deforestation, agricultural expansion, over grazing and human settlement. The park was facing to for different consequences like loss of biodiversity and decline of wildlife population. There is a lot of driving forces of anthropogenic impacts on wildlife conservation such as lack of implementation of rule and regulation, human settlement and competition for the use of resource. Generally, to minimize the negative impact of human activities to manage the park for sustainable conservation, keep safety of the park and local communities should be make collaboration with stakeholders.*

**Key Words:** *Gibe Sheleko National Park, Human activities, Wildlife Development*

# 1. INTRODUCTION

## 1.1. Background

“Ethiopia’s unique topography and biological diversity has resulted in a high level of endemism (Abunie, 2000). More than 320 mammals (31 endemic), 918 birds (19 endemic), 240 reptiles (16 endemic), 71 amphibians (30 endemic) and 172 fishes (38 endemic) species are recorded in Ethiopia (Young, 2012). The country protected areas, such as national parks and wildlife sanctuaries, are rich with distinctive flora and fauna and the country is one of the top twenty-five richest countries in the world in terms of biodiversity (Yalden and Larger, 1992). Protected areas play a vital role in biodiversity conservation. Over the past 25 years, the number of protected areas in developing countries has grown (Naughton, *et al*, 2005). For example, Ethiopia had only two protected areas before 1970 but today has more than 55 protected areas to conserve its natural ecosystems and wildlife heritage (Murray and Admasu, 2013). “

However, these protected areas are exposed to severe pressure from anthropogenic activities (fire wood collection, farming, over exploitation, bush fire by the investors and farmers around the park, charcoal production and harassing wild animals) that threaten their existence and sustainability (Reddy, 2014). Anthropogenic activities are directly influencing wildlife survival across different regions (Wilfred, 2010).

Human activities that affect wildlife and their habitats are pervasive and increasing. effect of these activity are manifested at all ecological scales, from short -term changes in the behavior of an individual animal through local extirpation and global extinction (Madden, 2008).

Consequently, understanding the effect of human on wildlife and wildlife population, as well as devising strategies to ameliorate this effect is an increasing challenge for resource manager. Virtually all human activities can affect wildlife populations either positively or negatively. These activities that are likely to have adverse effect can be divided in to those that function primarily altering the physical environment in relatively permanent way and those that cause change to animal behavior. Activity that alter the physical environment change the amount or the suitability of habitat for species, wide spread and large -scale Examples include activities the directly alter the structure and composition of the landscape, such as agriculture, forestry, livestock, grazing and unregulated off-road vehicle use, In general these are land use, or land

management practice that change the trajectory of ecological succession, including altering the dominant plant community and the biotic feature of site (Eltering, 1979).

Gibe Sheleko national park is primarily known in its diverse wildlife species but now days these wildlife species has been decreasing from time to time due to population growth, habitat degradation, climate change, different human activities and land use change. Human wildlife conflict is well known phenomenon in Gibe Sheleko national park. The people attack with wild life due to their crop damage, competition between livestock and wildlife for food and space. The great conflicts between human and wild life arises from that wildlife seek to fulfill nutritional, ecological and behavioral needs. Similarly the increasing human population in Gibe Sheleko national park to fulfill their own need and interest from natural forest as wild life habitat become more fragmented wild life gets confined into contact and this type of conflict come with wildlife mortality (Madden, 2006).

## **1.2 Statement of the Problem**

Many protected areas in Ethiopia are threatened due to ever increasing of population, habitat loss and degradation (Alemneh Amare, 2015). Land use changes through agriculture, rural and urban development activities have led to the decline and alteration of wild areas, resulting in the extinction to wildlife species and natural areas which serve as their habitat (Alemneh Amare, 2015). Tried to address some of the root causes of losses of biodiversity which directly impose wildlife tourism and biodiversity conservation (Alemneh Amare, 2015). Protected area has a great significance regarding to conservation of biodiversity (Alemneh Amare, 2015). Currently, human encroachment in terms of the density and wildlife with their habitat has faces challenging because of deforestation, agricultural expansion and settlement, Gibe Sheleko national park has endowed with diverse natural resource, currently its natural forest degrading at fast rate and convert into agricultural land and settlement (Alemneh Amare, 2015). Due to that people around the park who entirely depend on mix agricultural production complain wildlife which damage their crop and vegetable. Then after other people stuff in the park and outside and household in the park complain that wildlife disturb by entering into their crop. The study was attempted to examine the impact of human activity on wildlife development in Gibe Sheleko national park.

### **1.3 Significance of the Study**

This study will serve as generally, might help in different aspect to provide for policy makers, wildlife managers, local community, the natural resource management expertise and the society at large. The study will be baseline information for other researcher to undertake similar study elsewhere. The study provides the necessarily solutions for problems of the study area.

### **1.4. Scope of the study**

The research was conducted to identify adverse human activity on wildlife development in Gibe Sheleko national park. The study was selected the site location on purposively by the case of border of the park to manage wildlife and their habitat in order to reduce from different human activities and other threats. The research was considering impact of human activities on wildlife development in Gibe Sheleko national park.

