

## **Mapping the Livelihood Status of Migrant-Sending Rural Households in Southeastern Nigeria**

Chukwuedozie K. Ajaero

*Department of Geography, University of Nigeria Nsukka*

---

**Abstract:** *The purpose of this study is to map the estimated impacts of livelihood asset indices on the livelihood status of rural households in five States of Southeastern Nigeria. In each of the five States, 120 first-order migrant-sending households were used for this study totaling 600 households for the entire study area. Questionnaire survey was used to elicit data on the livelihood status of the sampled households. The study utilized the asset indices analytical techniques to estimate the livelihood status of the households. In addition, hierarchical cluster analysis was used to categorize the States according to the impact of the asset indices on their livelihood status before depicting the categories in maps. The results show that the financial index has the greatest contribution to livelihood status in the study area. Also, Imo State has the highest aggregate livelihood status value of 34.33 while Abia State has the least livelihood status value of 23.99. Based on the findings, it is recommended that agricultural extension services be introduced, and improved upon in the study area. Furthermore, small and medium scale industries should be established in the study area to create jobs for the population.*

**Keywords:** *Asset indices; Livelihood; Mapping; Migrant-sending Households; Southeastern Nigeria*

---

### **I. Introduction**

In most parts of the developing world, Nigeria inclusive, the livelihood of the rural populace is highly dependent on natural resources and these resources are persistently under intense pressure in the quest by the populations to earn their living. The consequence of this pressure includes degradation and depletion of these resources on which majority of the rural populations depend for their agricultural activities. (Bolorunduro *et al.*, 2005; Kesavan and Swaminathan, 2006). In addition, in most rural areas in the developing world, migration out of these impoverished rural areas results from the search for perceived or real opportunities as a consequence of rural-urban inequality in wealth (Sorenson 2004a; Madu, 2006). This inequality and or urban bias in development according to research findings over the years results from the overwhelming concentration of wealth, assets, purchasing capacity, economic activities, and variety of services in the urban centres as well as the continued neglect of rural areas (Pun 2004; Ullah 2004; Pradhan and Parera 2005; Madu, 2006; Lall, Selod, and Shalizi 2006 and Timalisina, 2007).

Consequently, migration has been identified as a livelihood strategy utilized by the poor, especially the rural dwellers. Livelihood has been defined as the capabilities, assets and activities required for a means of living (DFID, 1999). Capability of individuals includes various factors such as self-esteem, security, happiness, stress, vulnerability, power, and exclusion. Livelihood assets which their indicators will be analyzed in this study in order to examine their impacts on the rural populace may be categorized into natural capital, human capital, physical capital, financial capital and social capital. Livelihood activities on the other hand denote a wide range of human occupations in the primary, secondary, tertiary and quaternary economic sectors. In estimating the impact of livelihood, the Livelihood Monitoring Unit (LMU, 2004) identified various measurable asset indices such as financial index, economic index, nutritional index, and gender equity.

Generally, livelihood refers to the ways in which people make a living. Poor households in particular try to balance their lives with food and income-earning activities by using multiple strategies to sustain the activities (DFID 1999). The livelihood situation assumes a worse dimension when one or more of the strategies fail. Understanding the livelihood of the poor therefore, helps reveal how the poor live through difficulties. Therefore, the sustainable livelihood approach (SLA) implies taking a holistic view, identifying and building on people's existing assets and needs when planning interventions (FAO, 2006). Livelihood can only be seen as sustainable when the poor are capable of coping with stresses and shocks, and most importantly when the livelihood activities provide benefits without undermining the natural resource base on which they rely (World Bank, 2005 a;b ;DFID, 2002a, b, 2006a, b;).

Consequently, the assessment of the livelihood of rural migrant-sending households based on the above asset indicators has remained relevant since the findings of such a study are multi-dimensional and will contribute to the initiation of policies for improvement in livelihood and the achievement of the Millennium Development Goals (MDGs) (Timalisina, 2007). The MDGs related to livelihood include eradication of extreme

poverty and hunger, the improvement of health and education, the reduction of infant and child mortality, ensuring access to safe drinking water, and adequate sanitation. The improvement of the livelihood status of these rural households will also result in the improvement of the lives of poor rural dwellers as well as ensure gender equality and the empowerment of women. (Gambourd, 2000; Sørensen, Van Hear and Engberg-Pedersen, 2003; Levitt and Sørensen, 2004a & b). Subsequently, an objective and detailed account of livelihood status of rural migrant-sending households is indispensable particularly in terms of asset utilization in socio-economic planning, allocation of resources and much more importantly, in the political management of populous and developing countries, such as Nigeria (UNAIDS and International Organization for Migration (IOM), 1998).

