An Assessment of the Impact of Taraba State University on the Livelihood of the People of ATC and its Environs, Ardo-Kola Local Government Area, Taraba State Nigeria

[1]Yusuf, Mohammed Bakoji (Ph.D), [1]Abba, Umar Jauro and [1]Isa, Muhammad Salim

Department of Geography, Faculty of Social & Management Sciences, Taraba State University, Jalingo, Nigeria. Email: mbyusuf36@yahoo.com

Abstract

In Nigeria, people's livelihood is being threatened by developmental projects such as the establishment of educational institutions. It poses a major threat to agricultural lands and hence, human livelihood. This study examined the impact of the Taraba State University on the livelihoods of the host communities. A multistage sampling technique was used and data derived from a combination of direct field observations; interviews and questionnaire administration from randomly selected 210 respondents. The findings show that the majority of the respondents are male, married and have a generally low level of formal education with a varied but generally, low average monthly income. The study also revealed that the male respondent's major occupation was farming, but all diversified their livelihood options into non-farming activities after the establishment of the university. The changes in the physical development and in the design and architecture of the houses were attributed to the changes in peoples' economic status and the influx of migrants into the area. Hence, it is therefore recommended that government and microcredit institutions should assist in providing soft loan and strategic business opportunities so as to empower and improve the living conditions of the people to venture into full-size multiple livelihood options. The government should also provide infrastructures such as police post and modern market in the study area.

Keywords: Ardo-Kola, Impact, Livelihood, Taraba State, University

Introduction

Urban expansion has remained the single most important environmental and socioeconomic phenomenon impelling the livelihood of the human populace in the world (Castillo, 2003; Maina, 2013). It poses a major threat to agricultural lands and in many cases, benefits mainly the middle and upper-income group (Oluseyi, 2006). Urban expansion or new cities are a consequence of population increase due to natural increase and/or rural-urban migration often driven by private development interest, more demand for industrial, commercial, and institutional areas (Jennifer, 2001).

Although, Universities are ideal environment structurally, functionally and economically as a result of planning (Thuo, 2008), in Nigeria, like in most African countries, establishment of

Universities has remained the principal agent of urban expansion or new cities development with a significant impact on their host communities' sources of livelihood, leading to diversification of the sources in order to have a means of survival as a consequent of loss of employment viz farmlands, forestlands, and grazing lands (Daniella, 2013).

Livelihood can be defined as a means of earning money in order to live (Jacobsen, 2003). Also, Castillo (2003) mentioned that livelihood mean employment, job, living, maintenance, means of support, occupation (source of income) subsistence, sustenance or work. Sources of livelihoods are essential in a human's life, as it determines the way of living. However, most studies conducted on the human livelihoods such as those of Mbaiwa (2011); Idrisa (2008); Cinner, *et al.,* (2010); Jacobsen (2003); Liverpool-Tasie (2011); Omonona (2007); Otu (2014); Saleh and Mustafa (2018); Samuel, *et al.,* (2016) have focused on the causes of livelihood options of Peri-urban farmers. Very few studies in the literatures focused attention on the impact of livelihood of the populace, particularly of host communities of a university. Perhaps, the reason for this scanty research effort is that most researches and government policies are largely unconcerned with university host communities, and often regard their livelihoods as a simple problem of individual choice rather than a universal problem in which people lose their main source of dependence for living resulting in high or low economic conditions of the populace. While, understanding changes associated with the livelihoods of the inhabitants of the University host communities is relevant to the various levels of government agencies and policies in the country and most essentially if proper intervention measures are to be advanced and long-term management strategies successfully adopted.

Therefore, it is on this premise that this study seeks to investigate the types of livelihood alternatives adopted by people of ATC and environs impacted by the establishment of the Taraba State University. A study like this will be able to reveal a wide range of variation in the ability of the people and to understand the manner in which Taraba State University has impacted on their livelihood and alternatively on how well to manage the challenges. Moreover, the choice of livelihoods varies amongst individuals, communities and over time and contingent by the perception of opportunities and access to market, land, water, capital, and know how. Therefore, results from elsewhere cannot be extrapolated for the study area. Thus, this study constitutes an important contribution as no previous study has been undertaken in this part of the country, and it will complement the few existing studies from other parts of the country.

