Poverty Mapping: A case study of Guma Local Government Area of Benue State

Ortserga Saakuma

Department of Urban and Regional planning
Federal University of Technology Minna, Niger State
Email: *jsortserga3@gmail.com*

ABSTRACT

All efforts by previous administrations aim at reducing poverty in Nigeria and Benue State in particular have always failed to bring out the desired result. This has been traditionally blamed on lack of a well constructed poverty profile that provides information with complete geographic data coverage. This paper investigated poverty in Guma Local Government Area of Benue State with the aim of identifying the basic needs of the people in the Area. Seventeen settlement sub-units of varying sizes were chosen for the study; the study used income, basic amenities and road infrastructure development to measure and analyzes poverty in the LGA. The descriptive method of analysis was used with Geographical Information System (GIS) to conduct the study. The result of the analysis showed a high level of poverty in the LGA with Majority of the people living on less than the equivalent of one US dollar per day. The result also showed that majority of the people in the study area lack basic amenities of life like water, electricity, health centers and good roads. Finally the basic needs of each settlement sub-unit were ranked according to importance. The study concluded that, for poverty to be reduced, attention must be focus on analyzing, measuring and reducing poverty at settlement sub-units.

Keywords: Poverty Mapping, Settlement Sub-Unit, Poverty Reduction, income, basic amenities, road infrastructure and Basic Needs.

INTRODUCTION

Attempts at identifying who the poor are among the people have always been concentrated on regional or national analysis. Little attention is focused on the individual settlement sub- units. As a result, not only are poverty values over generalized, such values blur policy action and tend to intensify concentration approach to poverty reduction. This is a serious disservice to policy makers and those affected by poverty directly. According to Sanusi (2007), Part of the reasons for this might be the difficulty of decomposing poverty indices to the level of settlement units due largely to lack of data or due to the assumption that aggregate data will be useful in accounting for the poor at lower levels. In either case, the poor have not been benefiting and in addition it has also meant continuous effect at poverty reduction with little result to show for

it. In Polities this have created an easy avenue for opposition parties to launch attack on the ruling party, while on academic ground, it gives chance to scholars for continuous criticisms of government policies even when such policies are well intended.

Nigeria like many other developing countries is currently refocusing its development policies towards poverty reduction. The emphasis on poverty reduction is primarily a response to the fact that sustainable development cannot take place where majority of the people still live in extreme poverty. At the global level they are much talk about eradicating extreme poverty in human history by 2030. The sustainable development goals (SDG) have been part of an unprecedented global effort to halve the number of people living in extreme poverty by 2030, United Nations (1992). But how to go about reducing poverty and inequality in Nigeria is a huge challenge facing both local and National policy decision makers, this is largely due to the fact that they is no consensus on who the poor are, What causes their poverty, and what they need to come out of poverty, Ortserga (2015).

At the national level poverty is measured and analyzed among state. While at regional level poverty is measured and analyzed between urban and rural settlements. This generalization of poverty data or values aim at identifying the poor and solving their problems have done little or nothing in reducing extreme poverty, as aggregate data hardly capture the poor. This has made all efforts by Government aim at analyzing and reducing poverty using aggregate data failed to identify who the poor are, where they live and what they need to come out of poverty.

This study sought to investigate and map poverty in Guma LGA of Benue State using income, basic amenities and road infrastructure as a base. To achieve this, the study survey and examine individual income level, provision of basic amenities like schools, health centers, and road infrastructure in Guma LGA, with a view to identify and map poverty. This study is not based on comparing poverty between settlements but, it is based on spatial distribution of poverty among settlement sub-units in Guma LGA of Benue State, to clearly identify the poor, and what they need to come out of poverty.

Objectives of the Study
i. To identify poverty in the study area.
ii. To rank the basic needs of each settlement sub-units in order of importance.

Rational for Poverty Mapping
The plight of the poor has brought the issue of poverty to the fore in almost all socio-economic and

political debates in the world today. The initial and early thinking by development planners was that the fruit of economic growth would trickle down to the poor but this has instead resulted to persistence and deepening level of poverty. Past government with poverty reduction programs in Nigeria and Benue in particular often missed the poor partly because of lack of a well constructed poverty profile. A poverty study like this will provide information with complete geographic data coverage in the study area.