## **II. Research Methodology**

### ***Selection of study population***

The study area comprises the five southeastern Nigeria states of Abia, Anambra, Ebonyi, Enugu and Imo. The states exhibit homogenous socio-economic and linguistic characteristics, fall within the same agro climatic and other geographic conditions and are all within the South east geo-political zone of Nigeria. Since each of the states has three senatorial zones which have common characteristics, a rural LGA (RA) was randomly selected from each of the senatorial zones so as to ensure representation of all the zones of the states. This means that three (3) rural LGAs were used in each state totaling fifteen (15) rural LGAs for the five states of the study area. The sampled LGAs used in this research as shown in Figure 1 are as follows;

- Anambra State: Anambra West, Dunukofia, and Ekwusigo.
- Abia State : Ukwa East, Isikwuato, and Ikwuano
- Ebonyi State : Ivo, Ezza North, and Ebonyi
- Enugu State : Isi Uzo, Oji River, and Uzo Uwani.
- Imo State : Owerri West, Nkwerre, and Onuimo.

From each of the States, 40 households that have a first-order migrant in the last three years were randomly selected from each the rural LGAs (i.e 120 rural households in each of the five States totaling 600 rural households in the five States). A first-order migrant household as used in this work denotes households that have experienced rural-out migration of any of the member of the household for the very first time.

### ***Conceptual Framework.***

The analysis of the livelihood of the migrant-sending households is based on the sustainable livelihood framework developed by DFID (1999), and modified by the Livelihood Monitoring Unit (LMU) (2004). Livelihood is defined in the framework as the capabilities, assets and activities required for a means of living (DFID, 1999). The capability of individuals includes various factors such as self-esteem, security, happiness, stress, vulnerability, power, and exclusion. Also, livelihood assets are categorized into natural capital, human capital, physical capital, financial capital and social capital while livelihood activities on the other hand denote a wide range of human occupations in the primary, secondary, tertiary and quaternary economic sectors. The sustainable livelihood framework according to DFID (1999) and Timalina (2007) represents a tool which helps to define the scope of, and provides the analytical basis for livelihood analysis through the identification of the major factors affecting livelihood and the relationships between them. This framework identifies five interacting elements which are vulnerability contexts; assets/resources; structures and processes; strategies; and outcomes.

This framework was further modified by LMU (2004). The crux of the modified framework is that there exist assets, upon which households or individuals depend on for their livelihood whether they are in the rural or urban areas. Therefore, for assessment of the livelihood situation of any set of people, the framework identifies livelihood outcomes which are measurable through certain indices such as food security, water and sanitation (Watsan) security, gender equity etc. In this study, the analysis of the livelihood of the rural migrant-sending households was carried out using the various measurable asset indices in the sustainable livelihood framework such as the financial index, economic index, nutritional index, and gender equity.

### ***Data Collection***

A set of questionnaire was distributed to rural migrant-sending households and was used to gather information on the livelihood assets of the households that have a first-order migrant in the past three years. The use of this time frame is to standardize the findings of this study and allow for comparative and spatial appraisal of the livelihood status of the sampled households. Furthermore, Focus Group Discussion sessions involving cross sections of populations in the rural areas were used to appraise the authenticity of the responses got from the respondents. Finally, secondary sources of data on population characteristics were also used. These sources include the National Population Commission offices, Libraries, Government offices and data from other published sources.

**Data analysis.**

The assets of households in the rural areas (source regions) derived from questionnaire were analyzed with the aid of “Asset Indices” which were calculated from variables of household ownership of assets. These assets were derived from the Sustainable Livelihood Framework developed by the Livelihood Monitoring Unit (explained under the section on conceptual framework above) Asset Indices according to Filmer and Scott (2008) is of the basic form:

$$A_i = b_{1i} \cdot a_{1i} + b_{2i} \cdot a_{2i} + \dots + b_{ki} \cdot a_{ki} \dots \dots \dots (1)$$

Where  $A_i$  is the asset index of household “i”,  $a_{1i}, a_{2i}, \dots, a_{ki}$ , are k indicators of asset ownership variables (such as radio, television, corrugated iron roofs), and  $b_1, b_2, \dots, b_k$ , are weights to be used in aggregating the asset indicators into an index (Filmer and Scott, 2008). In calculating the asset index, PCA was used to determine the weights as a factor score for each asset variable, and to also achieve a linear combination of the variables in which the maximum variance was extracted from the asset variables. The first component to be extracted from each asset variable is known as the linear index or efficient component of the asset variable because it has the largest amount of information about the variable. Consequently, the scoring factors of the first principal components (efficient components) were used for estimating the asset indices using the asset indices formula by Filmer and Scott (2008) above. For this analysis, the determination of weight as a factor score for each asset variable was carried out using STATA 12 analytical program. Table 1 shows the variables that were used to estimate, and map the spatial variations in the value of the livelihood asset indices of the rural households in the study area.