Research Methodology

Description of the Study Area

The study area is located between latitude $8^{0}30^{1}$ and $8^{0}45^{1}$ of the equator and longitude $11^{0}10^{1}$ and $11^{0}30^{1}$ of the Greenwich meridian. The study area cuts across two electoral wards Lamido Borno and Jouro-Yinu of Ardo-Kola local government areas (fig. 1). The climate of the study region is characteristic of a humid tropical region, characterized by seasonal alternation of moist maritime air mass and dry continental air mass (Yusuf et al, 2015). The area experiences the onset of the rainy season in April and a peak in July and August, with a Cessation in October while the dry season lasts from November to March (Yusuf et al., 2017).

The average temperature regime of the study area is generally low to moderate throughout the year, with the average maximum temperature 32°C and minimum temperatures 20.2^0C. The mean annual evaporation is approximately 10mm; relative humidity is constantly high above 70% at mid-day and as low as 16.3% between the months of August/September and February/ March, respectively. The area receives high radiation of 5.7 hours per day and moderates to light wind speed/run (Yusuf et al, 2017).

The study area lies under the Northern Guinea Savanna belt of Nigeria's vegetation, with scattered trees and woody shrubs as well as extensive grass cover. *Myparrhemia violescens spp, Penisetum pedicellatum, Schizachyrium exile, Typha, wind sorghum, Calotropis prosperous, and Ipomeas sheep* are the dominant grass and weed species, while *Vitellaria paradoxa, Tamarindys indicia, Parkia species, Aegyptiaca and Balantie species and Neem, Eucalyptus, Mahogany, Date palm, Cashew, Mango, and Guava,* are the dominant indigenous and exotic tree species (Oruonye, 2014). The trees are deciduous, in other words, they shed their leaves during the dry season so as to cope with the long dry season. However, the vegetation cover is declining mainly in favor of physical development due to the rapid expansion of the study area.

The 2006 census puts the human population of the study area at 10, 785, which comprised of 5, 732 males and 5, 053 females (NPC, 2007). The population of the study area was projected to reach 16,095 with 9,109 males and 6,986 females with an annual growth 3.1% in 2018 (NPC, 2019). The implications of such high growth rate include pressure on land and consequently, expansion of the area. The residents are predominantly farmers and practice rain-fed and irrigation farming and livestock keeping. However, with the establishment of the Taraba State University, farming activities gave way to non-farming activities.

Methods

Data Collection Methods

To achieve the objectives of the study a qualitative approach using a case study design (multiple methods) was employed. The design involved two major components for gathering the necessary information.

The first component of the research methodology involved field observation aimed at collecting information on the people, housing design and architecture, the agricultural system, and the geophysical characteristics. Also are their socioeconomic situations, their attitude, and perception toward the establishment of the Taraba State University, and factors influencing their decisions. Such an understanding was used in refining the scope of the research problem, identifying major information gaps, and guiding the sampling process, and in designing and preparing the household survey which is the core instrument for collecting the data.

The second and the major component of the research methodology was the conventional household survey, using a structured questionnaire. This component was conducted to understand peoples' socioeconomic conditions, land ownership, agricultural products, and practices and to evaluate people's perception and knowledge about the impact of the Taraba State University on their livelihoods. However, informal interviews with key informants (the local people, especially the older ones) were carried out in three sessions, firstly, before the questionnaire administration,

secondly, during the questionnaire administration with some randomly selected respondents and thirdly, after the questionnaire survey. The desire for the third session was to complement and cross check the information provided by the randomly selected respondents to ensure the validity of the acquired data. Thus, the goal of the multiple methods was to obtain differently, but complementary data on the same topic to best understand the research problem. The study was conducted in two sessions, firstly between the months of June and August 2018 when intensive farming activities were ongoing and secondly, between the months of January and March 2019 when non-farming activities outweigh.

