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ASSESSMENT OF HOUSEHOLDS LIVELIHOODS IN PERI-URBAN COMMUNITIES OF KADUNA METROPOLIS, KADUNA STATE, NIGERIA

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ABSTRACT

The study aimed at assessing the livelihood of peri-urban communities in Kaduna Metropolis Nigeria. The study sampled four peri-urban communities in Kaduna metropolis. The selected communities include Nassarawa, Hayin na Iya/Malalin Gabas, Hayin Dan Bushiya and Down Quarters. The study employed interview and focus group discussion in obtaining the data. The study used 25 respondents from each of the four study areas making a total of 100 respondents (representing 30.3%) as the sample size. Purposive and simple random sampling were used in selecting for both interview and FGD. The respondents were contacted at different times for both interview and focus group discussion. The data was analyzed by the use of descriptive statistics, frequencies, percentages for interview method while narrative analysis and verbatim quotations were used for FGD and Kruskal Wallis test was used for interview method. This is because in the interview method numbers of respondents were used during the interview with the respondent. The findings revealed that the peri-urban communities engaged in different economic activities such as tailoring, driving, mechanic work, KekeNapep riding, land speculation, building, civil service, trading, vulcanization among others for their livelihood. The study also discovered the duration of the peri urban communities which differ from one another, but those that spent above thirty years have the highest number in the four study areas constituting 52%. However, the peri-urban communities have different sources of water, but water from the well is the main source of water in the four peri-urban communities. However, using KruskalWallis test it is revealed that there is no significant difference in the sources of water in the four peri-urban communities in Kaduna metropolis. Most of our Peri – urban communities suffer from inadequate and quality water supply, hence adequate sources and good quality water supply should be provided to such areas. Recommendably Authorities like ministry of environment, Kaduna State Urban Development Authority (KASUPDA) and Kaduna State Geographical Information Service (KADGIS) should provide an avenue for boosting micro – economic activities in our Peri – urban areas. Where Peri – urban settlements stay for along time, social and infrastructural facilities should be provided to them.

Key words: *community, livelihood, metropolis, peri-urban, respondents.*

INTRODUCTION

Land is one of the resources in any city that need to be effectively managed for better urban management outcomes (Ayman & Kamel, 2004). The world today faces complex challenges, many of which have a clear land dimension. These challenges which are repeatedly mentioned in the literature include rapid urbanization and growing food, water and energy shortages (Palmer, 2009). Land possesses a central position in social, political and economic terms. It gives support to life and it is central to human culture and institutional development (Ahmad, 2012). Urbanization and urban growth are considered as modern way of life which manifests economic growth and development in many countries. That means the level of urbanization and socio-economic status of the inhabitants is correlated in many countries (Tamira, 2016). Urbanization grows at such unprecedented rate that cities are spilling over their boundaries into nearby rural villages. Large metropolises spreads out on the surrounding fringe areas, often termed as peri-urban regions where economic transfer takes place at a massive scale (Pllabi & Veronica, 2016).

However, the high rate of urbanization has become a worldwide phenomenon and Nigeria is not left out on the prevailing global demographic and spatial flux. It has been observed that urban settlements attract people as they offer better economic opportunities and provide access to basic social needs like water and sanitation, better health care and wellbeing (Oluwale, 2011).Collectively constituting the pull factor as a result of the outward urban population thrust, many peri-urban land use changes from being dominated by agriculture to multiple land use patterns (Gallant *et al,* 2004).

Economic necessity, scarce urban land and resources and the large urban market associated with increasing urbanization, have among others encouraged micro-economic activities in the peri-urban areas. Livelihood is the way you make your living and pay for the basic things you need in life (Yeken, 2014)

Diversification is norm in every economy, particularly in rural and peri-urban areas of Africa, where farming alone rarely provides sufficient income. There are different forms and determinants of nonfarm livelihood in rural households in Ogun State Nigeria. Livelihood can be defined as the job or work one undertakes to earn income that will support himself and his family (Fabusoro *et al,* 2010).