**Table 1: Variables Used in Computation of the Asset Indices**

Asset Indices	Variables used in computing the asset indices
<b>Education</b>	Highest level of formal education of HH* head. Proportion of HH in primary, secondary and tertiary schools. Proportion of HH that have completed primary, secondary and tertiary schools.
<b>Water</b>	Primary source of domestic water supply for the household.
<b>Sanitation</b>	Where the HH dispose of sewage. Where the HH dispose of domestic refuse/garbage.
<b>Economic</b>	ICT equipment owned by HH. Transportation equipment owned by HH. Household equipment e.g. blender, fan etc owned by HH.
<b>Food</b>	Number of square meals consumed by HH per day. Percentage of income spent on food by HH.
<b>Health</b>	Last time a member of HH fell sick. How the HH manage health conditions of sick members. Last time a sick member of HH visited hospital for treatment.
<b>Gender Equity</b>	Participation of female members of HH in decision taking. Issues female HH members participate in their decision taking.
<b>Institution Access</b>	Membership of community associations by HH members. Institutions HH have access to, or benefit from.
<b>Nutrition</b>	Consumption rate of proteins by HH in a week. Consumption rate of vitamins by HH in a week.
<b>Financial</b>	Monthly income of HH. Proportion of income saved by HH.

**HH\*: Household**

In addition, Hierarchical Cluster analysis was used to categorize the value of livelihood asset indices across the states of the study area.

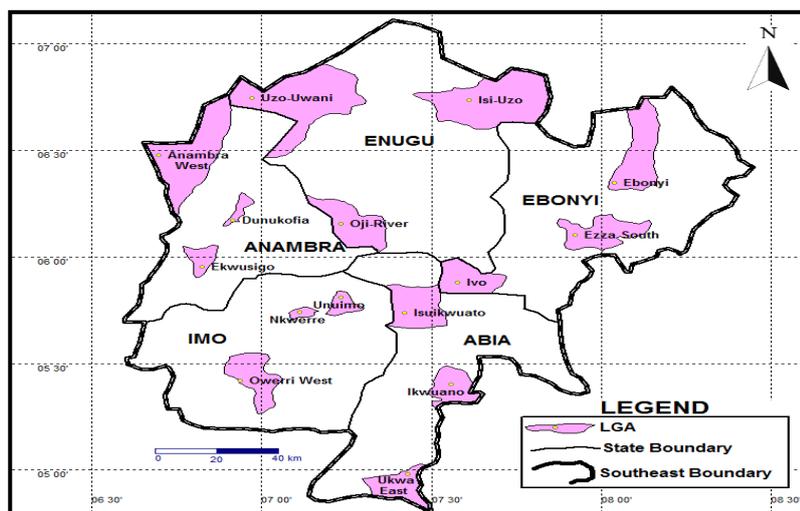


Figure 1: Map of Southeast Geopolitical Zone Showing the Sampled LGAs

### III. Results And Discussion

#### Explanation of the estimated livelihood indices scores in the study area.

Table 2 shows the estimated impacts of the livelihood indicators on livelihood status across the states in the study area using the asset indices analytical technique. Consequently, these livelihood indices scores are here under highlighted with regard to the strength of their respective scores in the parts of the study area. These scores are important values that easily point to where livelihood strategies are failing in different parts of the study area.

In interpreting the values of the livelihood indices, the higher the value of a livelihood asset index, the greater the impact of the livelihood asset index on the livelihood status of the households.

**Health Index:** The results of our analysis show that Imo State has the highest value of 1.30 . On the other hand, Abia State has the least value of 0.58 in the study area.

TABLE 2: Estimated livelihood indices on the Livelihood Status in the States of the study area

Livelihood Status Indices	Abia	Anambra	Ebonyi	Enugu	Imo
Education index	2.41	4.92	4.75	6.11	7.52
Water index	0.47	0.84	0.83	0.90	1.02
Sanitation index	1.17	0.98	1.25	1.27	1.80
Economic index	0.95	1.03	0.84	1.05	1.47
Food index	3.96	3.82	3.77	3.92	4.05
Health Index	0.58	0.87	0.93	0.73	1.30
Gender equity index	0.78	1.38	0.84	1.19	1.40
Access to institutions index	0.71	0.69	0.65	0.58	1.20
Financial index	11.59	12.87	10.30	13.43	12.63
Nutritional index	1.38	1.36	1.52	1.49	1.94
<b>Aggregate index</b>	<b>23.99</b>	<b>28.76</b>	<b>25.71</b>	<b>30.67</b>	<b>34.33</b>