Sampling Techniques

The sampling techniques were undertaken in two stages: Firstly, was the division of the study area into residential wards and used as a cluster for sampling purposes. Secondly, from these clusters (residential wards) a simple random sampling technique was then applied, first in selecting residential households and subsequently in picking the individual respondents. A total of 210 respondents was randomly selected and used for this study. According to Dell *et al.*, (2002), a sample size of 210 respondents is adequate to represent a study population of 20,000 people and above. Thus, given that the study area had a total population of 16,095 in 2018, the sample size taken from the population remains appropriate to represent the population and allows the findings to be generalized to the wider population.

Method of data analysis and presentation

Descriptive statistical analysis of Statistical Package for Social Sciences (SPSS 22) software was used to analyze the questionnaire data. The analysis method employed was descriptive statistics, primary frequency converted to percentages. The findings of the study were mostly presented in Tables.

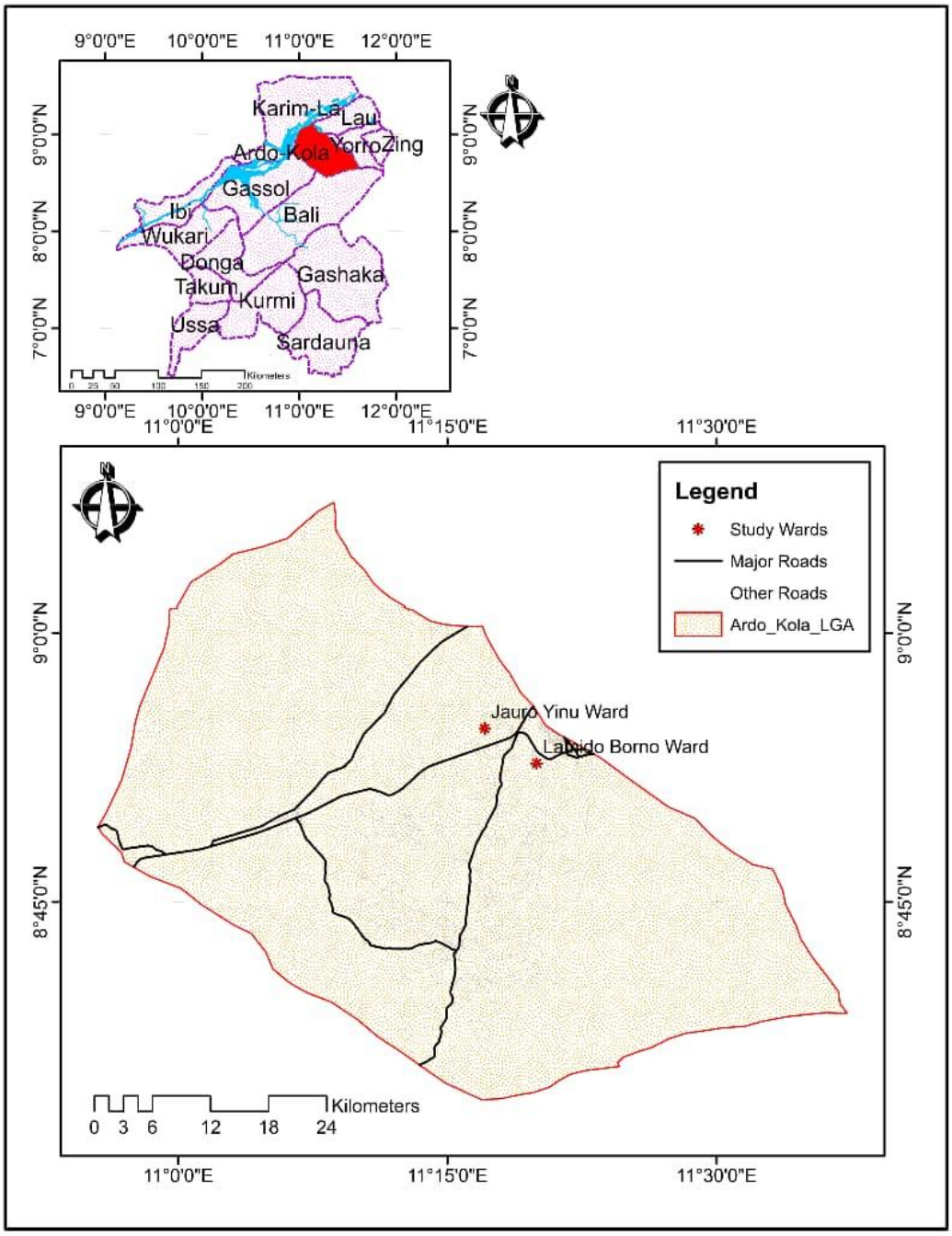

Fig.1: Map of the Study Area

Results and Discussion

Table 1: Demographic Characteristics of the respondents

Demographic Variables		**Respondent**				**Total**	
		Male		**Female**			
		No	%	No	%	No	%
AGE	20-30 yrs	23	15.4	20	33.3	43	20.5
	31-40 yrs	59	39.3	25	41.7	84	40.0
	41-50 yrs	51	34.0	13	21.7	64	30.5
	51-60 yrs	15	10.0	2	3.3	17	8.0
	61yrs and above	2	1.3	-		2	1.0
	Total	**150**	**100**	**60**	**100**	**210**	**100**
Educational status	Non-formal education	55	36.7	28	46.7	83	39.5
	Primary education	40	26.7	19	31.7	59	28.1
	Secondary education	32	21.3	13	21.6	45	21.5
	Tertiary education	23	15.3	-	-	23	10.9
	Total	**150**	**100**	**60**	**100**	**210**	**100**
Marital Status	Single	21	14.0	12	20.0	33	15.7
	Married	129	86.0	44	73.3	173	82.4
