

AN ANALYSIS OF INCREASING DEFORESTATION ON THE ENVIRONMENT, A CASE STUDY OF PARABONGO SUB-COUNTY AGAGO DISTRICT

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Abstract

The study aimed at the analysis of increasing deforestation on the environment, a case study of Parabongo sub-county Agago district and it was guided by the following objectives; To establish the different reasons why people in Parabongo sub-county have resorted to cutting down trees, recklessly, to analyze the different environment management strategies adopted by the people in Parabongo sub-county to sustain the existing trees for proper environment management and to find out the impacts of deforestation on the environment management especially in Parabongo sub county. A sample survey and cross-sectional study designs were based on quantitative data collections designs for primary data were employed. Secondary data will bring through documentary review from literature related to the objectives of the study. Qualitative data was collected using interviews, observation and Focus Group Discussions (FGDs). The questionnaire was the major basis for quantitative data that was presented in a descriptive form. The results were compared and contrasted with secondary data to establish the magnitude of the problem. Both qualitative and quantitative data were analyzed statistically by use of the mean, percentage, ratio through elaborating the respondents' views in comparison with findings from the observation checklist. The finding from the study indicated that deforestation have a negative impact on the environment and according to the views from the respondents, 90% of the respondents agreed that deforestation has led to soil erosion in the area and 10% of them disagreed on the basis that soil erosion take place in areas which are hilly and steep. In the same way 75% of the respondents agreed that deforestation leads to climate change through interfering with the water cycle and hence causing desert like conditions and on the other side 25% disagreed with this that climate change is a natural issue which is determined by God. Citizens should be encouraged to increase on the practice of tree planning because trees absorb some of these poisonous gases like Carbondioxide, carbon monoxide, nitrogen among others. The government through NEMA and National Forestry Authority should increase on punishments that are imposed on those convicted of encroaching forests for example cumberers, charcoal burners because it involves shoot going into atmosphere.

Key words: deforestation, refugee communities and environment

Background of the Study

Deforestation is among the world's leading causes of environmental degradation where it accounts for over 50% (Nicholas et al., 2023). The most affected continents are Australia, Africa and South America. In Australia over 70% of the natural forests have

been cut for agriculture, in Africa over 60% have been cut mainly for fuel and agriculture while in South America they have been cut mainly for timber, agriculture and fuel. According to Mubiru, et al (2014), in South America over 40% the

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Amazon Forest has been cut in search for arable land and timber for different uses at domestic and industrial levels (Ivan & Kazaara, 2023). Though the governments concerned are trying their level best to combat the problem, they lack enough man power to patrol the whole forest. The intruders use the above weakness to cut trees in the forest. This has led to reduction of rainfall amounts received in different parts that surround the forest. Without Borders shows that refugee communities living along Thailand's border areas who were displaced by war and civil strife from neighbor countries, are being unfairly accused of forest destruction in Thailand (Christopher et al., 2022). Since 1984, mass exodus of Karen, Karenni, Mon and Shan ethnic peoples fleeing from war and human rights violations by the military dictatorship in Burma, have settled in Thai border areas, totaling 10 border camps with some 115,000 refugees in the year 2000. Additionally, some 100,000 Shan people, who have not been granted refugee status, are living and working as migrant laborers. Most refugee camps are located in national forest reserves, which provide food and shelter to the communities (Collins et al., 2023). Butler, (2006) discussed deforestation in three East African countries, namely; Uganda, Rwanda and Burundi. In Burundi, rates of forest clearing have risen by almost 48 percent since the close of the 1990s. In total, Burundi lost 137,000 hectares (47%) of its forest cover between 1990 and 2005. Today only some 152,000 hectares remain in the country, none of which is considered intact forest. As a result of this forest loss, gorillas and elephants are extinct in

Burundi. Uncontrolled cutting of trees for fuel wood coupled with agricultural clearing and livestock grazing are the main causes for the nearly complete deforestation of the country (Allan et al., 2023). The State of Environment Report for Uganda, (2000/2001) noted that, "At the beginning of the 20th century, 45% of the Uganda's surface area (108,450sq.km) was under forest cover. The present level of forestland is only 21% of its value in 1990 as a result of deforestation. The major causes of deforestation are provision of wood fuel and clearing of land for agricultural activities.