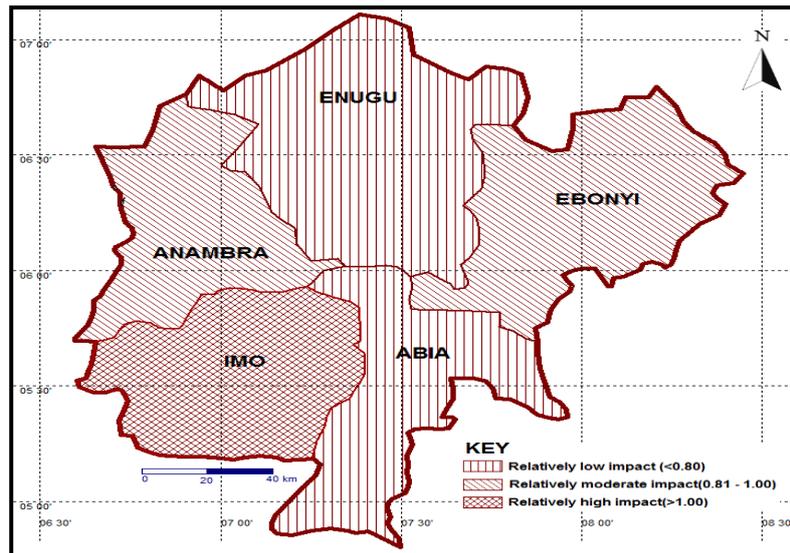


Figure 2: Map of Southeast Geopolitical Zone showing the estimated health index of the households.

**Gender Equity Index:** The gender equity index as noted earlier shows the degree of participation of women in household decision-making process. In the study area, Abia State has the lowest index of 0.78 as against the highest index value of 1.40 recorded in Imo State. Due to the high level of education attained by the population of Imo State, the women inclusive, the households in the State is more gender-friendly. Consequently, most traditional values are relegated here and the women given the opportunity to participate more in household decisions, hence the high gender equity index obtained in the State (Fig. 3).

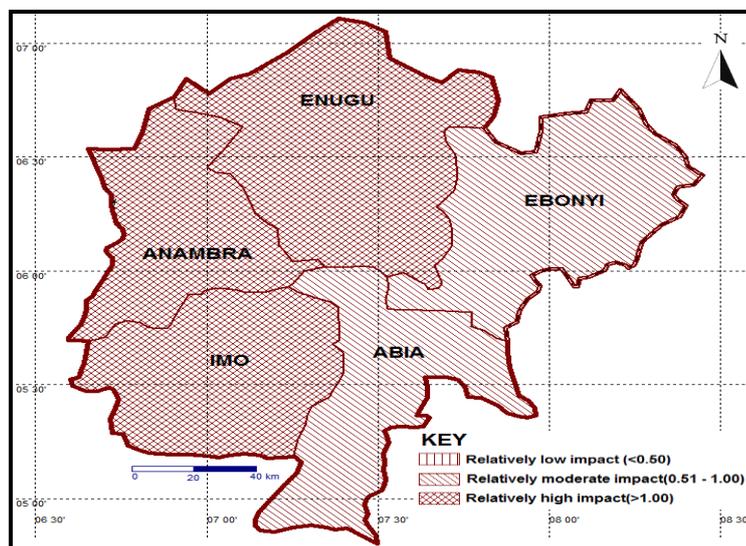


Figure 3: Map of Southeast Geopolitical Zone showing the estimated gender equity index of households.

**Access to Institutions Index:** Imo State has the highest index of 1.20 while Enugu State has the least value of 0.58. The results show that households in Imo State utilize the potential of institutions more than households in other States to further improve their livelihood (Fig. 4).

**Nutritional Index:** The results of our analysis show that Imo State has the highest value of 1.94 and this value may not be unconnected with their high educational, financial, and economic standings. On the other hand, Anambra State has the least value of 1.38 in the study area (Fig. 5).