	Divorced/Widow	-	-	4	6.7	4	1.9
	Total	**150**	**100**	**60**	**100**	**210**	**100**

Source: Field Survey, 2018-2019

The findings in Table 1 show that the age distribution of respondents ranges between 20 and 61years and above. The greater proportions of respondents are within the age bracket of 31-40 years. This suggests that the respondents are still in their economically active stage. People of middle-aged are generally more enthusiastic and have more physical vigor and family responsibilities than the young and old people. There were more male (71.1%) to female (28.6%) sampled with the majority married. Most of the respondents have a generally low level of formal education with the majority having only primary education. During transect survey, most people interviewed confirmed the above finding with respect to the low level of formal education, when they stated that, they were not given adequate opportunity to continue up to the secondary level. Thus, the low proportion of the high level of formal education among the respondent groups implies that the many of them may not be in a better position to be aware of, and/or engaged in a formal type of occupation and access to capital.

Table 2: Occupation of the respondents before the establishment of Taraba State University.

Major Occupation	Respondent				Total	
	Male		Female			
	No	%	No	%	No	%
Rain-fed Farming	102	68.0	2	3.3	104	49.5
Irrigation Farming	14	9.3	-		14	6.7
Fishing	6	4.0	-		6	2.9
Butchering	-		-		-	
Provision Selling	1	0.7	-		1	0.5
Hair dressing	-		6	10.0	6	2.9
Selling and processing of vegetable oil	-		4	6.7	4	1.9
Selling groundnut Cake (Bakuru)	-		8	13.3	8	3.8
Food selling (indoor)	-		3	5.0	3	1.4
Selling beans cake			5	8.3	5	2.4
Grinding machine	2	1.3	-		2	1.0
Animal husbandry	17	11.3	-		18	8.6
Commercial tri-cycle riding	6	4.0	-		6	2.9
Processing and selling of wine (Burukutu)	-		32	53.3	32	15.2
Tailoring	1	0.7	-		1	0.5
Shoe making	1	0.7	-		1	0.5
TOTAL	**150**	**100**	**60**	**100**	**210**	**100**

