
ASSESSMENT OF ROLES OF TREES TO RURAL LIVELIHOOD IN BUNZA LOCAL GOVERNMENT, KEBBI STATE

Umar I., Zogirma, F.U., Gwimmi D. P., Ambursa A. S., Abdulrahman A. and
Mustapha, M

Department of Forestry and Fisheries, Kebbi State University of Science and Technology,
Aliero, Kebbi State
iliyasudyu@gmail.com,

Abstract

The importance of tree to people and the environment was the aim of this paper. The Research was carried out at Bakura Local Area of Kebbi State. Questionnaire was used to get feedback from the farmers. The results that show the socio-economic status reveal that most of the dwellers in the local government use trees for shelter, food, medicinal, fodder, and fuel wood. Majority of the respondents (57.1%) in the area reported that they were married, (24.3%) were single, divorce (16.8%) while widows have (1.5%). This indicated that majority of the respondents have family responsibilities to cater for which affect their farming activities. Majority of students were male and only few were female, adults dominate the study area. On the education level, it was reported that primary education recorded (30%) of the respondents in the study followed by tertiary education (27.1%), secondary education had (11.5%) while quranic education had (15.9%). It is recommended that farmers should practice agro-forestry services, because of its dual benefits that people got from it and it also leads to successful recycling of nutrients and soil protection as well as improving their livelihood and agricultural production. Government should provide alternative source of living in the area so as to reduce the pressure on forest trees.

Keywords: Questionnaire, Environment and Tree Species

INTRODUCTION

According to (FAO 2010) Forests are dominant terrestrial ecosystem of the earth, which are distributed across the account to 75% of the gross primary production of earth biosphere, and contain 80% of the earth plant biomass (FAO 2010). The distribution and abundance of different tree species over a landscape is what constitutes diversity in respect of tree species (Tripath, 2009).

In every land and in all age forest have an influence on the progress and welfare of human being. The progress from premature cave dwellers to the present civilized State cannot be held without frequent references to trees and their product. Trees provide early inhabitant with food, medicine, fuel, shelter, protection and other needs (FAO 2010). Today over 10,000 products are reportedly made of wood. Vegetation provide food, shelter habitat and other number of services to humans, trees are such crucial components of ecology system that have productive and recreative functions this agreed with Rima, K (2019). They control soil erosion, stabilize regional and global climate change service as carbon sink and act in pollution control. Another issue worth noting is that tree height and length of the live crown do not affect the estimate of canopy cover, whereas canopy cover increase as the trees become taller, and as the height to the live base of the crown decreases (Husch, *et al.*, 2003). Due to major difference in terms of life form and regeneration with understory plant species playing important roles in the overall plant species diversity in such ecosystem (Gilliam, 2007). Pressure on forest especially in the tropical world, due to economic resources provision from it now receive geometric increase of human population in the region (Salami, 2006). Thus this has led to unabated deforestation, which has been recognized as one of the major drivers of biodiversity loss in many region of the world (Ojonigu *et al.*, 2010). According to FAO (2005), in each year about 13 million hectares of world's forest are lost due to deforestation and other anthropogenic factors. As a matter of fact one of the major concern of forest managers in resources development is the maintenance of plant diversity especially the predominant trees (Aubert *et al.*, 2003; Ellum *et al.*, 2010). Deforestation and overexploitation of trees and clearing of natural vegetation as a result of conversion of forest into the agricultural lands, shifting cultivation, due to infertility of the farm lands, high or excessive cutting of trees for firewood and local roofing and converting woody trees into logs, overgrazing, bush burning, debarking of trees for traditional medicine in Bunza local government area, especially the recent use of bark of (*Diospyros mespiliformis* with the English name Ebony tree, which is called *Kanya* in Hausa due to its medicinal value which are used by many dwellers in curing many diseases in the study area.

The negative effect of poor plant distribution in the study area causes desertification, high temperature, low humidity and drought. Therefore, an accurate data is needed to have information on tree species available for proper planning and sustainable management of trees in the study area.