### **1.5 Limitation of the study**

The main limitation of the study was communities in the study area do not have awareness about the impacts of human activities on wildlife development. Time and budget also another limitation

### **1.6. Objectives**

#### **1.6.1. General Objective**

- The general objective of the study is to assess the impact of human activity on wildlife development in Gibe Sheleko National Park.

#### **1.6.2. Specific Objectives**

- To identify human activities which affect the population of wildlife and its habitat in Gibe Sheleko National Park.
- To assess the effects of human activities on wildlife development in Gibe Sheleko National Park.
- To identify the driving forces of anthropogenic impacts on wildlife conservation.

### **1.7. Research questions**

1. What type of human activities affecting wildlife population in Gibe Sheleko National Park?
2. What are the effects of human activity on wildlife development?
3. What is the driving forces threatening the national park?

## **2. LITRATURE REVIEW**

### **2.1. Basic Concepts and Definition**

Human disturbance can influence wildlife behavior, which can have implication for wildlife population, for example wildlife may be more vigilant near human disturbance, resulting in decreased forage intake reduce reproductive success (Madden, 2008). We measured the effect of human activity compared to predator and other environmental factor on the behaviors wild animal in human -dominated landscape (Alberta, 2013).

### **2.2. Human activity that affect human wildlife development**

There are various activities that take place on the wildlife and their habitat in the park by human activities both positively and negatively. The positive activities: - conservation of wildlife and their habitat, preservation of the endangered species in the area, expand good breeding strategy by good mechanism, against or translocation the exotic species from the native species, respect the welfare and right of the animal, prepare good preference food for the animal but not affect the natural food of the animal. The negative activities:- human activities are affect the wildlife and their habitat by the following factor: - poaching/illegal haunting/logging, over exploitation, deforestation, burn by artificial fire of the wildlife habitat, construction of building on the wildlife area, change wildlife habitat in to agricultural land and investment area in protected area (Green, 1979).

#### **2.2.1. Deforestation and forest degradation**

Deforestation is the conservation of forest to alternative permanent non- forested land use such as agriculture, grazing or urban development. It is the removal of trees and other vegetation (for fire wood, commercial, logging or to land for farming and settlement. This increase run off and subsequent erosion causes sedimentation in river channel, which decrease their capacity. Deforestation resulting land degradation is the global threat of many wild animals with its natural habitat and affect the wild animal lifestyle in their preferred habitat. The extensive deforestation has also lead to the extinction of various biotas as a resulting in significant biodiversity loss. Some of the major cause of deforestation is uncontrolled logging, illegal charcoal production and fuel wood collection that directly influence large wildlife habitat, where tourism is dependent.

Moreover, such activities impose to decline the scenic beauty of the park. Which also affect tourism and wilderness (Henson and Grant, 1991).

### **2.2.2. Poaching (illegal hunting)**

Poaching and illegal wildlife trade activities in and around the park as well as the un wise use of natural resource have been the major problem facing the park and have led to the extinction of some fauna species. It leads to detrimental environmental, economic and social consequence. over time, the international community has become aware of fact that poaching is the most immediate and direct threat to wildlife in Africa making its upward trend a cause of serious consenting this case poaching has been practiced for income generation and other agricultural and industrial product (Berta, 2015). Poaching or mass killing is carried out mainly on white eared kob and Nile lechwe, while poaching on buffalo, bush bucks and reed buck occur in rare cases (Berta, 2015). Generally, traditional subsistence hunting and poaching area the major factor that affected the distribution and movement of wildlife in the park.

## **2.3. Consequences of human activities on wildlife development**

### **2.3.1. Habitat destruction**

When human destroy wild land to build homes, factories, shopping miles, amusement park garbage dumps Even to build Gupstarcentre, store and restaurant in park, the land is changed. The animal that once lived there, from the bugs that give in the ground to the birds that ate. Those, all may disappear. Some can more to new homes areas, but there are already other animal living there.

There is not enough food, water or shelter for all of them-money of the animal will die, when farmers sprig chemical on their crops to save them from pests (bugs and modes and things that eat the plant), the chemical get into the water and into the soil (Toll, 2015).

The bugs that do not hurt the crop die. The birds and mammals who eat those poised bugs may also die, or they can't reproductive, or their offspring die young (Toll, 2005).

### **2.3.2. Change in wildlife behavior**

When humans made different activities for instance feed wild animal change their behavior, Behavior can indicate how animal respond to disturbance into their environmental. For instance,

vigilance, or scanning of the environmental, is adapted by wide range of birds and mammals to increase the probability of detecting predators or other source of disturbance including humans (Belaynesh Abebaw, 2002).

A more obvious change in behavior us with coyotes, these wonderful adaptive wild have different social strategies depending up on the habitat in which they live, in wide, open undisturbed setting, they form mono famous pairs and maintain an active social life with related clans (Belaynesh Abebaw, 2002).