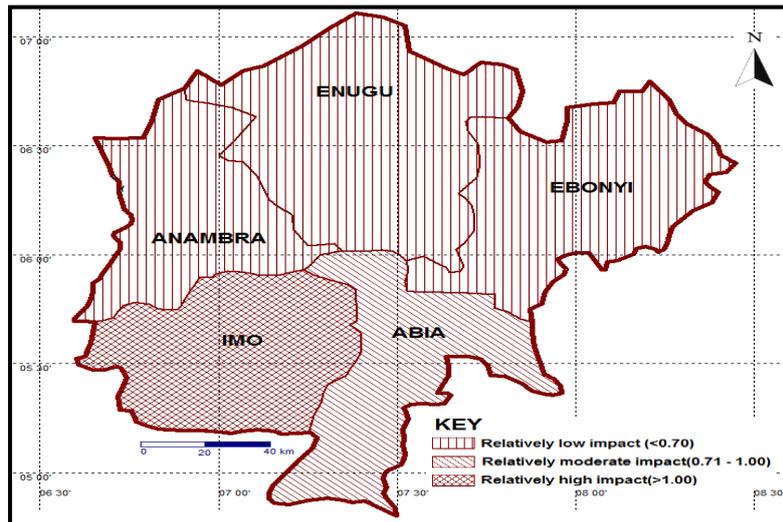


Figure 4: Map of Southeast Geopolitical Zone showing the estimated access to institution of households.

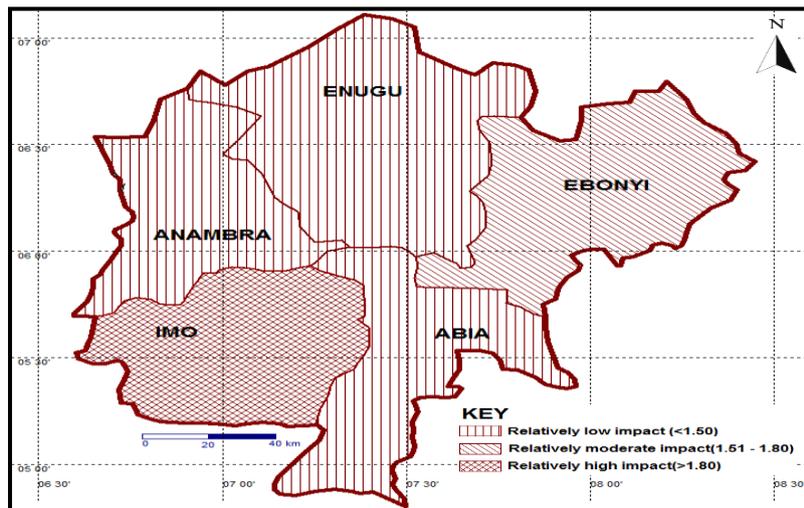


Figure 5: Map of Southeast Geopolitical Zone showing the estimated nutritional index of households.

**Financial Index:** It can be seen from Table 2 that the financial index is the most critical of all the indices studied and its characteristics above are not surprising. As shown in Figure 6, this index ranges from the largest value of 13.43 in Enugu State to 10.30 in Ebonyi State. This reflects the disparate abilities of households to make money, and to cater for their needs.

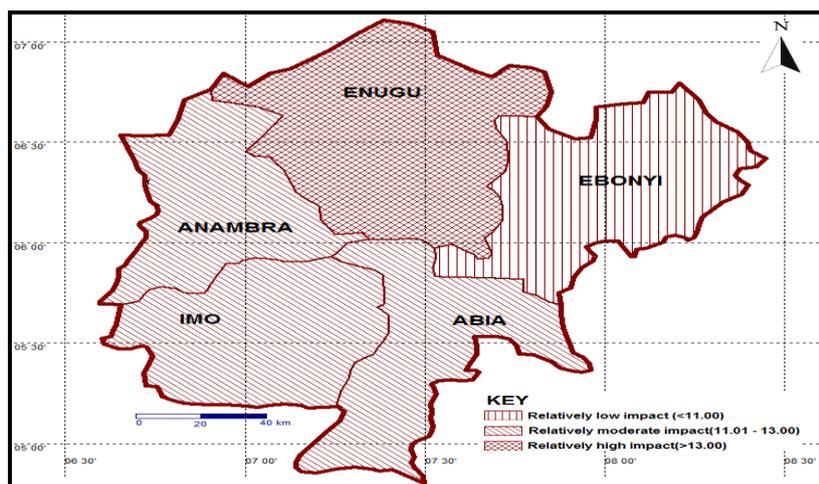


Figure 6: Map of Southeast Geopolitical Zone showing the estimated financial index of households.

**Education Index:** With regard to the education index, Imo State has the highest value of 7.52 while Abia State has the least value of 2.41. Figure 7 therefore shows that the high value of 7.52 in Imo State is a reflection of the fact that education drives the activities in the State more than other States in the study area.