Conceptual Framework and Relevant Literature

The concept poverty is a multifaceted concept centered on lack. Poverty has being defined by people and organizations as they perceive it. Sociologist Peter Townsend, (1985) defined poverty as " individual and families that lack the resources to obtain the type of diet, participate in activities and have the living conditions and amenities which are customary or at least widely encouraged or approved in the societies to which they belong". This is because their resources are seriously below those commended by the average family that they are in effect excluded from the ordinary living patterns, customs and activities, Ezekiel (2003). According to World Bank (2006), poverty is pronounced deprivation in well being----"to be poor is to be hungry, to lack shelter and

clothing, to be sick and not cared for, to be illiterate and not schooled". Poor people are particularly vulnerable to adverse events outside their control. Also, United Nations (1999) have defined poverty "as a denial of choices and opportunities, a violation of human dignity". This means lack of basic capacity to participate effectively in the society; it means not having enough to feed and clothe a family, not having a school or clinic to go to, not having land on which to grow one's food or a job to earn one's living, and not having access to credit. It means insecurity, powerlessness and exclusion of individual households and community. It means susceptibility to violence and it often implies living in marginal or fragile environment, without access to clean water or sanitation, UNDP (1997).

Traditionally poverty is defined in term of income. It is seen as the minimum level of income required for a decent standard of living, Sanusi, (2007). This is the poverty line or bread line approach. The poverty line is the income level below which a minimum nutritionally adequate diet and other essential non-food requirements are not affordable, World Bank (1995). Below this minimum income, a human standard of living becomes threatened. This income line approach has brought about distinction between absolute poverty and relative poverty, Sanusi (2007). Absolute poverty definition indicates some level of income per

person or per family that is deemed sufficient to by a minimum of life's necessities UNDP, (1997). On the other hand, by relative poverty, people are poor in relation to others, Mckinley, (1997). Salaam, (2004) defined households living in poverty as families who's income falls below some fraction of the national median or means. This is to say poverty is the inability of some individuals and sections of the society to satisfy their basic needs.

In recent time poverty is being redefined to include lack of assets, deprivation, powerlessness and vulnerability, Sanusi, (2007). While assets possession relates to the income component of accessibility, deprivation, powerlessness and vulnerability describe particular social-political conditions which poverty may bring. Deprivation occurs when basic needs of life are lacking. In relation to power it weakens people capacity to bargain for political and legal rights, access to services and goods allocated by governments, while by vulnerability, the poor are characterized by defenselessness, insecurity and exposure to risk, shocks and stress that may lead to their early death. According to United Nation, (1999) one- third of deaths, that's eighteen million people are due to poverty related causes.

Study Area and Methods

Guma Local Government Area is located between longitude 8° 21ᴵ - 9° 13ᴵ E and latitudes 7° 35ᴵ - 8° 8ᴵ N. The area lies in the extreme Northern part of Benue State. It is bordered in the North by Nasarawa State, in the East by Logo LGA, in the Southeast by Buruku LGA, in the South by Tarka LGA and in the Southwest by Makurdi LGA; all in Benue State. (See figure 1). Guma LGA extends over 2,925 Square Kilometers' lies athwart river Benue and it main tributary, river Katsina-Ala. The LGA have a population of 191,599 according to the 2006 census, and a projected population of 225,590 in 2016. The area is characterized by numerous other rivers whose basin flood at the peak of rainy season, Ortserga (2009).

Guma LGA is certainly an example of local Government underdevelopment in Nigeria. It possesses all the essential attributes of local Government neglect in the country. It has no major town: and socio-economic infrastructures are few. It underdevelopment is best illustrated by its transport system, and provision of basic amenities. Settlements are predominantly rural and the people are mostly farmers and patty traders with few people employed in the local, state, and Federal civil service.

To this nature of study the research method focuses at providing the best approach toward addressing the research objectives. The study explored the relevant body of

knowledge that has to do with poverty. With regards to the topic of the study, information on poverty was used for proper analysis and interpretation of poverty in the study area to bring out issues of concern for planners and policy makers.