## **2.4. Conservation Strategies to overcome challenges of Wildlife development**

In order to minimize or reduce the negative impact human activities on wildlife management in protected area. Local community should be identifying the different threat that affects the wildlife and its habitat and we should be finding the correct solution to overcome challenges for sustainable conservation of the park. So there are some management and conservation strategies of the park such as strong institution to conserve park, protection and conservation of the park, promotion of sustainable utilization of the resource, full participation of local community, to rehabilitee and protect the remnant wildlife resource and important ecosystem, raise public awareness on the importance of conserving park, habitat improvement of wildlife corridor and finding fund and project to maintain detail research

### **2.4.1. Conservation awareness**

The object of this, to promote public awareness on the importance /management of the park, this would be achieved through village conference, provision of tracing to leader of protected areas /Kebele or villages and arrangement of traing in the schools around the park. The park manager should be train or educate the local community about the wildlife and the park how to manage for sustainable conservation. The local people should have a good perspective about the behavior of wildlife and have a positive relationship with wildlife.

### **2.4.2. Community Based Development Program**

This is aimed at promoting community participation in the management of the park in particular and the surrounding natural resource is general. The ultimate goal is to enable the community to manage their natural resource on sustainable bases. Strategies to achieve this objective would contain the following elements:-

\* Provision of benefit from various form of wildlife utilization (Game hunting, non- consumptive use, sales of live animals etc.).

\* Introduction of community based wildlife management (CBWM) programs through legally binding agreement, wildlife management agreement (WMA) and wildlife management rules (WMR). The former is an agreement to be made between the park office and the concerned protected areas, while the wildlife management rule which would be established by the community and serves as instrument that govern the management and use of the resource by members of the community.

\* Provision of employment and income generation schemes. This include introduction of agriculture (be keeping), artisan crafts and fruit production (Mann and Smaller, 2010).

## **2.5. Conservation strategies to human- wildlife- conflict**

Human wildlife conflict is defined by the world wide fund for nature (WWF) as” any interaction between human and wildlife that result in negative impact on human social, economic or cultural life, on the conservation of human wildlife population or the environment. The aim of conflict resolution on management is to reduce the potential for human-wildlife in order to protect life and limb, safety and security of animal population, habitat and general biodiversity, and to minimize damage to property. There are two management technique of human-wildlife conflict: -Traditional management technique which aim to stop, reduce or minimize conflict by controlling animal population by different way. These are lethal control for dangerous animal, translocation, regulation and preservation of animal population. Modern management technique:- these methods depend up on the ecological and ethological understanding of the wildlife and its environment to prevent or minimize conflict :- example being behavioral modification and measures to reduce interaction between human and wild life management (Wuver and Attuquayefio, 2006). potential solution to those conflicts include electric fencing, land with planning, community based natural resource management (CBNRM), compensation, payment for environmental service, ecotourism, wildlife friendly product, or other field solution (Boyle and Sampson, 1985).

### 3. MATERIAL AND METHOD

#### 3.1. Description of the Study Area

Gibe Sheleko national park (GSNP) is located in Gurage Zone, southern Ethiopia. It is 170 and 18km far from Addis Ababa and Wolkite, respectively. It is geographically located from 05°25'N to 06°15'N and 35°24'E. Altitude of the area ranges from 1050 to 1835 m above sea level. The Park is bounded by three districts namely Cheha, Abeshigie and Enemor ena Ener (Alemneh Amare, 2015). The park was designed as a regional park since 2009/2010 due to its high endemism and biodiversity conservation importance and home for numerous migratory and endemic bird species. The park covers 360 km<sup>2</sup>, and characterized by heterogeneous landscape, flora, fauna and habitat types and it is dissected by deep gorges of the Gilgel Gibe and Wabe rivers. The annual rainfall is high and reliable, in average 1100mm/year with low inter-annual variation and the temperature ranges from 7.5-25°C. The rainfall in the area is bimodal (i.e. having two rainy seasons). The dry season includes December up to March and rainy season includes June up to August (Alemneh Amare, 2015).

Gibe Sheleko national park has viable population of mammalian species and viable groups of fauna species to diversified flora and also involves varieties of bird species, reptiles and amphibians as well as insects are also found. The fauna species found in these national park are including; mammals such as Leopard, Hippopotamus, Greater kudu, Warthog, Olive baboon and bush buck. The plant species found in this national park are most Acacia wood land species. This plant species are more dominate species in the study area.