Coping with the pressure and dynamics of population and land use changes, peri-urban zones are areas capable of promoting rural and peri-urban livelihoods. Livelihood is also defined as the work that provides the money that one need to earn a living (Ayo, 2016).

However, the peri-urbanities have to engage themselves in different economic activities to sustain their livelihood because their farms are lost to urban development. There are resources that individuals and households draw upon to build their livelihoods. These include natural capital or natural resources like land, forestry, water and mineral resources, physical capital like road, electricity, market, building and machinery, financial capital, personal savings, loans from relatives, friends or money lender as well as credit and financial services received from formal financial institutions, human capital like wage employment, business venture, education, vocational and managerial skills as well as health status and social capital which refers to the rules, norms, obligation or trust that help individuals and households to devise livelihood strategies (Charles *et al*, 2015).
The word peri-urban is interchangeably used as suburb areas, extended places or areas, outskirt areas, sprawl areas, peripheral land, transition zone, rural hinter land, urban fringe, middle band areas, commuting zone, urban edge, urban frontier among others (Inhoff, 2000; Berry, 1990; Daniel, 1999; Bureau of Census, 2000; John, 2008; Ravetz*et al* 2013; Mandere, 2010). The term peri-urban has been defined differently by many scholars.For instance, Pallabiand Veronica (2016) defined peri-urban as a home to migrant population who are unable to afford the city life, and also is a place where people shift from agricultural activities to non agricultural activities. Appiah*et al* (2014) sees peri-urban land as a prime agricultural land outside the cities bought by urban residents for residential or commercial purposes.

The term peri-urban is also defined as a rural agricultural areas located in urban built-up areas in cities and predominantly rural agricultural areas (Achamyeleh, 2015).
Several studies have been conducted both locally and internationally by different researchers on the livelihood of peri-urban dwellers.For instance Pallabi & Veronica (2016) in India observed that peri-urban dweller enhanced their livelihood through non agricultural activities, technological innovations and tertiary activities such as service based activities thereby creating huge pool of human capital in their pei-urban areas.

However, in peri-urban communities in Accra, Ghana peri-urban household engage in various means of enhancing their wellbeing through different ways. These

means of livelihoods included land speculation, sand mining, stone quarrying, fishing, poultry farming, trading, traditional restaurants, saw mills, hairdressing salons, artisan shops, private health centers, private schools, telecommunication and internet cafes among other (Charles *et al*, 2015). Frederic *et al* (2018) in their research findings observed that in WaMunicipality of Ghana the source of the livelihood of the peri-urban dwellers comprised sand mining, stone mining, farming, sheanut trading, fuelwood selling, charcoal production and quarrying.

The core aim of this study is to assess the livelihood of the pei-urban communities in Kaduna metropolis, Nigeria. The study have the following objectives; to examine the type of micro-economic activities of the peri urban communities in the study area, to examine the duration of the peri-urban communities in the study area and to analyze the sources of water in the peri-urban communities. The study focused on peri-urban communities in north, south, east and western parts of Kaduna metropolis which are all within the four local governments of Kaduna metropolis. These local governments comprise Kaduna North Local Government, Kaduna South Local Government, Igabi Local Government and Chikun Local Government. The study areas selected comprises peri-urban communities in Nasarawa in Rigasa in the west in Igabi Local Government, Hayin Na Iya/MalaliGabas in the North, in Kaduna North Local Government, Hayin Dan Bushiya in the east in Chikun Local Government and Dawn Quarters in Makera (Kakuri) in the South in Kaduna South Local Government. This communities were selected to serve as sample.

THE STUDY AREA

Kaduna metropolis is located between latitudes 10° 25'27" to latitudes 10° 35'29" N and longitude 7° 22'20" E to longitude 7° 30'27" E. Kaduna metropolis comprises of Kaduna North, Kaduna South, parts of Chikun and Igabi LGAs of Kaduna State.