Source: Field Survey, 2018-2019

The findings in Table 2 revealed that farming activities (rain-fed and irrigation) constituted over half (56.2%) of the respondent's occupation in the study area while nonfarm activities formed the remaining (43.8%). The respondents are engaged in multiple livelihood options, with more than two-thirds of the male respondents engaged in farming as a major source of income while, female 3.3%. The smaller percentage of female farmers sampled, based on oral interviewed with the elders is reflective of the fact that women in general, and in the study area, in particular, depend on their husbands for a livelihood. The women rarely claim ownership of farms and usually regard their husbands as the owners of the family farms. However, the many of the female (53.3%) sampled were engaged in processing and selling of local wine (Burukutu). This research finding clearly provides support for the conclusion of Yusuf *et al.*, (2016), which indicated that gender is an important social factor that determines the kind of profession that suits a particular sex. Some professions are referred to as male dominated while others are said to be female dominated.

Table 3: Livelihood options adopted by the respondents after the establishment of Taraba State University

Major Occupation	**Respondent**				**Total**	
	Male		**Female**			
	No	%	No	%	No	%
Butchering	1	0.7	-	-	1	0.5
Provision selling	8	5.3	-	-	8	3.8
Trading	5	3.3	2	3.3	7	3.3
Hair dressing/weaving	-	-	7	11.7	7	3.3
Selling and processing of vegetable oil	-	-	6	10.0	6	2.9
Selling groundnut Cake (bakuru)	-	-	5	8.3	5	2.4
Food selling (restaurant)	-	-	6	10.0	6	2.9
Selling beans cake	-	-	5	8.3	5	2.4
Grinding machine	2	1.3	-	-	2	1.0
Animal husbandry	15	10.0	1	1.7	16	7.6
Commercial tri-cycle riding	13	8.7	-	-	13	6.2
Processing and selling of local wine (Burukutu)	-	-	10	16.7	10	4.8
Tailoring	5	3.3	-	-	5	2.4
Shoe making	5	3.3	-	-	5	2.4
Transporters (inter-city)	8	5.3	-	-	8	3.8
Selling second hand clothes	7	4.7	1	1.7	8	3.8
Selling sugarcane	5	3.3	-		5	2.4
Selling fish	9	6.0	4	6.7	13	6.2
Patient Medicine Store	4	2.7	-	-	4	1.9
Barbing	4	2.7	-	-	4	1.9
Block selling	8	5.3	-	-	8	3.8
Laborers/ Bricklayers	19	12.7	-	-	19	9.0
Land vendors (dealers)	3	2.0	-	-	3	1.4
Selling cooked corn & G/nut	2	1.3	8	13.3	10	4.8
Selling and processing of locus beans seasoning	-	-	2	3.3	2	1.0
Laundry	2	1.3	-	-	2	1.0
Selling of textile material	2	1.3	2	3.3	4	1.9
Water vendor	6	4.0	-		6	2.9
Repairing of electrical and electronic equipment	9	6.0	1	1.7	10	4.8
Carpentry	7	4.7	-		7	3.3
Welding	2	1.3	-		2	1.0
	150	**100**	**60**	**100**	**210**	**100**

Sources*: Field Survey, 2018-2019*

The finding in Table 3 shows that the respondents engaged in diversified livelihood options after the establishment of the University. Some of the new economic activities include laborers/bricklayers (9.0%), repairing of electrical and electronics equipment (4.8%), block selling (3.8%), selling of second hand clothes (3.8%), carpentry (3.3%), water vendor (2.9%), Patient medicine store (Chemist) (1.9), selling of textile material (1.9), and land vendors (agents and dealers) (1.4%). This implies that additional livelihood options were undertaken as a result of the changes that took place structurally and economically due to the establishment of the university. During transect surveyed, most people interviewed confirmed the above findings when they stated that more economic activities have derived from the study area owing to the establishment of the Taraba State University.