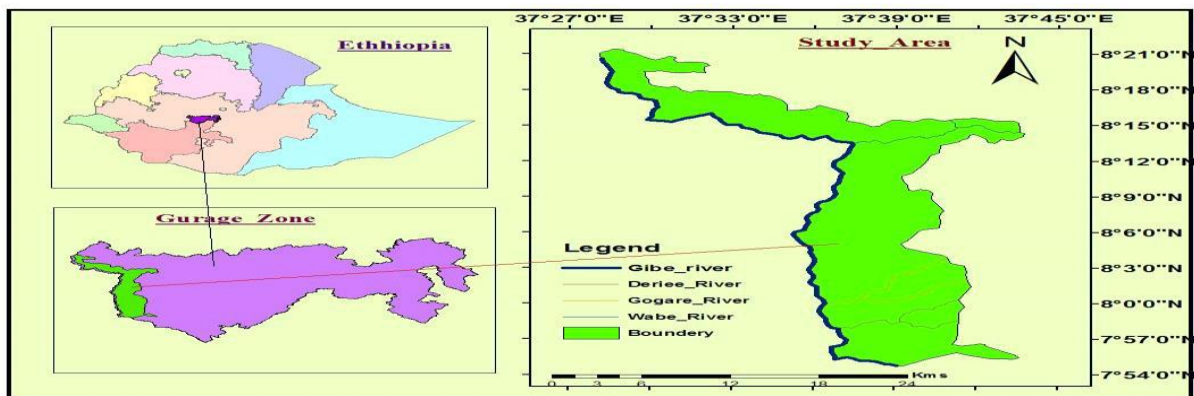


Figure 1: Map of Gibe Sheleko National Park (source: Belete,

### 3.2 Sample size and sampling techniques

The study was carried out through purposive sampling technique by select respondents from the local people and from the target population such as from scouts, wildlife manager and local community. Two kebeles from Gibe Sheleko national park were selected purposively based on the proximity and adjacent to the national park. These two kebeles, namely Fite jeju and Gibe yabere selected from Abeshegie woreda. 50 respondents from the two kebeles were selected purposively.

NO	Name of kebeles	Total population(N)	No of respondent (n)
1	Gibe Yabere	4200	28
2	Fite Jeju	4060	22

### 3.3 Data Collection Methods

Data was collected both primary and secondary sources and different types of data collection instruments.

#### 3.3.1 Primary data

The researcher used primary source of data form target group responses through key informant interview, questionnaires and field observation.

**Key informant interview;** under this, interview was used in order to get reliable data by directed face to face interviewed with key respondents.

**Questionnaires;** the questionnaires was used for the data collection from scouts and staffs. Both closed and open ended items were distributed to for relevant groups.

**Field observation;** the data were gathered directly by observing the impact of human activities on wildlife development in GSNP, driving forces of anthropogenic impacts on wildlife conservation and effects or consequences of human activities.

### **3.3.2 Secondary Sources**

Secondary source of data was collected more information about the impact of human activities on wildlife development in GSNP from document, journal, internet, website, published and unpublished data and other different books.

### **3.4 Data Analysis**

The data was analyzed by using qualitative and quantitative method. The data were analyzed by using simple descriptive statistics such as mean percentage and the data would be presented on tables, charts, picture and percentage also further represented by using grapes and other diagram.

## 4. RESULT AND DISCUSSION

### 4.1 Demographic characteristics of respondents

Demographic characteristics of respondents of the study have been mentioned in table 1. According to sex category 35 (70%) were male and 15 (30) female were participated. According to age category most of respondent categorized between 31-45 (50%). Regarding to the educational level, most of respondent 40 (80%) were literate and 10 (20%) were illiterate. The marital statuses of the respondent (70%) were married and (30) were single.

Table 1: Demographic information of respondents

Variables	Section /categories	Respondents	Percentage (%)
Sex	Male	35	70
	Female	15	30
	Total	50	100
Age	15-30	16	32
	31-45	25	50
	46-60	7	14
	>61	2	4
Educational level	illiterate	10	20
	literate	40	80
	Primary school	12	30
	Secondary school	15	37
	Diploma	9	23
	Bachelor Degree	4	10
Marital status	Single	15	30
	Married	35	70
	Total	50	100

Source: Field Survey (2019)

### 4.2 Human activities that affect wildlife Development in GSNP

Habitat degradation and loss are the primary causes of biodiversity loss worldwide. This has been exacerbated by growth of human population in nearby protected areas causing destruction of wildlife habitats and thus reduction of biodiversity (Nahonyo, 2001). To understand why extensive alteration and destruction of habitats are occurring, it is essential to know what the

proximate causes are. The main driving forces behind biodiversity loss arise from human activities and can be distinguished in terms of economic, social, political and cultural factors that lie behind the economic activities leading to the indirect depletion of species, destruction and degradation of their habitats (underlying causes) and on the other hand to the relationship with wildlife (proximate causes) (International Institute of Environment and Development, 2003).

Respondents were asked about human activities affecting the wildlife and their habitat in GSNP. As mentioned on the below table, the respondents expressed that, there are a lot of human activities on wildlife development in the park from these were Agricultural expansion 22%, Expansion of invasive species 8%, Human settlement 28%, Road construction 4%, Fuel wood collection 16, Grazing 12% and deforestation 10%. But most respondents of 14 (28%) were gave response for us among the different human activity that affect the wildlife and its habitat in the park on human settlement. While the least respondent 2 (4%) were gave response for us among the human activities that affect the wildlife and its habitat in the park on road construction. because of the reason road construction is that take place at a little time in park.