Considering the complexity and heterogeneous nature of the topic within the geographic spaces, field investigation formed the drive and provided the framework for the type of data used, which included primary data, source through field survey and structured questionnaire. Population of the selected settlement sub-units was projected from the National census of 1991. This was because details of the 2006 census figures at settlement sub-units were not accessible to the author at the time of investigation. The study used the descriptive analytic method and Geographical Information System (GIS).

Study Population

The population of the study includes some selected settlement sub-units in Guma Local Government Area of Benue State. These settlements were selected systematically to have at least one settlement from each council ward in the LGA. They include, Agasha, Udei, Gbajimba, Daudu, Abinsi, Yogbo, Yelwata, Umenger, Tse-Akenyi, Tyulen, Sherev, Shan, Torkula, Iordye, Kiana, Ikper, and Tatyogh.

The sample of the study

The selection of the respondents was carried out using simple random sampling method and questionnaires were distributed without any pattern or systematic procedure to the above mentioned people in the study area. The sample size consisted of 297 males and females. The distribution of the sample is show in table 1.

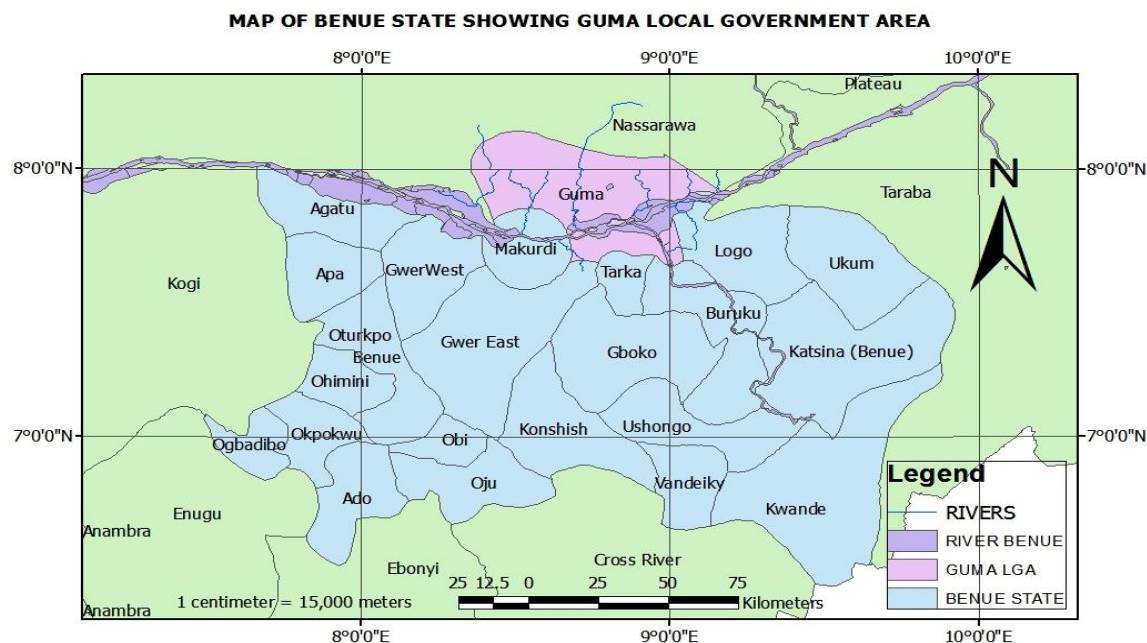**MAP OF BENUE STATE SHOWING GUMA LOCAL GOVERNMENT AREA**

Fig1: Map of Benue State Showing Study Area

RESULTS AND DISCUSSIONS OF THE STUDY

Table1: Distribution of the sample of the study according to demographic variable

Variables	Categories	Frequency	Percentage
SEX	Males	137	46%
	Females	160	54%
AGE	18-29	80	27%
	30-40	96	32%
	Above 40	121	41%
EDUCATION	Primary education	29	10%
	Secondary education	175	59%
	Higher education	93	31%
OCCUPATION	public servants	23	7%
	Farmer	177	60%
	Others	97	33%

Source: field survey 2016

Table 1, for sex, 137(46%) of the respondents were males and 160(54%) were female. For age 80(27%) were between the age of 18-29 years and 96(32%) were between the age of 30-40 years, while 121(41%) were above 40 years. For education, 29(10%) of the respondents have primary education, and 177(59%) have secondary education while 93(31%) have higher education. On occupation 23(7%) were public servants, and 177(60%) were farmers while 97(33%) were into trading and other informal activities.