Similarly, increases in some socioeconomic activities and decline or total disappearance of some particular occupations were also recorded. For instance, riding commercial tricycle has shown a phenomenal increase from 2.9% in table 2 to 6.2% in table 3; Food selling has also remarkably increased from 1.4% in table 2 to 2.9% in table 3, with a change in the pattern of selling which formally use to be in-door but now in a form of the restaurant. The practiced of hairdressing on a commercial basis has increased from 2.9% in table 2 to 3.3% in table 3. The occupations that decline or disappeared as a result of the respondent's choice or preferences include Butchering and fishing.

In addition, most of the people interviewed indicated that the males now prefer to engage in block selling, commercial tri-cycle or serve as laborers in block industries or in any form of construction activities and indirectly into farming by reinvesting their income from non-farming activities. This is achieved by employing the services of hired laborers to farm for them. Thus, the University has significantly positively impacted on the livelihood options adopted by the respondents, most especially with some level of variability in gender and choice of livelihood options.

Table 4: Monthly income and sources of capital of the respondents

Monthly Income (N)	**Respondent**				**Total**	
	Male		**Female**			
	No	%	No	%	No	%
Below 15,000	79	52.7	37	61.7	116	55.2
16000-25,000	37	24.7	13	21.7	50	23.8
26,000-35,000	11	7.3	6	10.0	17	8.1
36,000-45,000	9	6.0	4	6.6	13	6.2
46,000-55,000	7	4.7	-	-	7	3.3
56,000-65,000	5	3.3	-	-	5	2.4
66,000 and above	2	1.3	-	-	2	1.0
Average (11,000)						
Total	**150**	**100**	**60**	**100**	**210**	**100**

Source: Field Survey, 2019

Findings in Table 4 show considerable variations in the monthly income of respondents and their sources of capital. Generally, the average monthly income was very low. The majority 55.2% female and 52.7% males are within the category of below N15, 000 monthly incomes. Only a small proportion, totally to about 22.6% of the respondents sampled earned from N26, 000 and above. The lower level of monthly income among the people as recognized from the in-depth interview was their over-dependent on their farm produce as their source of income. Thus, the inadequate or low level of formal education and poverty (no off-farm income) are two key characteristics, which impact on peoples' perceptions, which result in lower levels of monthly income.

Table 5: Sources of capital of the respondents

Source of Capital	**Respondent**				**Total**	
	Male		**Female**			
	No	%	No	%	No	%
Loan	79	52.7	37	61.7	116	55.2
Inheritance	37	24.7	13	21.7	50	23.8
Reinvestment	11	7.3	6	10.0	17	8.1
Selling of Livestock	9	6.0	4	6.6	13	6.2
Property business	7	4.7	-	-	7	3.3
Compensation/ Reinvestment	5	3.3	-	-	5	2.4
Selling of plots of land	2	1.3	-	-	2	1.0
Total	**150**	**100**	**60**	**100**	**210**	**100**

***Source**: Field Survey, 2019*

Findings in Table 5 shows that the respondent's major sources of income/capital for the start-up of other economic activities are mostly sourced from loans and inheritance which constituted more than two third 79% of the respondents sources of income/capital. Other sources in order of significance are reinvestment of fund, selling of livestock, and property business as in the case of block making industry, Compensation / reinvestment and selling of plots of land.

Table 6: Housing Quality in the study area

Source: Field Survey, 2018-2019

Types of Housing	**Respondent**				**Total**	
	Male		**Female**			
	No	%	No	%	No	%
Compound	101	67.3	38	63.3	139	66.2
Flat/Bungalow	49	32.7	22	36.7	71	33.8
Total	**150**	**100**	**60**	**100**	**210**	**100**

The findings in Table 6 revealed that majority (66.2%) of the sampled respondents stayed in a compound type of housing, while only 33.8% lives in Flat/Bungalows.

Field observation has shown that the architecture of the houses is changing from compound or traditional mud houses to modern structures or flat houses. The roofing is being changed from thatched type (traditional roofing) to zinc and aluminum (modern roofing) of different designs. Compound houses built with cement blocks occupied 31.4% and those built with mud blocks occupied nearly two-third of the total built-up areas. Modern houses built of cement blocks amount to 32.1% and those build of mud bricks occupied 35.3% of the total built-up areas.