Its climate is tropical wet and dry. The wet season is between May and early October and the dry season is between end of October to early May. The rainfall is variable with its highest peak in August and sometimes September. The rainfall decrease from the south to North ward. The rainfall is heavier in the south. It has about 1500mm of precipitation annually. The humidity follows the pattern of rainfall in the wet season with 60% and in the dry season with 20 – 30%. The temperature ranges between 15^0 C – 36^0C with the highest temperature between April and May while the lowest is between December and February. The elevation of Kaduna ranges between 500 -700m above sea level. It is among the Hausa plain. The geology of the study area is essentially basement complex rocks. Most of the role out crops are made up of granite. The rocks have been exposed to weathering for long period of time where some of them have produced a kind of regolith which is rich in clay content (Abdullahi, 2010). The basement complex rocks comprise of migmatites, gneisses, schists, granites, pegmatites, quartzites, phyllites, metamorphic rock and metasediments (Eze *et al,* 2011) reported by (Mallo, 2019). In terms of vegetation, Kaduna has Sudan Savanna vegetation characterized by numerous grasses. Some grasses are tall while others are short. It has some deciduous trees which are scattered. The vegetation is also characterized by some trees which wither in the dry season in adaptation to water shortage. The soil of Kaduna is tropical Ferruginous soil or nitrosols which are usually reddish in colour due to the presence of Iron. The soil is lso heavily leached due to rainfall. They are also sticky when wet and hard when dry. The soils support the growth of cocoyam, cassava, maize, rice, Guinea corn, Ground nut, Soya beans,Millet among others. Kaduna circumscribes different ethnic groups like Hausa, Yoruba, Igbo, Fulani, Kadara, Gwari, Jaba, Bajju, Kaje, Igbira, Igala, Kamanton, Kamuku, Nupe, Gwandara, Kagoma, Kataf, Marwa, Kahugu, Sanga, Surubu among others. Kaduna metropolis has a population of 1,570,331 million as betokened by the National population commission (NPC census, 2006).

