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Socio-Economic Impact Of Deforestation In Katsina Local Government Area

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ABSTRACT
The study attempted to find out the Socio-Economic Impact of Deforestation in Katsina Local Government Area. Some of the objectives of the study were to assess the rate of deforestation in Katsina local government area, to assess the economic and environmental impact of deforestation in the study area and to find solution to these problems. Thirty structured questionnaires were distributed in five wards of the local government. From the information gathered, majority of the respondents in the study area lack western education. The respondents were however aware of the importance of the forest resources and its management. They are also aware of the importance and impacts of human activities taking place in the forest, the effects of deforestation by human activities and the causes and possible solution to the problems, the survey recommended mass campaigns against indiscriminate felling of trees, re-planting of trees and grasses immediately they have been exploited for economic purpose and employing more forest guards and providing them with enough working materials.
Keywords: Deforestation, Socio- economic, Forest resources,

INTRODUCTION

Vegetation is one of the vital renewable resources which also play a vital role in the development of any country, state, region or local government. The benefits derived from forest or vegetation involves among others things economic growth through revenue generation, machine uses (traditional and manufactured) as social development through recreation.

Forest contributes significantly to the region economic development as environmental security. It supports many people farmers, herders, local communities and forest dwellers. It also provides important environmental services as water shed protection and institute a source of income, livelihood and capital. Most of village depends on forest for the basic needs such as foods, fibers, fuel wood and machine. At the same time the tropical forest provides benefits to the global community, in the form of biological diversity, generate materials and carbon sequestration (F.A.O, 1993)

Forest provides excellent protection of the soil against erosion it maintains their rate of evaporation, interception and infiltration and therefore generates only small qualities of run-off Deforestation as it implies, is the process by which one area deprived of existing natural forest or vegetation resources this is by systematic falling, stumping and total clearing of the existing vegetation in a forest in order to make room for available farmland or to create industrial or residential estate. It normally results in the destabilization of ecosystem FAO (1993) defined deforestation as the permanent conversation of the forest to non-forest land. Some deforestation is unavailable and necessary in the continent where majority of a

rapidly growing population derives its basic needs directly from forest land. But where deforestation is wasteful such as in the case of removal of forest trees essential for watershed protection and biodiversity conservation on the clearing of land unsuitable for agricultural production, it is eroding the region resources based and environmental stability (Sharma et al., 1994). Nowadays most of the deforestation that is presently taking place is wasteful.

Moreover, deforestation is defined as the cutting down and removal of all or most of the trees in afforested area, deforestation result from removal of trees without sufficient afforestation, this process alters the hydrologic cycle, altering the amount of water in the soil (ground water) and moisture in the atmosphere.

Some of the major environmental problems related with deforestation are lowering biodiversity, desiccation of soil that used to be moist, increase in temperature extremes, less recycling of the water, global wearing and more desertification and soil erosion, FAO (2014).

The biggest driver of deforestation is agriculture, farmers cut forest to provide more room for planting crops or grazing livestock, often many small farmers will clear a few acres to feed their families by cutting down trees and burning them in a process known as "Slash and burn" agriculture F.A.O (2014). Logging operation which provides the world's wood and paper products also cut countless trees each year, forest are also cut as a result of growing urban sprawl.

According to Katsina State Ministry of Environment Department of Forestry, there is high rate of deforestation in Katsina central which is increasing significantly, every day this has significant social economic and environmental consequences.

The objectives of this study are;

1) To assess the rate of deforestation in the study area
2) To assess the economic and environmental impact of deforestation in the study area
3) To find solution to these problems

RESEARCH METHODOLOGY

Study Area

Katsina Local Government Area is among the federation. It is halted as the core North end to Katsina state at a distance of about 45KM to the Niger Republic. It is geographically located between latitude 1108 and 1322 N and longitude 682 east of the prime meridian. The area is characterized by two climatic seasons, a cool dry season from December February, a hot dry season from March to May September annually, and have average temperature of 28 to 32°C (Abdu, 2020).