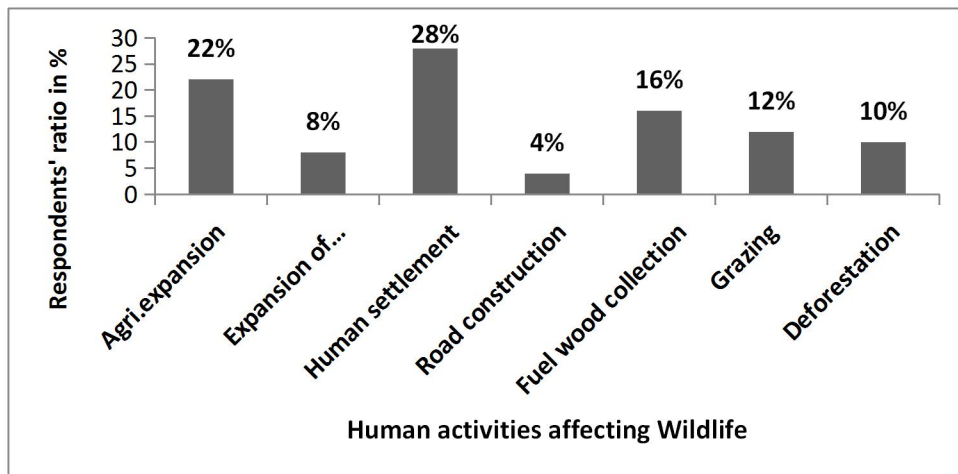


Figure 2: human activities that affect wildlife development

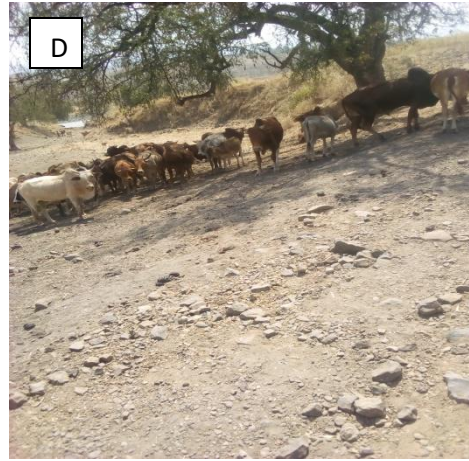
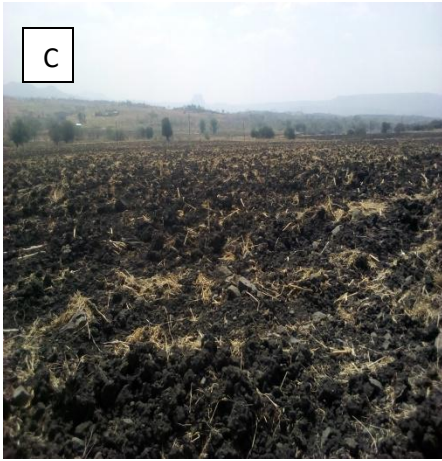
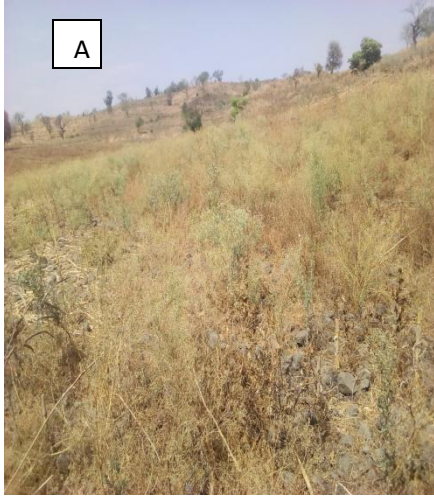


Figure 3: Presence of human activities on wildlife development in GSNP

A. Invasive species  
expansion

B. Road construction  
D. Over grazing

C. Agricultural

### 4.3 Effects of human activities on wildlife development in GSNP

According to the respondents during data collection the main effects of human activities of wildlife development were loss of biodiversity 36%, food shortage 20%, and decline of wildlife population 24%, Car accident 6%, Affect wildlife reproduction period 4% and Wildlife migration 10%. As mentioned in the below table the respondents were giving response for us about the effect of human activities on wildlife development in GSNP. Most of respondent 18 (36%) were gave response among the effects of human activities on wildlife population decrease, because of the reason various human activities that take place in the park, so by this case many biodiversity are affected or loss. While the least respondent 2 (4%) were gave response among

the effect of human activities on the wildlife reproduction period about this few respondents were gave response for us because of they didn't know more information about this activity in the GSNP.