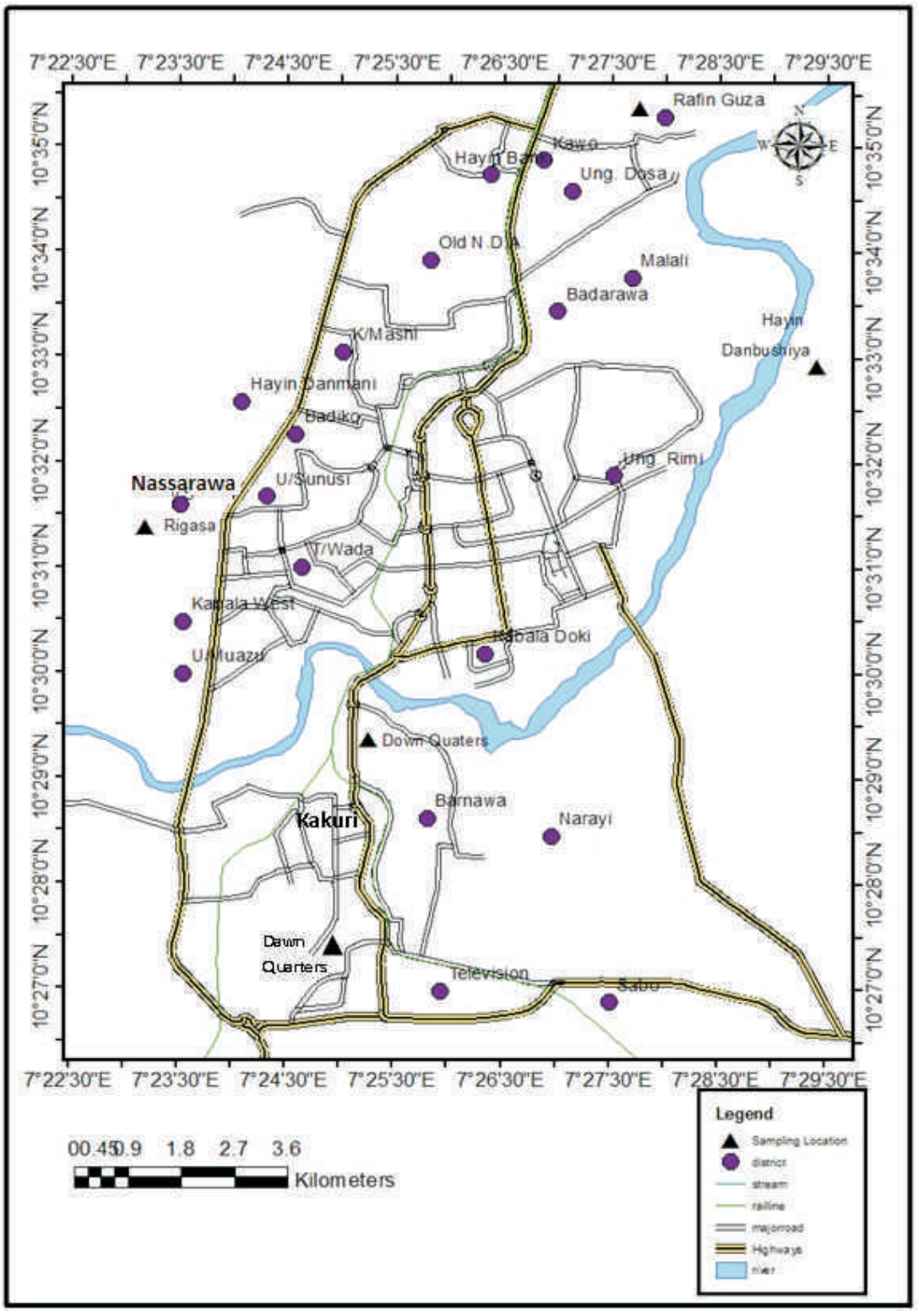


Figure 1: Administrative Map of Kaduna Metropolis.

Source: Geography Department Bayero University Kano, 2018

METHODOLOGY

The study used both primary and secondary sources of data. The secondary sources of data include Map, Journal, Books among others. Purposive and simple random sampling were the methods applied in selecting the respondents. The study selected the respondents that can give information purposely for this study, while for the simple random sampling respondents were selected in such a way that adult, old age, religious leaders and district heads were selected randomly. Thus, 25 people were chosen from each of the four study areas making 100 respondents (representing 74%) as the sample size from the population of 135. Sample size based on the Krejcie and Morgan (1970) was applied in selecting the respondents, because the research used focus group discussion and interview methods in collecting the data, and in focus group discussion the sample size is expected to range between four and twelve's respondents, but where there is diversity in either the respondents or the range of topics to be covered then there will be increase in the number of respondents in order to achieve saturation (Morgan, 1992 and Gamson 1992). For instance Gamson (1992) in his focus group discussion wanted each of his group to give their opinions on four different political issues, 37 groups were conducted in order to produce enough discussion on each topic therefore this is what inspired this study to choose 25 respondents from the four study areas. For the FGD 8 discussants were selected each from the four communities which comprise youth, adult, old age, religious leaders and district heads. The four communities were visited twice for the FGD session.