The people of Katsina local government area are Hausa and Fulani, farming and trading are the major economic activities of the people, the local government comprises of Katsina city and other villages like Dutsin safe, Barda, Shinkafi, Kwado and Modoji among others (Katsina State Government, 2018)

Method of Data Collection

The data were collected by the use of structured questionnaire consists of open and close-ended questions which gives the respondents alternative with the staff of various Agricultural Organizations these are (EEC), federal unit at KTAFU.

Sampling Method and Size

The sampling size of the study constitutes of the dwellers and staff of the local government area. Five (5) wards were selected out of the twelve (12) wards in the area. These wards consist of Kwado, Dutsen safe, Shinkafi, Barda and Modaji. Twenty (20) questionnaires were distributed to dwellers of each selected wards and ten (10) to members of the agricultural organizations in the local government area making a total of thirty (30) questionnaires.

Data Analysis

The data collected were analyzed using simple descriptive statistics (percentage & frequencies).

RESULT AND DISCUSSION

Table 1: Bio-data of the Respondents

	Frequency	Percentage
Gender Distribution		
Male	20	77%
Female	10	23%
Total	30	100%
Age of Respondents		
26 – 35 yrs	6	20%
36-45 yrs	12	40%
46 yrs and above	12	40%
Total	30	100%
Marital Status		
Married	23	78%
Single	7	22%
Total	30	100%
Occupation of the Respondents		
Trading	4	15%
Crop farming	14	45%
Animal production	8	30%
Hunting	4	15%
Total	30	100%
Level of Education of the Respondents		
Primary education	5	25%
Secondary education	2	5%
Post-sec. education	2	5%
Informal education	6	30%
Illiterate	15	40%
Total	30	100%

Source: Field survey 2022

The table showed that 77% of respondents were males while 21% were female. The table also shows that there is high percentage of respondents between 36-45 years respectively. This is probably due to the fact that people are more active and more productive of their peak age. It is then followed by age ranging between 26-35 years.

78% of the respondents are married, while 22% of the respondents are single. Table 1 above shows that there is high percentage of farming both of crop and livestock (45% and 30% respectively). This is probably due to the facts that people in rural areas regard farming as their main occupation as stated by Bello Yusuf (2000) in his study Prospect of deforestation and its socio-environmental impact.

The above table showed that the level of education is low. There is a high percentage of illiteracy and informal education.

Table 2 Size of Farmland

Responses	Frequency	Percentage
1-5 ha	16	53.3 %
6-10 ha	7	23.3 %
11-15 ha	7	23.3 %
Total	30	100%

Source: Field survey 2022

The above table has shown that the high percentage of respondents has small size of land. The dominance small size of land tenure, which is dominated by land inheritance, this may he probably one of the reasons that people tend to deforest the forest to increase the size of the land as started by Alexandries (2007). This tally with the findings of Bello Yusuf (2000) that reported 65% of respondent have very small size of farmland.

Table 3 Types of Crops Cultivated.

Responses	Frequency	Percentage
Millet	7	30%
Sorghum	7	30%
Maize	4	10%
Cowpea	4	10%
Groundnut	6	15%
Others	2	5%
Total	30	100%

Source: Field survey 2022

The table has shown high percentage cultivate millet and sorghum in the study area. This is followed by groundnut, cowpea, maize and others.

This is probably due to the fact that millet and sorghum tolerate drought soil conditions

Table 4 Importance of the Forest to Respondents

Responses	Frequency	Percentage
Yes	25	85%
No	5	15%
Total	30	100%

Source: Field survey 2022

The table shove has shown that the forest has importance to the people surrounding it. They benefit from the forest in terms of fuel wood, bush meat, shelter rearing their animals and increase their farmland; this also may increase the deforestation of the forest

Table 5 Importance Derived From the Forest by the Respondents

Responses	Frequency	Percentage
Animal rearing	10	33.3 %
Prevent erosion	5	16.6 %
Prevent desert encroachment	5	16.6 %
Hunting	4	13.3 %
Tourism	6	20 %
Total	30	100%

Source: Field survey 2022

The above table has indicated some of the importance of the forest to the respondents indicate 33.3 % is animal rearing

Table 6 Awareness of Deforestation in the Forest

Responses	Frequency	Percentage
Yes	28	95%
No	2	5%
Total	30	100%

Source: Field survey 2022

The table above shown that there is deforestation in the forest, this is confirmed from the response of the respondents.