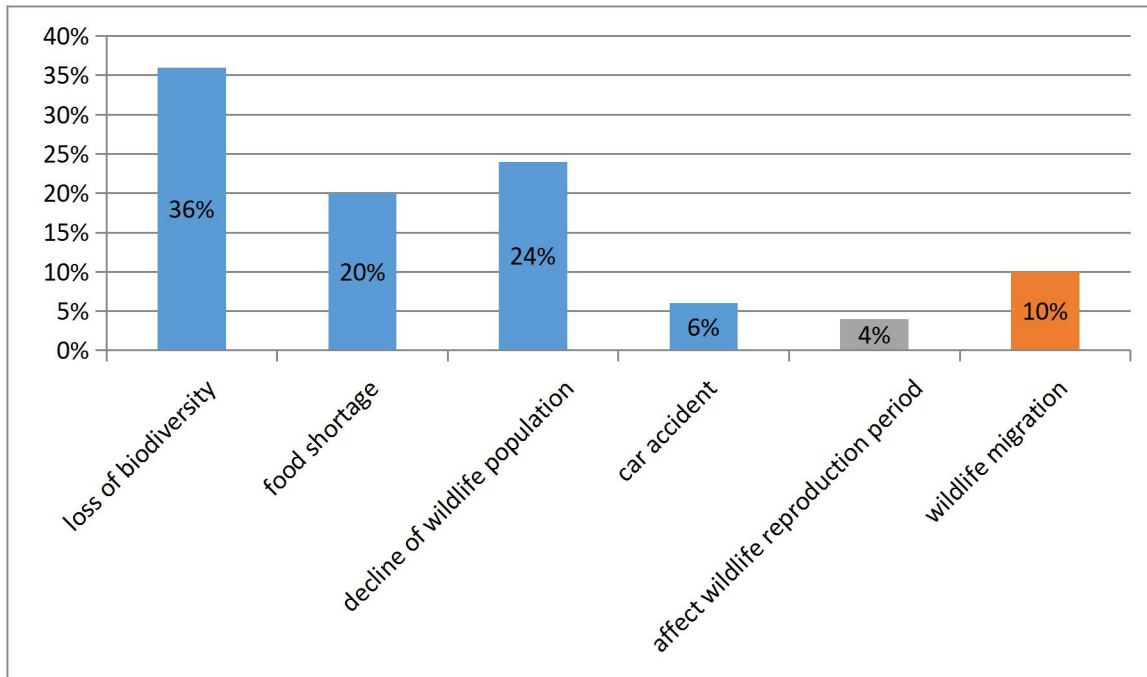


Figure 4: Consequence of human activities on human wildlife development

#### 4.4. Driving Forces of Anthropogenic Impacts on Wildlife Conservation

Respondents were asked whether driving forces of anthropogenic impacts on wildlife conservation in GSNP. As mentioned on the below table the respondents expressed that, there was a lot of driving forces of anthropogenic impacts on wildlife conservation in the park. From these driving forces of impacts were Lack of implementation of rule and regulation of the park 14%, there is a lack of another means of income generation for locals because of these locals use charcoal production from forests 20%, Human settlement in side of the park 32%, Competition among locals for the use of resource 18% and Low involvement of government and other stake holder and lack of awareness among local community 16%. But most respondents of 16 (32%) were given response for us among the different driving forces of anthropogenic impacts on wildlife conservation in the park were Human settlement in side of the park. While the least

respondent 7 (14%) were gave response for among the driving forces of anthropogenic impacts on wildlife conservation in the park were Lack of implementation of rule and regulation of the park.

Table 2: Driving Forces of Anthropogenic Impacts on Wildlife Conservation

Driving forces	Number of respondents	Percent %
Lack of implementation of rule and regulation of the park	7	14
Lack of income generation for local communities other than charcoal production	10	20
Human settlement in side of the park	16	32
Competition among local communities for the use of resources	9	18
Low involvement of government and other stake holders and lack of awareness among local community	8	16

#### **4.5 Conservation strategies to overcome challenges for sustainable conservation of the park**

Respondents were asked about the conservation strategies to measure the negative impacts of human activities on wildlife development in GSNP. As shown in the below table the respondents were giving response for us about the conservation or mitigation strategies to measure the overcome challenge on wildlife management in GSNP for sustainable conservation. The most respondents 13(26%) were gave response based on create community awareness about the park. The reason that, they said, creates community awareness about the park is the good strategies at first time. While few respondents 3(6%) were gave based on community based development

program me, they said, for conservation and mitigation strategies to manage the negative impact of human activities in and around the GNP.

Table 3: Conservation or mitigation strategies to measure the overcome challenges for sustainable conservation of the park

Conservation or mitigation measures for overcome challenges	Number of respondents	Percentage (%)
Strong institution to conserve the park	10	20
Create community awareness about the park	12	24
Full participation of the community in the park	8	16
Community based development program	6	12
Respect rule and regulation of the park	4	8
Should have strong management techniques or strategies	8	16
Keeping the safety of the park	2	4

#### 4.6 Discussion

Most of our protected areas are not big enough to accommodate wild animals (Newmark, 2008). Human population growth bordering these protected areas is high and has become a serious threat to the management of wild animals all over Africa (Msoffe, 2011). Local communities around the protected areas conduct activities such as agriculture practices, cutting of wood forest and setting bushfires, all of which are destructive to the vegetation cover. Illegal wildlife hunting for subsistence and commercial use is uncontrolled. The hunting activity is often conducted by poachers (Pittiglio, 2012). Therefore; the problem of human activity impacts has reached a level that threatens wildlife habitat and animal species. The rationale of this study was therefore to document negative impacts caused by human activities to wildlife as a result of human population pressure and other related activities from communities in the park.

Respondent were asked about the different human activities on human wildlife development in GSNP. Those activities that are likely to have adverse effects can be divide in to those that function primarily by altering the physical environment in relatively permanent and those that cause change to animal behavior. Activities that alter the wildlife and its habitat, includes: - Agricultural expansion, fuel wood collection, deforestation, invasive species, human settlement, road construction and grazing in the park. In general, those are land use or land management practice that changes the trajectory of ecological succession including altering the dominant plant communities and a biotic feature and site. The ecological effects of these activities are rapidly appeared and have been well studied.