The study area was visited twice for interview were 17 respondents were interviewed and anybody within the age of 18 years and above was qualified to be among the respondents community leaders, religious leader, youths, adults and old age were part of the respondents. The number of respondents were considered when conducting the interview by the study. For both the interview and the focus group discussions session, the questions used by the study were in line with the objectives of the research. All the relevant data were gathered through the interview and the focus group discussion on the livelihoods of peri-urban communities of the study areas. This has been achieved through the maximum cooperation given by the respondents in the study area. When gathering the data especially in the focus group discussion the moderator was assisted by the assistant moderator using relevant materials like field notebook, checklist and smart phone. For the data analysis descriptive statistics, frequencies, narrative analysis, verbatim quotations and Kruskal Wallis test were applied in order to have meaningful and significant result. KruskalWalli'stest is applied in order to established whether there is significant difference in the sources of water of the peri-urban communities in the four study areas using the level of significance at 0.05. The formula for KruskalWalli'stest is expressed mathematically as

$$H = \frac{12}{N(N+1)} \sum_{1=1}^{K} \left(\frac{R1^2}{n1}\right) - 3(N+1) \quad \text{.....(1)}$$

where:

N = total sample size.

R1 = total of the ranks for the height sampled or the sum of rank for each sample.

n1 = sample size of each group

k= the number of sample

RESULTS AND DISCUSSIONS

Types of Micro-economic Activities

Discussions and interviews with the respondents pointed out different means of livelihoods in the peri-urban communities in the four study areas.

i *Trading:* some of the respondents participate in trading activities to earn their living. Thus, some items are bought from the city centre and brought to the peri-urban areas. Most of these items are provisions and some food items. Business transactions in these items is among the economic activities of the respondents in the four study areas.

ii *Farming:* some respondents earn their living through farming. They use farming as their major source of income to take care of their families. Thus they engage in both rainfed agriculture and irrigation agriculture. This allows them to produce different series of crop on their farm.

iii *Tailoring:* it was revealed that from the study areas some of the respondents participate in tailoring as a means of living. Their major economic activity is tailoring in different designs. Some of them due to their competency engage in some contracts with some government agencies, boards or commissions.

iv *Driving*: response in the study areas indicates that driving is among the economic activities they engage in. It is of different forms, some are mainly for town services while some are for long journeys. But most of the responds using driving as their sources of livelihood engage in town service driving.

v *Mechanic work:* discussion among the respondents revealed that some of the respondents are involved in mechanic work. Some of them are for motor cycle and some are for taxi or buses, their family livelihood is dependent upon the mechanic work. Even though sometimes their services can be needed outside these peri-urban areas. This was confirmed by some of the respondents in the course of this research.

vi *Land speculation:* due to increase in peri-urban expansion land speculation is one of the economic activities of some of the respondents in these study areas. It is through this that many of the respondents have access to own some plots of land apart from their residential house in which they occupy together with their families.

vii *Construction /Building:* it is another economic activity to some respondents, because it is their source of income to take care of their families. It is revealed that in all the four study areas builders are found in all the four study areas. Building is their major economic activities. They can be taken to other places to work but their major areas of work or construction activities are within the study areas. Their livelihood is solely dependent upon building work.

viii Tricycle Riders (KekeNapep): from the focus group discussion with the respondents it is revealed that some of them engage in KekeNapep riding. Their source of livelihood is form the movement of people. Form one locality to another using KekeNapep.

ix Vulcanization: it is another form of economic activities of the respondents in the four study areas. Some of them combine vulcanization with farming especially in the rainy season.

However, in all the economic activities of the respondents in the study areas, farming is the major economic activities of the respondents, because most of the Peri-urbanities when the dry season is over they go to the farmer and engage a farming activities to support their regular economic activities.

For instance, among the respondents

some land speculators, builders, retirees, tailors stated that in the rainy season they give more emphasis to farming, in order to boost their income for their family livelihood. Again, one elderly man Ibrahim Musa aged 65 years explained how he that he benefited immensely through land speculation, "When I came here in 2000 there were only three to four houses in Hayin Dan Bushiya I decided to be a land speculator, and through this I have built about three houses apart from the one I am living with my family". Another respondent named Idris Abbas in NasarawaRigasa also stated that "I was the first vulcanizer here, and this gave me the opportunity to build my house and even went to the extent of buying a private car". (FGD)

However, a similar study was conducted by (Charles *et al,* 2015) in Accra, Ghana where the livelihood of the Peri-urbanities included farming, trading, traditional restaurants, land speculation, sand mining among others.