Table 2: Income level of Respondent per Month

Settlement	Settlement Population	Income ₦1000-₦10000	Income ₦11000-₦40000	Income Above ₦40000
Yelewater	622	10	7	1
Udei	1266	9	8	1
Ikper	531	14	3	-
Yogbo	887	16	2	1
Tatyogh	492	12	4	-
Agasha	3887	8	8	2
Tyulen	512	13	3	-
Tse-Akenyi	384	14	3	-
Gbajimba	6104	7	9	2
Tse-Iordye	843	12	4	2
Shan	387	15	2	1
Sherev	943	8	8	1
Daudu	1831	6	9	3
Umenger	1012	9	7	1
Abinsi	5656	7	7	2
Torkula	732	12	5	1
Kiana	654	16	1	1
Total	26743	188(63%)	90(30%)	19(6%)

Source: field Survey 2016

Table 2, the survey shows that 188(63%) of the sample population have a monthly income of ₦1000-₦10000 and 90(30%) of the sample population have a monthly income of ₦11000-₦40000, while 19(6%) of the sample population have a monthly income of above ₦40000. Going by the United Nation living standard of at least 2$ US dollar per day, 63% of the people living in the Study Area are very poor and live below the equivalent of one US dollar per day and 30% of the people in the study

area live above the equivalent of one US dollar per day but below standard, and 6% live above two dollar and within standard. The measurement was done at the exchange rate of ₦344 per $1(dollar) which was the exchange rate at the time the study was conducted. The mapping of income is shown in figure 2 with Kiana and Yogbo being the poorest and Dauda being the richest followed by Agasha, Abinsi, Gbajimba and Iordye.
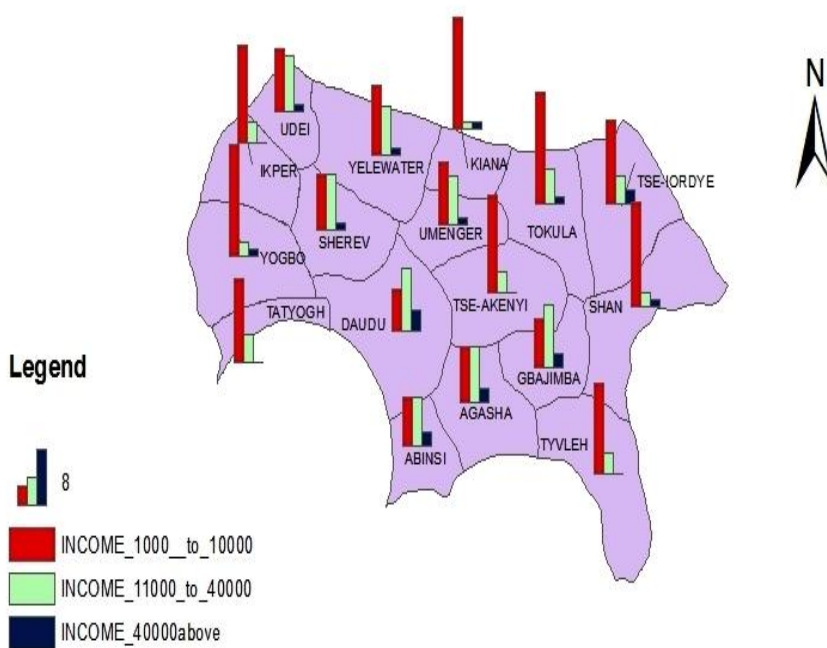