There was a lot of driving forces of anthropogenic impacts on wildlife conservation in the park From these driving forces of impacts were Lack of implementation of rule and regulation of the park, lack of income generation for local communities other than charcoal production, Human settlement in side of the park, Competition among local communities for the use of resources and Low involvement of government and other stakeholders and lack of awareness among local community.

Respondent were asked on about the effect of human activities are cause for or result of activities as include habitat loss, food shortage, population decrease, wildlife migration, behavioral change of the species and affect wildlife reproduction period and also as the respondents give information about wildlife animals damage their crops specially maize. In the study, the respondents participant in key informants interview participant expressed the cause of conflict was resulted from the increasing number of human population in the area changed their lifestyle to destruct habitat through encroachment for agriculture and human settlement and the modification of natural habitat in to crop cultivation. Consequently, the competition for food, water and habitat causes of conflict between wild animal and local people.

In general, human activities leads to for wildlife migrate from their normal habitat and lost their freedom to live with their natural habitat. In the study, the respondents expressed the conservation strategies to measure the overcome challenge such as strong institution administrative to conserve the park, expand the legal status and improve human power, create awareness for habitat improvement of wildlife corridor, keep safari of the park, conserve endangered species, protection and conservation of the park and have a good correlation between the local community and the wildlife sector.

## **5. CONCLUSION AND RECOMMENDATIONS**

### **5.1 Conclusion**

There were different human activities that affect the wildlife development in GSNP such as agricultural expansion, fuel wood collection, deforestation, irrigation, human settlement, road construction, grazing and invasive species. Also those human activities had an effect on habitat loss, food shortage, wildlife population decrease, wildlife behavioral change, wildlife migration and effect of wildlife reproduction period on wildlife development in the park. Driving forces of anthropogenic impacts on wildlife conservation like lack of implementation of rule and regulation of the park, human settlement in side of the park, lack of income generation for local communities other than charcoal production, Competition among local communities for the use of resources and low involvement of government and other stake holders and lack of awareness among local community. Also human activities, leads to the cause of human-wildlife -conflict in the study area. This include increasing number of human population in the area changed their lifestyle to destruct habitat through encroachment for agriculture and human settlement and the modification of natural habitat in to crop cultivation and lack of food for wildlife. In the above listed of human activities has different conservation strategies to manage those human activities and cause of human wildlife conflict so as to manage the park properly, local people should have a good perspective for wildlife, don't change the natural feeding of wildlife by artificial feeding system and be respect the rule and regulation of the park.

## 5.2 Recommendations

Based on the result of the study, the following points were recommended;

- ✓ Local community should increase plantation will help to minimize wild animal to visit to crops.
- ✓ Intensive tree cutting should be minimized.
- ✓ Improving or rehabilitation of wildlife within their habitat
- ✓ Local communities must be participate in decision making from planning up to Implementation
- ✓ To implement rule and regulations of the park
- ✓ To create alternative livelihood or income generation option of the local communities
- ✓ Schools of wildlife and Ecotourism management should have to educate the community around the park in collaboration with other stakeholders on the cause, consequence and prevention methods regarding the existing conflict.
- ✓ Government should be make community based conservation.
- ✓ To awareness community and to construction wise use of wildlife resource
- ✓ The local communities should be make collaboration (working together) with the tourism sector, wildlife sector, education sector and other organization in order to conserve and manage the park & the wildlife that living inside it.

## 6. Reference

- Abunie, L., 2000. The challenges of ethiopian wildlife: *Overview.walia*,31,56-61.
- Alberta, G., 2013. Human-Wildlife conflict". *Environment Yukon. Government of Yokon. 3 July 2013. Retrived 20 July 2013.*
- Alemneh, Amare., 2015. Amare, A., 2015. Conservation challenges of Gibe Sheleko national park, sout hwestern Ethiopia. . *Natural resources*, 6, 286-289.
- Belaynesh Abebaw., 2002. *Perception of forest change in around kachment areas and its impacts*. Hawassa, Ethiopia. Macthes is presented to school of graduated study at Hawassa university.
- Berta, Abraham ; Soreness, Tahoma; Belliethathan, Satishkumar., 2015. "Carbon Stock of Gambella National Park: Implication for Climate Change Mitigation". *Advances in life Science and Technology*, 35.
- Boyle, S.A. and Sampson, F.B., 1985. Effects of non consumptive outdoor recreation on wildlife: . *A review. Wildlife Society Bulletin* , 13, 231-241.
- Eltering ham., 1979. The ecology and conservation of large mammals.
- Green, R.H., 1979. Sampling design and statistical methods for environmental biologists. . *New York: Wiley*.
- Henson, P., and Grant, T.A., 1991. The effects of human disturbance on trumpeter swan breeding behaviour. . *Wildlife society Bulletin* , 19, 248-257.
- Madden, F., 2006. Human wildlife conflict cause for collaboration nature.
- Madden, F., 2008. *The growing conflict between human and wildlife:- law and policy contributing and mitigating factors Journals of international wildlife law and policy.*