Table 11 Awareness of Deforestation by Human Activities

Responses	Frequency	Percentage
Yes	25	90%
No	5	10%
Total	30	100%

Source: Field survey 2022

The above table shows that most of the respondents in the study area are aware of deforestation by human activities in the forest.

Table 12 Types of Human Activities in the Forest

Responses	Frequency	Percentage
Rearing of Animals	12	40%
Crop cultivation	4	15%
Tourism	4	15%
Hunting	10	30%
Total	30	100%

Source: Field survey 2022

The above table shows that there are human activities in the forest. This tally with the findings Bello (2012), he reported that the 40% of respondent testified that there are people who rear their animals in the forest.

Table 14 Effect of Human Activities in the Forest

Responses	Frequency	Percentage
Soil erosion	10	33.33%
Reduce soil fertility	2	6.67%
Desert encroachment	6	20%
Overgrazing	12	40%
Total	30	100%

Source: Field survey 2022

From the above table it is shows that human activities do cause problems, major of which is overgrazing by livestock activity. The above effect has conformed to view of Brandon (2017).

Table 15 Governmental Attempts to Solve Problems Of

Responses	Frequency	Percentage
Yes	25	90%
No	5	10%
Total	30	100%

Source: Field survey 2022

From the above table we can deduce that there are efforts by government to solve the problems of deforestation in the study area

Table 16 Respondents Suggestion on how to Preserve the Forest Flora and Fauna

Responses	Frequency	Percentage
Afforestation	16	33.33 %
Forest guard	8	25%
Participation of private sector	6	5%
Total	30	100%

Source: Field survey 2022

The table shows suggestions by respondents on ways to preserve the forest flora and fauna. High responses for afforestation was recorded. The suggestion conforms with Abegnube et al, (1991) and Baumer (2010).

Table 18 Campaigns Made on Effect of Deforestation

Frequency	Responses	Percentage
Yes	25	90%
No	5	10%
Total	30	100%

Source: Field survey 2022

The above table has shown that the people are aware of campaigns made to them on deforestation and how to counter its effect.

Table 19 Related Authorities Concerned With Deforestation.

Responses	Frequency	Percentage
Non-Govt. Organization	5	16.66 %
IFAD	5	16.66 %
Local Govt. forestry unit	12	40 %
Forestry Dept. Min. of Agric	8	26.66 %
Total	30	100%

Source: Field survey 2022

Above table shows that there are many governmental and non-governmental agencies concerned with the campaign. The local government forestry unit however has the highest response by respondents as the authority most concerned with deforestation in the study area.

CONCLUSION

From the information gathered, it has shown that majority of the respondents in the study area lack western education. Even though the farmers lack western education they are aware to some extent the importance of the forest resources and its management. They are also aware of the importance of forests, the human activities taking place in the forest, the effects of deforestation on human activities in the forest are the problems facing the forest, the causes and solution to the problems, the attempt effort made by the government to solve such problems.

RECOMMENDATION

It is hoped that the authority concerned adopt the following recommendations.

1. Mass campaigns against indiscriminate felling of trees.
2. Forest resources management should be decentralized on the principle of responsibility including local people, private sector and the government at appropriate levels.
3. Employing more forest guards and providing them with enough working materials.
4. Declaration of certain forest areas as government reservation where gaming and felling are strictly prohibited.
5. Specified legislation on the minimum height of the tree to be felled
6. Re-planting of trees and grasses immediately they have been exploited for economic purpose.
7. There should be trained man power to manage the existing forest resources fast growing species of trees should be planted to curb the menace of deforestation
8. Traditional leaders should be involved in forest management Improving and dissemination forest related knowledge and technology.
9. Provide alternative energy sources in order to reduce the fuel wood used for cooking.

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