Fig 2: Map showing income level Among Settlements

Table 3: Distribution of Basic Amenities in Guma LGA

Settlement	Settlement Population	Water	Electricity	Health Center	Schools
Yelewater	622	-	-	1	2
Udei	1266	-	-	1	2
Ikper	531	-	-	-	2
Yogbo	887	-	-	-	2
Tatyogh	492	-	-	-	3
Agasha	3887	-	1	1	4

Tyulen	512	-	-	-	2
Tse-Akenyi	384	-	-	1	2
Gbajimba	6104	-	1	1	3
Tse-Iordye	843	-	-	1	2
Shan	387	-	-	1	2
Sherev	943	-	-	1	3
Daudu	1831	-	1	1	4
Umenger	1012	-	-	-	2
Abinsi	5656	-	1	1	3
Torkula	732	-	-	1	2
Kiana	654	-	-	1	2
Total	**26743**	**0**	**4**	**12**	**42**

Source: field Survey 2016

Table 3 shows the distribution of basic amenities like Water, electricity, health and schools. The study shows that of the 17 settlements sub-unit selected for the study none was provided with top water. The people depend on the natural sources of water such as rivers, streams and rain water, and some few borehole provided by politicians aspiring for political positions. For electricity only four settlements sub-units were provided with electricity. These settlements include Agasha, Gbajimba, Daudu and Abinsi. The other 13 settlements were not provided with electricity. And health centers were provided in 12 settlement sub-unit, excluding 5 settlements. Settlements not provided with health center were Ikper, Yogbo, Tatyogh, Tyulen, and Umenger. Schools were provided in all the settlements sub-units with some settlements having more than 2 schools. But most of these schools were in bad condition. The mapping showing the distribution of basic amenities is shown in figure 3.
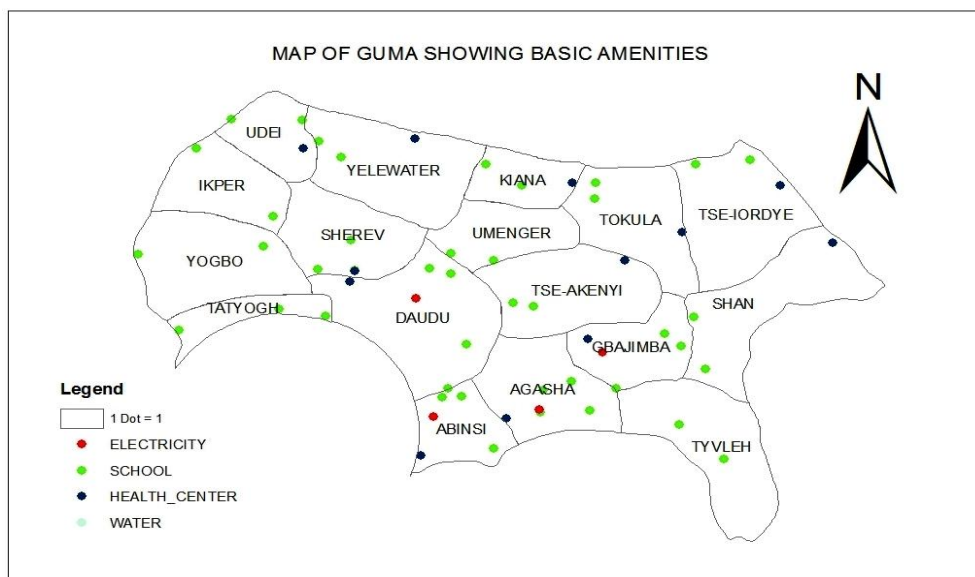
Fig 3: Maps Showing the Distribution of Basic Amenities