Study Area

The study was carried out in Bunza Local Government Area (LGA) of Kebbi State, Nigeria. The Local Government has its administrative headquarters in Bunza township. The Local Government was created in 1975 from former Sokoto State during the local government reform of the administration of General Murtala Ramat Mohammad. Bunza is bounded in the

east by Kalgo Local Government Area, in the north by Dandi and Arewa Local Government in the south and west by Suru Local Government Area.

Bunza local government fall within Kebbi central senatorial zone alongside with Birnin Kebbi, Aleiro, Gwandu, Kalgo, Koko/Beese and Maiyama Local Government Areas. The Local Government forms a federal constituency alongside with Birnin Kebbi and Kalgo Study Areas. Agriculture is the main occupation of the inhabitant of Bunza Local Government has a population of 1, 2746 and it lies on the latitude $12^{\circ}05,98N$ and Longitude $4^{\circ}01,16^{\circ}E$.

Sampling Techniques

The study area and the respondents were purposively selected from four districts in Bunza Local Government Area of Kebbi State, which include Bunza, Zogirma, Tilli and Raha, districts. Assessment of the importance of tree to the people and environment were asses with the aid of questionnaire which were administered to 25 purposely selected respondents in each village making a total of 100 questionnaires and they were retrieved at the end of the administration.

Data Analysis

The data collected were subjected to descriptive statistics such as bar chart, frequency distribution Table and percentage were used for the interpretation of the results.

RESULTS

Socio-economic Characteristics of the Respondents

Table1: showed that 26.8% were within the range of 30-40 years, 25.3% of the respondents were within the age of 40-50 years, 17.1% of the farmers have attained the age range of 20-30, 18.7% of the farmers were 50-60 years of age, while 60-70 years of age range constituted 6.2% of the total respondents. Males formed the majority of the respondents with 99.1% and female the minority with 0.9%. Majority of the respondents (57.1%) in the area reported that they were married, (24.3%) were single, divorce (16.8%) while widows have (1.5%). This indicated that majority of the respondents have family responsibilities to cater for which affect their farming activities.

On the education level, it was reported that primary education recorded (30.%) of the respondents in the study followed by tertiary education (27.1%), secondary education had (11.5%) while quranic education had (15.9%).

Table 1: Socio – economic characteristic of the respondents (100)

Variables	Respondent	proportion (%)
Age (Year)		
20-30	55	17.1
30-40	86	26.8
40-50	81	25.3
50-60	60	18.7
60-70	20	6.2
70-80	18	5.6
Total	320	100
Married		
Married	183	57.1
Single		
Single	78	24.3
Divorced		
Divorced	54	16.8
Widowed		
Widowed	5	1.5
Total	320	100.0
Educational attainment		
Primary	96	30
Post-Secondary	84	27.1
Qur'anic education	51	9.3
Adult class	30	15.9
Nomadic	19	5.9
Total	320	100
Occupation		
Farming	120	37.5
Craft	78	24.3
Business	69	21.5
Civil servant	53	16.5
Total	320	100.0

Source: Field survey 2018.

Table 2: The result reveals that, (24%) the respondent in the study area agreed that majority of them utilized trees for soil erosion control, (18.1%) of the respondents made mention that, the use of tree plant is to restore soil fertility, (12.8) prevention of desert encroachment, wind while only 7.8% said the use of a forestation were provision of shade. This showed that insufficient soil cover poses problem in afforestation. In Nigeria, Lal *et al.* (1979) observed that afforestation improve the cover of soil nutrient. The result obtain show that fuelwood has highest of 23.1%, followed by food 22.1%, medicine 19.35 fodder 6.25 while manure has the least 5.3%. This agreed with Koh *et al.* (2004) & Pimm and Raven (2000). Habitat destruction is the leading cause of species extinction and biodiversity loss in natural ecosystems, decreasing of species are numerous, but the most important is the human interference in the form of burning and clearing for cultivation, fuel wood, fodder etc. According to Thomas, Ryan (2019), forests are disappearing at an alarming rate owing to deforestation for extraction of timber and other forest produce or total conversion to other uses. Trees are one of the major structural components of forest ecosystems. Trees can reduce air temperature by blocking sunlight. Further cooling occurs when water evaporates from the leaf surface. The conversion of water to air vapour, a chemical process removes heat energy from the air.