Duration of stay in the peri-urban areas

Table 1: Duration of stay in the Peri-Urban Areas

Duration	Nasarawa Rigasa		Hayin na Iya/ Malalin Gabas		Hayin Dan Bushiya No.		Dawn Quarters		Total
Year		%		%		%		%	%
1 – 5 Years	12	48	10	40	9	36	1	4	32
6 – 10 years	8	32	9	36	8	32	1	4	26
11 – 15 years	3	12	5	20	5	20	2	8	15
16 – 20 years	2	8	1	4	3	12	4	16	10
21 – 25 years	0	0	0	0	0	0	2	8	2
26 – 30 years	0	0	0	0	0	0	2	8	2
Above 30 years	0	0	0	0	0	0	13	52	13
Total	**25**	**100**	**25**	**100**	**25**	**100**	**25**	**100**	**100**

Source: Author's field work 2018

Discussion with the respondents revealed that their duration differ from one another. Some have stayed for a long time, some have stayed for a short time while some are in between. For instance, one of the respondents named Musa Garba explained that "I built my house in 2003 in Malalin Gabas but I was afraid of attack by thieves therefore I waited until in 2006 I relocated to the house when most of my neighbors relocated to their houses.

It is revealed from the interview that in the four peri-urban areas respondents that spent 1 – 5 years in Nassarawa Rigasa constituted 48%. Their movement to the area could be attributed to low price of land for house construction. Respondents in Hayin Na Iya/Malalin Gabas formed 36% in the four study areas whose duration is form 6 – 10 years. Their movement to the area could be attributed to accessibility to farmland. Both Hayin Na Iya/ Malalin Gabas formed 20% for the respondents who spends 11 – 15 years. For the respondents whose duration is between 16 – 20 years constituted 16% Dawn Quarters in the four study areas. Those who spent 21 – 25 eras and 26 – 30 years

formed 8% in Dawn Quarters is not far way form some textile industries, therefore, the duration of the respondents in this area could attributed to job opportunities in the industries. However, those respondents whose duration is above 30 years constituted 52% in Dawn Quarters. In the four study areas the highest number of respondents are those that spent over 40 years. This could be attributed to location of other industries apart from textile industries.

Sources of water

Water is very essential in our daily life. People always like to stay where there is availability of water. Interviews with the respondents revealed various means of getting water from the peri-urban communities in the four study areas. For instance, one of the respondents stated that "when we first settled here there was difficulty in getting water, we had to dig well but after sometimes we were provided with boreholes but still we are using our wells to support the boreholes".

Table 2: Source of Water by the Respondent

Sources of water	NassarawaRigasa No. of respondent 25		HayinnaIya/MalalinGabas No. of respondent 25		HayindanBushiya No. of respondent 25		Dawn Quarters No. of respondent 25		Total 100
			%			%		%	100
River	2	8	2	8	0	0	0	0	4
Well	16	64	18	72	14	56	20	80	68
Borehole	6	24	4	16	9	36	3	12	22
Rain Harvesting	1	4	1	4	1	4	0	0	3
Pipe borne water	0	0	0	0	1	4	2	8	3
Total	25	100	25	100	25	100	25	100	100

Source: Author's Field work 2018

The interview with respondents indicated that most of their sources of water is from the well. About 80% of the respondents their water from the well. Another major source of water is the borehole. The usage of water from the well by the respondents is attributed to the inadequacy of social amenities. Therefore the respondents paid much attention to source their water from the well. However, respondents who depends on the water from the river or rain encounter shortage of water especially during the dry season, and for those who source their water from the pipe-borne water in most cases the water is not reliable. Therefore the common source of water by the respondents is water from the well. Sources of water from pipe borne water and rain constitute only (36%) of the respondents. Water from the rain have the least respondent with three respondent (4%). However, Thokozani *et al* (2018) conducted a similar study in Peri-urban areas of Malawi, Tanzania where they discovered that the major sources of water include tap water, boreholes and water from the well. The findings of this study revealed that well water is the major source of water followed by borehole and river in the study area. This shows that there is little variation in the sources of water between the finding of Thokozani in Tanzania and the present study.