Statement of Problem

Despite the fact that Uganda has a large percentage of Arab land, degradation of land and the general environment is a significant problem. In general, it is estimated that 4% to 12% of gross national product (GNP) is lost due to environmental degradation (Lydia et al., 2023), 85% is due to soil erosion, nutrient loss and crop changes, where most arises. from deforestation (Emmanuel et al., 2023). In Agago District, deforestation to provide arable land, fuelwood, wood and charcoal for commercial purposes, among others, has been observed to continue and has led to prolonged droughts in some areas and a drastic reduction in rainfall received, impacting the environment (Gracious, 2023). This results in; ecological, hydrological, soil and atmospheric changes where flora and fauna life were negatively affected in Agago district. In Parabongo sub-district, temperatures are high, some streams and other small bodies of water have either dried up or experienced reduced water levels, rainfall is low

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and unreliable, and plants are heavily affected by wind. More than 50% of families in Parabongo District lacked sufficient food due to the effects of environmental degradation, particularly deforestation (Nicholas et al., 2023). Empirical information on the environmental impact of deforestation in Parabongo District, Agago District

is still lacking, yet vital in resource planning and development of appropriate strategies to control deforestation for environmental protection. This study therefore investigated the impact of deforestation on environmental degradation in Parabongo Sub-County, Agago District (Jac & Kazaara, 2023).

Specific objectives of the study

1. To establish the different reasons why people in Parabongo sub-county have resorted to cutting down trees, recklessly.
2. To analyze the different environment management strategies adopted by the people in Parabongo sub-county to sustain the existing trees for proper environment management.
3. To find out the impacts of deforestation on the environment management especially in Parabongo sub county.

Methodology

A sample survey and cross-sectional study designs were based on quantitative data collections designs for primary data were employed. Secondary data will bring through documentary review from literature related to the objectives of the study. Qualitative data was collected using interviews, observation and Focus Group Discussions (FGDs). The questionnaire was the major basis for quantitative data that was presented in a descriptive form. The results were compared and contrasted with secondary data to establish

the magnitude of the problem. Both qualitative and quantitative data were analyzed statistically by use of the mean, percentage, ratio through elaborating the respondents' views in comparison with findings from the observation checklist. This information was integrated into tables, charts and graphs. The study was conducted in Parabongo Sub-County, Agago district in the five villages namely; Otumpilli, Jinja, Wipolo, Olee, Yotkom. According to the 2002 Population census there were 371,806 people. The study

involved 80 respondents including the Farmers, NEMA officer, and NFA officer in the sub county. These parties were selected because they are assumed to be well versed with data related to the socio-economic impacts of deforestation on environment. The study involved a simple random sampling where respondents were selected from the area of study to represent the whole population of study. Every respondent had a chance to participate in the study. In descriptive research, a sample size of 10-50% is acceptable

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according to Mugenda and Mugenda (2003). All the managers shall be selected and a 30% of the population of the employees was used to obtain a sample size. Therefore, the sample size was 24 respondents. Data collected included both primary and secondary data where necessary. Primary data, these was collected from the sample population in the field whereby questionnaires and unstructured interview was employed to

gather data in the study, and secondary data was obtained from already existing publications and journals such as magazines, newspapers, and internet. The study resulted from both primary and secondary data was presented, interpreted, discussed and analyzed in related manner that made a uniform study report. The quantitative data were generated through the questionnaires to generate mean, ratios and percentages.

Data form questionnaires was first inspected and edited where items misunderstood with discovered, detected gaps and discarded off any irrelevant data that never generated enough ideas to the study. Both quantitative and qualitative data was presented in a descriptive form that involved; charts, graphs and tables using SPSS (Nelson et al., 2022)

RESULTS

Table 1 showing the respondents views as to why people resort to cutting down trees.