Table 4: Road Condition, Distance (Km), and main Settlements Link in Guma LGA

Name of Road	Type of Road	Km	Road condition	No of settlements linked
Agan-Yelwater	Tarred	42.4km	In Good condition	Link 4 settlement
Daudu-Gbajimba	Lateritic	43.6km	Under construction	Link 6 settlement
Tse-Abi-Shan	Lateritic	12.0km	In Bad condition	Link 4 settlement
Agnada-Gbajimba	Lateritic	29.6km	In Bad condition	Link 4 settlement
Udei-Yogbo	Lateritic	16.8km	In Bad condition	Link 3 settlement
Yogbo-Ikper	Lateritic	13.7km	In Bad condition	Link 5 settlement
N/Bank-Yogbo	Lateritic	31.3km	In Bad condition	Link 5 settlement
Gbajimba-Iordye	Lateritic	28.6km	In Bad condition	Link 3 settlement
Umenger-Torkula	Lateritic	14.3km	In Bad condition	Link 2 settlement
Abinsi-Tyulen	Lateritic	41.7km	In Bad condition	Link 3 settlement
Yogbo-Sherev	Lateritic	15.4km	In Bad condition	Link 2 settlement
Umenger-Kiana	Lateritic	13.2km	In Bad condition	Link 3 settlement
Total		302.6km		44 settlements

Source: field Survey 2016

Table 1.4 shows road distribution network, their distance, road condition, and major settlements link by these roads in the Local Government Area. The surveys reveal that a total length of 42.4km of tarred road in good condition was taken from one major road, (Agan-Yelwater). And a 43.6km road under construction (Daudu-Gbajimba) was taken from secondary road. A total of 216.6km of roads with Lateritic surface was obtained from 10 roads that were in bad condition and their usage seasonal. The only good road in the LGA as revealed by the survey is a road that link Benue State with Nassarawa State. The number of settlements link by these roads were 44 settlements. The settlements used were the main villages and small towns. The farmsteads and hamlets were left out to avoid superfluity. The mapping of road distribution and their condition is shown in figure 4
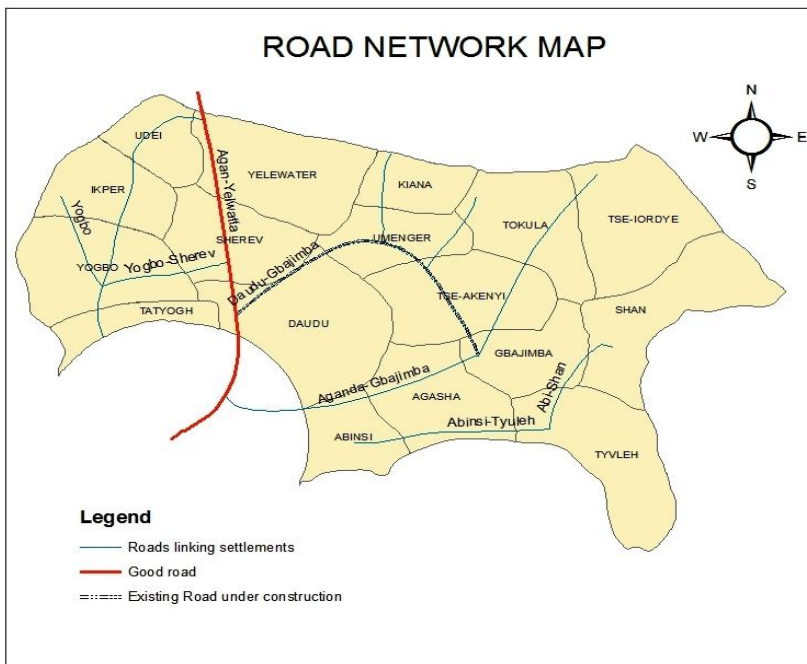

Fig 4: Maps Showing the Distribution of Roads and their Conditions

Table 5: Basic needs of each settlement sub-unit ranked according to importance

Settlements Sub-unit	Settlement Population	Basic Needs Of Each Settlement Sub-Units		
		Most Important 1st	Very Important 2nd	Important 3rd
Yelewater	622	Electricity	Hospital	Water
Udei	1266	Good Road	Hospital	Electricity

Ikper	531	Good Road	Hospital	Electricity
Yogbo	887	Good Road	Electricity	Hospital
Tatyogh	492	Hospital	Good Road	Electricity
Agasha	3887	Good Road	Water	Industry
Tyulen	512	Hospital	Good Road	Electricity
Tse-Akenyi	384	Good Road	Electricity	Hospital
Gbajimba	6104	Good Road	Water	Higher Institution
Tse-Iordye	843	Good Road	Electricity	Hospital
Shan	387	Good Road	Hospital	Electricity
Sherev	943	Good Road	Electricity	Hospital
Daudu	1831	Hospital	Agro-Center	Water
Umenger	1012	Good Road	Health Center	Electricity
Abinsi	5656	Hospital	Higher Institution	Water
Torkula	732	Good Road	Electricity	Hospital
Kiana	654	Hospital	Good Road	Electricity