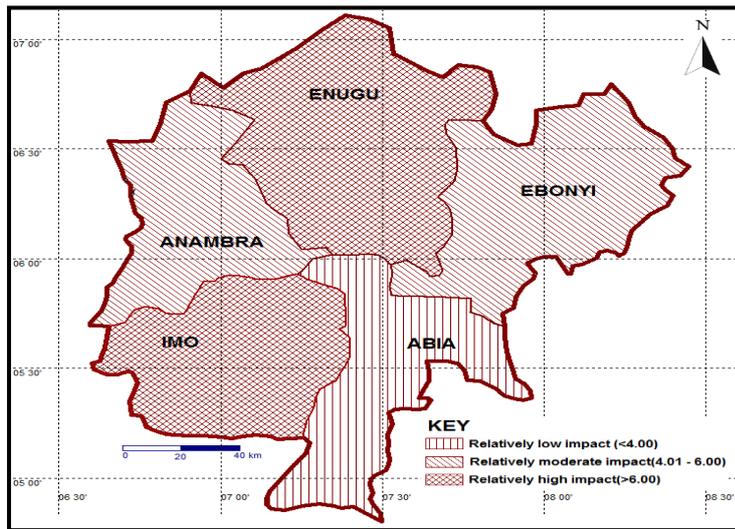


Figure 7: Map of Southeast Geopolitical Zone showing the magnitude estimated education index of households.

**Water Index:** The lowest water index across the sampled States in the study area was got for Abia State with a value of 0.47 while Imo State has the highest water index of 1.02 (Fig.8). The lowest score got for Abia State may be due to the fact that their springs, streams and other water sources are continuously being polluted by oil and gas drilling and exploration activities. This might not also be unconnected with the abysmal low health index of the State which is 0.58. On the other hand, the high score of the water index in Imo State is indicative of the rule that the higher the educational level, the more the affluence, and subsequently, the more their ability to provide higher living standards for their households, including good quantity and quality water.

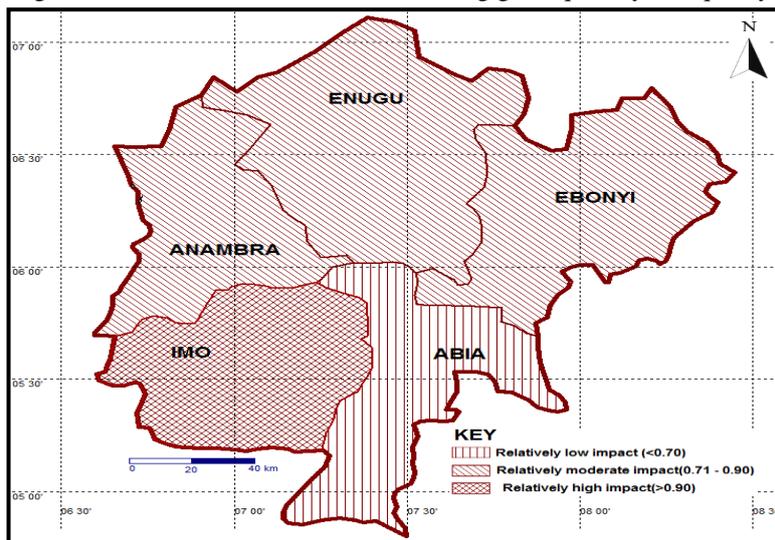


Figure 8: Map of Southeast Geopolitical Zone showing the estimated water index of households.

**Sanitation Index:** The sanitation index mirrors the inertia of the people to pursue modern standards of sanitation vis-à-vis the easier traditional methods. The values of this index in the study area emphasize the existence of some cultural values that have not been overcome. It shows that the provision of funds without attitudinal change cannot, does not, and has not for all cases transformed society. Changes in the values of the people provide the foundation on which other changes occur. Consequently Figure 9 shows that people from Anambra State have the least sanitation index value of 0.98 vis-a vis the households in Imo State with the highest value of 1.80.

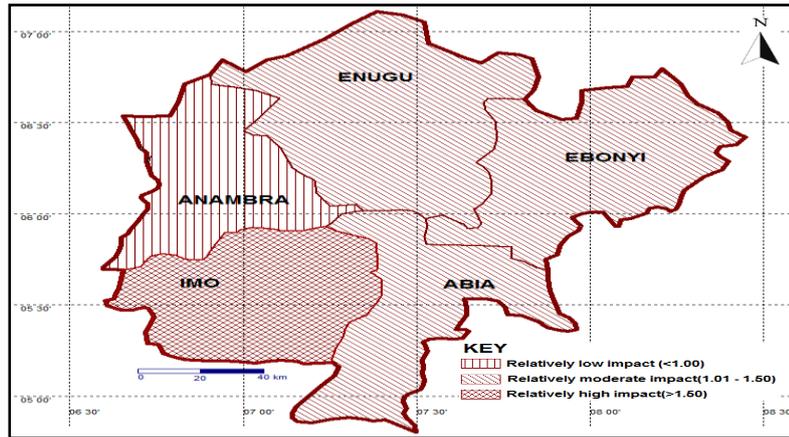


Figure 9: Map of Southeast Geopolitical Zone showing the estimated sanitation index of households.