Furthermore, based on oral interview with the respondents, it was also discovered that most of the modern structures built with cement and mud blocks are largely owned by the young adults, while the traditional old mud houses are owned by the aged (old people). The modern houses have modern toilets and bathroom facilities in them than the traditional or old houses in the study area. The changes in the design and architecture of the houses can be attributed to the changes in the economic status of the residents and the influx of migrants into the area that owned almost all newly constructed modern structures.

Challenges faced by the respondents

As recognized, from the in-depth interview, most people stated that the inability of the government to provide infrastructures such as police post and modern market in the study area are major challenges encountered as a result of the establishment of the university.

Implications of the study (observed changes on the respondents)

The population characteristic is changing from homogeneous to heterogeneous as new settlers and students are coming into the study area. Thus, the population and the size of the study area are increasing. These would affect the cultural and social setting of the area. There is also a change in the economic characteristics of the area, as respondents engaged in multiple livelihood options. Ownership and development of land in the area used to be traditional or informal, but presently one needs to have formal approval for the development of any plot of land in the area.

Development of land without approval from the Ministry of Land & Survey or Urban Planning is illegal. Lastly, farming activities are giving away to non-farming activities in the study area.

Conclusion

The present research assessed the types of livelihood alternatives adopted by the people of the study area impacted by the establishment of the Taraba State University. The desire was not unconnected with the agricultural, residential and economic potential of the study area. Thus, the research is targeted towards generating a base-line data and /or information for further similar research works in the study area. The study has shown that the majority of the respondents are male, married and have a generally low level of formal education with the majority having only primary education. The study also revealed that the male respondents mostly pursue farming before, but they all diversify into multiple livelihoods after the establishment of the university. Similarly, with a varied but generally, very low average monthly income. Hence, it is therefore recommended that government and microcredit institutions should assist in providing soft loan and strategic business opportunities so as to empower and improve the living conditions of the people of the study area to venture into multiple livelihood options. The government should also provide infrastructures such as police post and modern market in the study area.

References:

Castillo, G. E. (2003). Livelihoods and the city: an overview of the emergence of agriculture in urban spaces. *Progress in development studies, 3*(4), 339-344 https://doi.org/310.1191/1464993403ps1464993069pr.

Cinner, J.E., McClanahan, T. R. and Wamukotac, A. (2010). Differences in livelihoods, socioeconomic characteristics, and knowledge about the sea between fishers and non-fishers living near and far from marine parks on the Kenyan coast. *Marine Policy, 34*(1), 22-28 https://doi.org/10.1016/j.marpol.2009.1004.1003.

Daniella Ferrol-Schulte, M. W., Sebastian Ferse, Marion Glaser. (2013). Sustainable Livelihoods Approach in tropical coastal and marine social–ecological systems: A review. *Marine Policy,, 42*, 253-258.

Dell, R.B., Holleran, S., and Ramakrishnan, R. (2002). Sample size determination. Ilar Journal 43(4), 207-213.

Idrisa, Y. I., Gwary, M. M. and Shehu, H. (2008). Analysis of Food Security Status among Farming Households in Jere Local Government Area of Borno State, Nigeria. *Journal of Tropical Agriculture, Food, Environment and Extension,, 7*(3), 199-205.

Jacobsen, K. (2003). Livelihoods in Conflict: The Pursuit of Livelihoods by Refugees and the Impact on the Human Security of Host Communities. *Tourism management*.

Liverpool-Tasie, L. S., Kuku, O. and Ajibola, A. (2011). A Review of Literature on Agricultural Productivity, Social Capital and Food Security in Nigeria. NSSP working paper No. 21. IFPRI. Abuja.

Maina, T. A. D. (2013). Impacts Of Urbanization On Land Use Planning, Livelihood And Environment In The Nairobi Rural-Urban Fringe, Kenya. *International Journal of Scientific and Technology Research, 2*(7), 70-79.