Source: field Survey 2016

Finally, respondents were asked to list three important basic amenities/infrastructure facilities important to their settlement. The questionnaire was structured in a table like manner with most important ranked with 3 points, very important ranked with 2 points and important ranked with 1 point. The basic needs for each settlement sub-unit were sum up and the result is presented in table 1.5 above. As shown above, on average what most of the settlements need are good roads, hospital, water and electricity while Agasha, Gbajimba, Daudu and Abinsi having industry, agro-center and higher institution of learning on their list of basic needs.

The study has come up with the following findings:

1. There is a high level of poverty among the people as majority of people live below the minimum standard of the equivalent of two dollar par day as set by United Nation.

2. Majority of the people in the study area are highly deprived of basic social amenities of life that are very essential for a decent living.

3. They are worsening road infrastructure and settlement inaccessibility in the area

which reduces economy development of the people to improve their livelihood strategies that will take them out of poverty.

CONCLUSION AND RECOMMENDATIONS

In this paper an attempt has been made to investigate and suggest ways of reducing poverty in Guma LGA of Benue State using income, basic amenities and road infrastructure as stimulus. Analytical light has been thrown on specific attributes of poverty to show the specific ways in which the people are deprived of the basic needs of life.

The analytical results have confirmed what is already common in Nigeria especially among rural people, the worsening standard of living. This problem has already been a popular knowledge, only radical measures can solve the problem. The paper therefore suggests a decentralized approach to poverty reduction known as "socio-spatial settlement sub-unit approach" as a solution to the problem.

Income, social amenities and road infrastructure are crucial component of economic formation. Smaller economies as building blocks of the National economy and reservoir of much of the resources needed for National development should be given greater attention by providing them with the basic needs of life. This will kit up the smaller units to develop faster and contribute more meaningfully to sustainable national development.

REFERENCES

Ezekiel, O.O (2003). An assessment of poverty reduction strategy in Nigeria (1983-2003). Being a dissertation submitted in partial fulfillment of the requirement for the award of the Doctor of philosophy (Management) of the St Clement University.

Mckinley, T. (1997). Beyond the line: implementing complementary methods of poverty measurement, in UNDP Poverty measurement: World Bank, Washington D.C.

Ortserga, D.S. (2009). Analysis of incidence of service facilities in Guma Local Government Area of Benue State. Journal of Environmental Studies and Policy Analysis, Volume 2, number 1, December 2009, pp 90-104

Ortserga, S. (2015). Report on poverty assessment in Kpakungu settlement; practical governance (planning seminar), submitted to the Department of Urban and Regional planning, school of Post-Graduate studies

Federal University of Technology, Minna.

Salaam, D. (2004). The United Republic of Tanzania poverty reduction strategies: the third report.

Sanusi, Y.A (2007). Measurement and spatial variations of poverty in Minna. OOU Journal of Environmental Technology and Development, 1(1) 2007 pp 177-184.

Townsend, P. (1985). A Sociological approach to the measurement of poverty: A rejoinder to Professor Amartya Sen. Oxford Economic papers Vol 37, pp 659-68.

United Nations (1999). The state of world's children: the prevention, control and elimination of neglected diseases in America. hppt://www.biomedcentral.co m/contant/pdf/1471-2458-7-6 pdf.

United Nations (1992). United Nations conference on Environment and Development held at Rio de janerio, Brazil, 3-14 1992.

UNDP (1997), Nigeria human development Index Report. UNDP, Lagos.

UNDP (2003). World development Lagos report, 2003: Washington D.C: World Bank.

World Bank, (1995). Jobs, poverty and working in South Asia: Regional perspectives on World development report. World Bank, Washington D.C

World Bank, (2006). World development report; Equity and Development, World Bank Washington D.C.