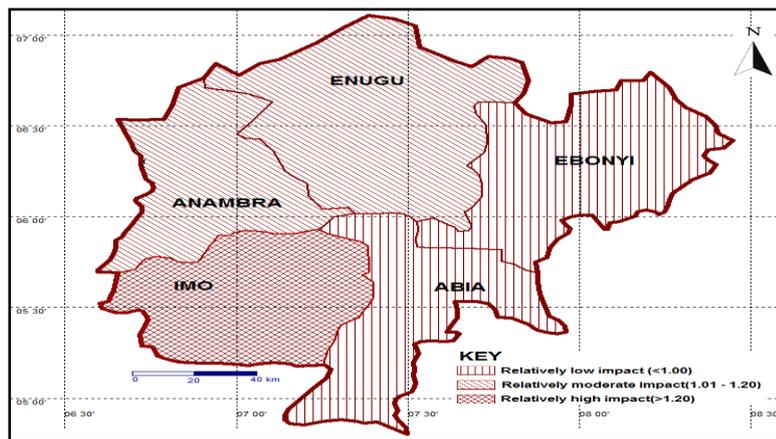


Figure 10: Map of Southeast Geopolitical Zone showing the estimated economic index of households.

**Economic Index:** As regards this index, Ebonyi State with a value of 0.84 has the least economic index in the study area. The reason for this low index in Ebonyi is due to the fact that the State is predominantly agricultural and more rural than the other States. Therefore, they usually make low returns on agriculture in which their investments have a long gestation period. On the other hand, Imo State has the highest index in this category with a value of 1.47 (Fig. 10)

**Food Index:** Imo State has the highest food index value of 4.05 in the sampled States. On the other hand, Ebonyi State with a value of 3.77 has the least food index (Fig. 11). Contributory to this low food index are the predominance of poor soils, and high rate of net out-migration of the young men from the state.

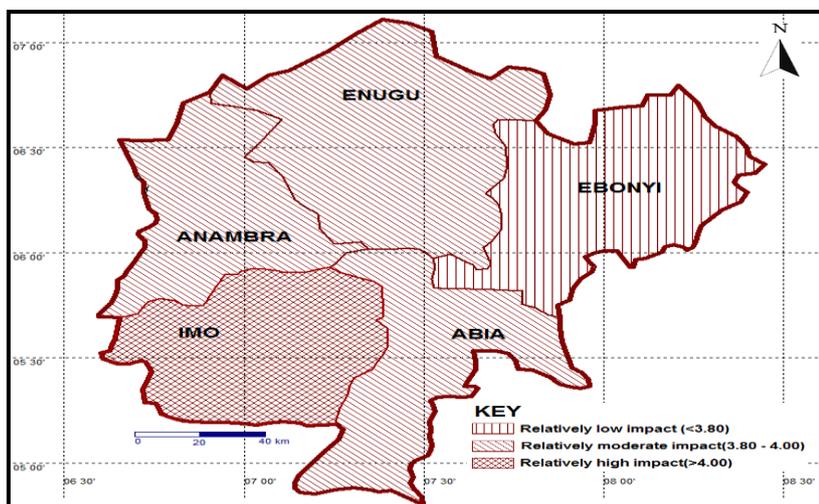


Figure 11: Map of Southeast Geopolitical Zone showing the estimated food index of households.

#### **IV. Conclusion.**

In summary, the results of this study show that with regard to the aggregate scores of the asset indices, financial index (60.82) has the highest while access to institutions (3.83) has the least score. Also, the results show that the aggregate livelihood status (34.33) of the households in Imo State is higher than that of households in other states. Based on the above findings of this study, the following suggestions are made to further improve the livelihood status of households in the study area. A major way of improving the livelihood and quality of life of any population is for the population to engage in productive ventures through investments. It is therefore suggested that governments at Federal, State and LGA levels revive agricultural extension services in these rural communities since majority of the people living in the rural areas of the study area are engaged in agriculture. In addition, there is need for the establishment of small and medium scale industries (SMEs) in the rural areas of the study area. If these SMEs are established in these areas, it will provide the much needed job by the youths, yield revenue for the development of the rural areas, attract more economic activities to the rural areas, and contribute to the improvement of the quality of lives of the populations.