Mbaiwa, J. (2011). Changes on traditional livelihood activities and lifestyles caused by tourism development in the Okavango Delta, Botswana. *Tourism management, 32*(5), 1050-1060.

NPC. (2019). National Population Commission of Nigeria.

Oluseyi, F. (2006). Urban Land Use Change Analysis of a Traditional City from Remote Sensing Data:The Case of Ibadan Metropolitan Area. *Nigeria Humanity & Social Sciences Journal, 1*(1), 42-64

Omonona, B. T. and Agoi, G. A. (2007). An Analysis of Food Security Situation among Nigerian Urban Households: Evidence from Lagos State, Nigeria. . *Journal of Central European Agriculture,, 8*(3), 397-406.

Oruonye, E. D. (2014). The Challenges of Fishery Resource Management Practices in Mayo Ranewo Community in Ardo Kola Local Government Area (LGA), Taraba State Nigeria. *Global Journal of Science Frontier Research. 14*(3), 15-26.

Otu, W. I., L.;Idiong, C.; Idiong, T.,Nsikan, E.; Bassey, O.; and Ekaette S. U. (2014). Food Security and Productivity of Urban Food Crop Farming Households in Southern Nigeria, *Journal of Agricultural Science,, 2*(3), 01-12.

Saleh, M. K., and Mustafa, A. S. (2018). Food Security and Productivity among Urban Farmers in Kaduna State, Nigeria. *Journal of Agricultural Extension, 22*(1), 171-180 https://dx.doi.org/110.4314/jae.v4322i4311.4315.

Samuel, O., Precious, A.D., Mattah, M.M. and Philip, O.Y. (2016). Assessing the Environmental and Socio-Economic Impacts of Artisanal Gold Mining on the Livelihoods of Communities in the Tarkwa Nsuaem Municipality in Ghana. *International Journal of Environmental Research and Public Health 13*(2), 160-. doi:10.3390/ijerph13020160

Thuo A. D. M. (2008). Tradition, culture and development in Africa: Historical lessons for modern development planning. Book Review: Ambe J. Njoh (Author), . *Urban Policy and Research., 26*(1), 125 –139

Walker., J., Bruce, M. and Susan, W. (2001). Livelihood strategy approach to community- based planning and assessment: a case study of Molas, Indonesia, . *Impact Assessment and Project Appraisal,, 19*(4), 297-309, DOI: 210.3152/147154601781766925.

Yusuf, M. B. and Ray, H.H. (2011). An appraisal of Farmers Agronomic Practices for the Control of Soil Erosion in Zing Local Government Area of Taraba State, Nigeria. . *TSU Journal of Arts and Social Sciences, Jalingo,Taraba State,, 1*(1), 55-64.

Yusuf, M. B., Firuza, B. and Salleh, K. O. (2016). Exploring Farmers' Local Knowledge and perception of Soil Erosion Under Agricultural Lands in the northern part of Taraba State, Nigeria. *International Journal of Tropical Agriculture, 33*(4), 3291-3303.

Yusuf, M. B., Firuza B.M. and Khairulmaini, O.S. (2017). Variation in Soil Physiochemical Properties at Different Land Use Sites in Northeastern Nigeria. *International Journal of Applied and Physical Sciences, 3*(1), 26-34. DOI: https://dx.doi.org/10.20469/ijaps.20463.50005-20461.

Yusuf, M. B., Firuza B.M. & Khairulmaini, O.S. . (2015). Survey of Rill Erosion Characteristics of Small-scale Farmers' Crop Fields in the Northern Part of Taraba State, Nigeria. . *International Journal of Tropical Agriculture,, 33*(4), 3305-3313.

Yusuf, M. B., Mustafa, F. B., & Salleh, K. O. (2017). Farmer perception of soil erosion and investment in soil conservation measures: emerging evidence from northern Taraba State, Nigeria. *Soil Use and Management, March 2017, 33, 163–173, 33*, 163–173 doi: 110.1111/sum.12332.