Reason	Number of respondents	Percentage
Agriculture	15	75
Settlement	8	40
Urbanization	5	25
Industrialization	5	25
Charcoal burning	13	65

Source: field research 2022

The findings from the field study on the reasons as to why people in Parabongo Sub County have resorted to cutting down trees are seen in the figure above. It is observed that 75% of the respondents (Majority) agreed that deforestation has been as a result of agriculture and crop cultivation in the area, 40% agree that deforestation is as a result of need land for settlement while as 50% agreed that urbanization and industrialization are the major causes of deforestation in Parabongo sub county while as 65% agree that it is as a result of charcoal burning (Jackline et al., 2023). Basing on the findings, agriculture and charcoal burning are the leading causes of deforestation in Parabongo Sub County with a percentage of 75% and 65% respectively.

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The impacts of deforestation on environment**Table 2 showing the impacts of deforestation un to the environment**

Impact	A	DA
soil erosion	18 (90%)	2(10%)
Climate change	15 (75%)	3 (15%)
Land sliding	10 (90%)	10 (90%)
Global Warming	10 (50%)	5 (25%)
Wild life extinction	5 (25%)	3 (15%)
Loss of bio diversity	5 (25%)	2 (10%)

Source: field research 2022

The finding from the study indicate that deforestation have a negative impact on the environment and according to the views from the respondents, 90% of the respondents agree that deforestation has led to soil erosion in the area and 10% of them dis agree on the basis that soil erosion take place in areas which are hilly and steep. In the same way 75% of the respondents agreed that deforestation leads to climate change through interfering with the water cycle and hence causing desert like conditions and on the other side 25% disagreed with this that climate change is a natural issue which is determined by God. 10% of the respondents urged that deforestation leads to the out-break of landslides in the area while 90% disagreed on the basis that the area is not hill/mountainous therefore there are minimum risks of landslides while 5% agreed that deforestation leads to wild life extinction. Conclusively, the study findings imply that deforestation have a negative impact on the environment.

Findings

In this report, an analysis of the increasing deforestation on the environment of Parabongo sub county, there has been deforestation due to population increase, Lumbering, charcoal burners, agriculture has been practiced by people in forestry areas and this has resulted into destruction of forests hence leading to famine.

The Cause of deforestation in Parabongo Sub County.**Received: 14.11.2023****Accepted: 20.11.2023****Published on: 30.11.2023**

Basing on the research conducted from the field in areas of Parabongo, some of the causes of deforestation in Sub County include need for land for agricultural activities, settlement, over grazing, charcoal burning, urbanization and industrialization (Allan et al., 2023). It was proved that agricultural activities were the main cause of deforestation in Parabongo Sub County.

The effects of forest encroachment on the environment of Parabongo sub county.

The second objective was to find out how encroachment of forests has affected the environment of Parabongo Sub County. Some of the effects of deforestation include climate change, soil erosion, wild life extinction, land slide and global warming. The respondents argued that soil erosion was the main effect of deforestation in Parabongo Sub County.

Possible solutions to reduce the encroachment of forests

The third objective was to find out the possible solutions in order to reduce the encroachment of forests. The study shown that improving strict laws on forest resources is the vital solution to the problem of encroachment of forests. Mitchell Beazley states that forest contains an enormous store of carbon which is released in air. Findings also showed that resettlement of people can help to prevent the encroachment of forests and controlling fertility and migration can also be helpful as a solution towards the encroachment of forests.

Conclusion

In conclusion, the researcher has tried to cover up the effect of deforestation on the environment. On the population growth, the findings indicate that due to high population, need of land for agriculture, settlement, urbanization and industrialization people encroach forests in order to carry out economic activities such as charcoal burning, lumbering and settlement due to the fact that there is a lot of poverty among people due to the high population and this results into the encroachment of forests (Allan et al., 2023).

Recommendations

Strict laws should be put and implemented to control the encroachment of forests for example those who carry out charcoal burning, cutting trees for settlement. This is because many people carry out charcoal burning in order to earn a living therefore punishments like imprisonment in order to solve the problem of encroachment of forests.

People should be sensitized in order to apply family planning which will enable them to control fertility and

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this will reduce the encroachment of forests due to the low population.

Recommendation to environmentalists on the issues of encroachment of forests.

Citizens should be encouraged to increase on the practice of tree planting because trees absorb some of these poisonous gases like Carbon dioxide, carbon monoxide, nitrogen among others. The government through NEMA and National Forestry Authority should increase on punishments that are imposed on those convicted of encroaching forests for example lumberers, charcoal burners because it involves shoot going into atmosphere.

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