Assessment of Roles of Trees to Rural Livelihood

Table 2: How many trees did you know?

Name of tree	Respondent	%
<i>Azadirachta indica</i>	43	13.4
<i>Butilaria paradozom</i> 17	5.3	
<i>Vitex doniana</i>	38	11.8
<i>Mangifera indica</i>	72	22.5
<i>Fiscus cycomorus</i>	21	6.5
<i>Combretum glutinosum</i>	61	19.0
<i>Adamsonia digitata</i>	78	7.8
<i>Hyaphane theobic</i>	30	9.3
<i>Philiostigma toningii</i>	13	4.0
Total	320	100
What Importance Did You Derivev From Trees?		
Shelter	37	11.5
Medicine	62	19.3
Food	71	22
Fodder	20	6.2
Manure	17	5.3
Fuel wood	74	23.1
Farm tools	39	12.1
Total	320	100
What are the contributions of trees to your environment?		
Soil erosion control	77	24.0
Desertification control	39	12.1

Shelter belt	31	9.6
Wind break	25	7.8
Restoration of soil fertility	58	18.1
Beutification	41	12.8
Cooling of Environment	49	5.3
Total	320	100
Which part of tree did you use more?		
Fruit	44	13.7
Nut	33	10.3
Bark	68	21.2
Stem	24	7.5
Root	71	22.1
Leaf	52	16.2
Flour	28	8.1
Total	320	100
Is a tree having any disadvantage to you?		
Reducing the size of farm land	139	43.4
Reducing crop yield	41	12.8
Reducing light penetration from the sun	125	37.5
None	15	4.6
Which value does a tree add to your farm crops?		
Increasing yield	62	19.37
Conserving mulching	33	10.3
Make plant grow fast	90	28.1
Increasing farmers' income	44	13.7
Total	320	100

DISCUSSIONS

Table1: showed that 26.8% were within the range of 30-40 years, 25.3% of the respondents were within the age of 40-50 years, 17.1% of the farmers have attained the age range of 20-30, 18.7% of the farmers were 50-60 years of age, while 60-70 years of age range constituted 6.2% of the total respondents. Males formed the majority of the respondents with 99.1% and female the minority with 0.9%. This proved that male dominate agricultural work force in the study area. It agrees with Anselm A. E (2010) who reported that male dominated the agricultural workforce in Nigeria. The high proportion of males to females may be because religion and custom play vital roles in the livelihoods of the study area. For instance, males who are mostly the household heads, have more access to land and participate more in community activities than females. Majority of the respondents (57.1%) in the area reported that they were married, (24.3%) were single, divorce (16.8%) while widows have (1.5%). This indicated that majority of the respondents have family responsibilities to cater for which affect their farming activities.

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Conclusion

This study discovers the existence of different trees in the study area. But these species were being endangered as a result of over exploitation, fuel wood, charcoal production, bush burning and agricultural activities led to the environmental degradation. Rural people who engage into marketing of fuel wood and charcoal production and illegal felling of trees contribute to the discourage in making forestry research in the study area, Kebbi State, and Nigeria at large.

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Thomas, Ryan (2019). "Fundamental of Ecology". *Marine Biology: An Ecological Approach* (reprint ed.). Waltham Abbey, Essex: Scientific e-Resources (published 2020). p. 86. ISBN 9781839474538. Retrieved 8 March 2020. A habitat is an ecological or environmental area that is inhabited by a particular species of animal, plant, or other type of organism. The term typically refers to the zone in which the organism lives and where it can find food, shelter, protection and mates for reproduction.