Table 3: Test of hypothesis using walli's test for the sources of water of the respondents in the peri-urban communities.

Sources of water	NasarawaRigasa No of respondent 25		Hayin Na IyaMalalinGabas No of Respondents 25		Hayin Dan Bushiya No. of Respondent 25		Dawn Quarters No of Respondents 25	
		R1		R2		R3		R4
River	2	10	2	10	0	1	0	1
WELL	16	18	18	19	14	17	20	20
BOREHOLE	6	15	4	14	9	16	3	13
RAIN	1	6	1	6	2	6	0	1
Pipeborne water	0	1	0	1	1	6	2	10
		R1=50		R2=50		R3=46		R4=45

HO: there is no significant difference in the sources of water by the respondents in the four communities of the peri-urban areas. The level of significance used is 0.05.The degree of freedom is K = 4 = 4 – 1 = 3

$$H=\frac{12}{N(N+3)}\frac{K}{\frac{E}{1-1}}\left(\frac{R2}{\frac{1}{n1}}\right) - 3(N+1) \quad \text{.....(2)}$$

$$H=\frac{12}{20(20-1)}X\left(\frac{50^2}{5}+\frac{50^2}{5}+\frac{46^2}{5}+\frac{45^2}{5}\right) - 3(20+1)$$

$$=\frac{12}{140}X\ (500+500+423.2+405)-63$$

$$=(0.03X1{,}828.2-63)$$

$$=(54.846-63=\ -8.154)$$

The critical value is 5.780, therefore, the hypothesis is accepted, that is, there is no significant difference in the sources of water in the four peri -urban communities , because the value calculated is less than the critical value, this means – 8.154 is less than 5.780.

CONCLUSION AND RECOMMENDATIONS

As agricultural and forest land uses in our peri-urban areas are gradually missing their prominence with time, and the demand for other land uses are rising substantially, households move from subsistence agriculture to other means of livelihood.From the foregoing findings, the study has shown that the peri-urban communities resort to different livelihood activities such as tailoring, driving, mechanic work, kekenapep riding, land speculation, building, civil service, trading, vulcanization among others. However the discussions with the peri – urban communities as stated by the respondents revealed that these livelihood strategies are the ways used in enhancing their well being. The study discovered that the residents of the peri-urban area engaged in different economic activities namely farming, trading, tailoring, mechanic work, land speculation, vulacanization among others. It was also found that most of the peri-urban communities have stayed for over 30 years followed by 24 years. Additionally their major sources of water is from the well.

The utilization and management of water is an essential aspect of man's daily life. Peri-urban communities also need water just like their counter part in the urban cities. As such, the maintenance of several access points to water sources is a practice through which the peri – urban communities generate water security (Megan and Morin Ville, 2014)
Drawing from the findings of the study the following recommendations are suggested;

I. State government and local government should provide an avenue for boosting micro – economic activities in our peri – urban areas through the provision of soft loan to the poor masses especially residents of peri-urban areas to support their micro economic activities.

ii. Where Peri – urban settlements stay for along time, social and infrastructural facilities should be provided to them. This infrastructural facilities will encourage the peri-urban communities in engaging in different economic activities.

iii. Most of our Peri – urban communities suffer from inadequate and quality water supply, hence adequate sources and good quality water supply should be provided to such areas. Therefore ministry of water resources can play a vital role in developing peri-urban communities through the provision of adequate sources of water.

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