- Mann, H and Smaller, C., 2010. Foreign Land Purchases for Agriculture: What Impact on Sustainable Development? Sustainable Development Innovation Briefs, United Nations, New York.
- Murray, M. and Admasu, B., 2013. Development of a marketing strategy for wildlife tourism in Ethiopia. *Un published repor*, 65.
- Naughton-Treves, L., Holland; M.B. and Brandon, K., 2005. The role of protected areas in conserving biodiversity and sustaining local livelihoods. *Annual review o fenvironmenta lresource*, 30,219-252.
- Reddy, R., 2014. Conflicts between the conservation of elephant and human activities: In the case of Babile elephant sanctuary (BES), Ethiopia. *European academic research*, 2,1280-1292.
- Toll, G., 2005. Prospects of sustainable natural resources management and livelihood development, Msc thes is presented to Addis Ababa university.
- Wilfred, P., 2010. Towards sustainable Wildlife management areas in Tanzania. *Tropical conservation science*, 3,103116.
- Wuver, A and Attuquayefio, D., 2006. *The Impact of Human Activities on Biodiversity Conservation in a Coastal Wetland in Ghana*, West Africa Journal of Applied Ecology, 9, 2006, pp. 1-14.
- Yalden, D. and Larger, M., 1992. Endemic mammals of ethiopia. *Mammal review*, 22, 115-150.
- Young, J., 2012. Ethiopian protected areas; A "Snapshot." wordpress, 23.

## 7. Appendices

### Appendix I: Questionnaires for Households/local community

Interviewer ----- Date of interviewer -----

#### Demographic Characteristics of Respondents

1. Sex/Male----- Female-----
2. Age (15-30--- 31-45---- 46-60----- above 61-----)
3. Occupation: A. Government worker B. Farmer C. Personal business D. Other
4. Education status: A. Un educated C. High school completed B. Elementary complete D. Other
5. Monthly income level: A. <1000 ETB B.1000-2000 ETB C.2000-3000ETB D. 3000-4000 E.>4000

1. Do you know wildlife? A. Yes B. No

IF yes/ No, please explain, -----  
-----

2. What benefit /value you get benefit from the GSNP?

A. Economical B. Social C. Cultural D. Recreational E. All

3. What are the human activities which affect the population of wildlife and its habitat in GSNP?

A. Agriculture expansion B. Poaching C. Unintentional fire D. Deforestation

E. Illegal settlement F. Over exploitation G. All

4. What are the effects/consequences of human activities on wildlife Development in GSNP?

A. Loss of biodiversity B. Habitat destruction C. Decline in Wildlife Population D. Habitat fragmentation E. Diseases transmission F. Wildlife Migration G. All

5. What happen the number of wildlife from time to time? A. Increase B. Decrease C. The same

6. What should be possible conservation strategies or mitigation measures to overcome challenges and for the sustainable conservation of GSNP?

- A. Have good management techniques or strategies
- B. Create awareness and educate the community about the wildlife
- C. don't bring unnecessary thing to inter the park.
- D. The wise or proper use of wildlife resource in the park
- E. Don't pollute the park by different toxics
- F. recruit trained human power for the conservation activities

G. enhance community participation for the conservation activities

H. all I. others

### Appendix II: Questionnaires for Key Informants

1. Do you know about wildlife? A ,Yes B/No

If yes/No, Explain. -----  
-----

2. What benefit /value you get benefit from the GSNP?

3. What are the human activities which affect the population of wildlife and its habitat in GSNP?

-----

4. What are the effects of human activities on wildlife development in GSNP?

-----

5. What happen the number of wildlife from time to time? A. Increase B. Decrease C. The same

-----

6. What should be possible conservation strategies or mitigation measures to overcome challenges and for the sustainable conservation of GSNP?

-----

7. What are the different reasons that reduce wildlife species time to time in the park?

-----

**Appendix III: Questionnaires for investors**

1. Which animal is mostly feed or damage the crop of the investor?

A. Hippopotamus B. Buffalo C. warthog D. Other bird species

2. Is that the number of investors currently increase? A. yes B. No

3. Is there human wildlife conflict in GSNP and the investment area? A. YES B. NO

4. What are the Investment activities which affect the population of wildlife and its habitat in GSNP?

-----

5. What are the effects of Investment activities on wildlife development in GSNP?

-----

6. What happen the number of wildlife from time to time? A. Increase B. Decrease C. The same

-----

7. What should be possible conservation strategies or mitigation measures to overcome challenges and for the sustainable conservation of GSNP?

-----

8. What are the different reasons that reduce wildlife species time to time in the park?

-----  
-----

9. What Value /Benefit you get from the GSNP?

-----

10. What we observe or see the human activists that takes place or happen in GSNP?

-----

11. What we think the wildlife habitat change in to agricultural land and investment area in the park when at time of visit the area?

-----

12. What we say the natural forest became to deforested in GSNP?

-----

13. How to we see the local community and wildlife relation in GSNP?

-----

14. Give as an example of the place that affected by human activities, when we observe in GSNP?

-----