#### **Acknowledgment**

This research was supported by the International Foundation for Science (IFS), Stockholm, Sweden, through a grant to Chukwuedozie Kelechukwu Ajaero.

#### **References.**

- [1] P.I.Bolorunduro, A.O.K. Adesehinwa, and O.M. Bolorunduro. Policy options in managing the crisis of environmental degradation and the prevalence of poverty in urban Nigeria. *Journal of Food, Agriculture and Environment*. 3 (1): 2005, 216-219
- [2] Department for International Development (DFID). Sustainable livelihood guidance sheets. Department for International Development, London, 1999.
- [3] Department for International Development (DFID). Urban Poverty and Livelihood: Localizing the Habitat Agenda for Urban Poverty Reduction. DFID Research Project R7963, UK, 2002a.
- [4] Department for International Development (DFID). Linking Poverty Reduction and Environmental Management - Policy Challenges and Opportunities. DFID/EC/UNDP/WORLD BANK., 2002b
- [5] Department for International Development (DFID). DFID's approach to the environment. Department for International Development. UK., 2006a
- [6] Department for International Development (DFID). Eliminating World Poverty: Making Governance Work for the Poor - A White Paper on International Development. Department for International Development, UK., 2006b.
- [7] FAO. Fisheries and Aquaculture Management and Conservation: Sustainable Fisheries Livelihood Approach. Food and Agriculture Organization of the United Nations, Rome, 2006
- [8] D. Filmer and K. Scott. "Assessing Asset Indices" World Bank Policy Research Paper 4605, Washington, D.C. 2008
- [9] M.Gamburd. *The Kitchen Spoon's Handle: Transnationalism and Sri Lanka's Migrant Housemaids*. New York, Cornell University Press., 2000.
- [10] International Organization for Migration. Mobilizing the African Diasporas for the Development of Africa. MIDA. Geneva: IOM.2004
- [11] P.C. Kesavan, and M.S. Swaminathan. Managing extreme natural disasters in coastal areas. *Philosophical Transactions of The Royal Society A*. 364 (1845), 2006; 2191-2216
- [12] V.S. Lall, H. Selod and Z. Shalizi. Rural-urban Migration in Developing Countries: A survey of Theoretical Prediction and Empirical Findings. Development Research Group, World Bank Washington DC, 2006.
- [13] P. Levitt and N.N. Sørensen, The transnational turn in migration studies. *Global Migration Perspectives*. No. 6., 2004; 2-13
- [14] Livelihood Monitoring Unit. Measuring Livelihood Impacts: A Review of Livelihood Indicators, CARE Bangladesh Research Tool. TANGO International, Inc, Dhaka, 2004
- [15] I.A. Madu. "Spatial Inequality in Nigeria: The Imperative of Geographic Perspectives in the Development Process" *Journal of Social and Economic Development*, Vol.8, No.2, 2006; pp105-120
- [16] P. Pradhan and R. Parera. Urban Growth and Its Impact on the Livelihood of Kathmandu Valley, Nepal, Urban Resource Network for Asia and Pacific (URNAP) , UMP-Asia Occasional Paper No. 63, AIT,Thailand, 2005.
- [17] D.P. Pun. "Rural Landscape Change: Landscape Practices, Values and Meanings The Case of Jagatpur VDC, Chitwan, Nepal" MPhil Thesis in Social Change, Department of Geography, Norwegian University of Science and Technology (NTNU), Trondheim, Norway, 2004
- [18] N.N. Sorenson. The development dimension of migrant remittances: Toward a gendered typology". Paper presented at International Forum on Remittances. Washington, June 28-30, 2004.
- [19] N.N. Sørensen, N. Van Hear and P. Engberg-Pedersen. Migration, Development and Conflict: State of the Art Overview. In *The Migration Development Nexus*, eds. Van Hear N. and Sørensen, N.N. Geneva, International Organization for Migration, 2003.
- [20] K.P. Timalina. Rural Urban Migration and Livelihood in the Informal Sector: A Study of Street Vendors of Kathmandu Metropolitan City, Nepal. Unpublished Master of Philosophy Thesis in Development Studies Submitted to the Department of Geography Norwegian University of Science and Technology (NTNU).2007
- [21] A.A. Ullah. Bright City Lights and Slums of Dhaka city: Determinants of rural-urban migration in Bangladesh. *Migration Letters* . Vol.1, No.1, 2004.
- [22] World Bank. Empowering People By Transforming Institutions: Social Development in World Bank Operations. 2005a
- [23] World Bank. Lessons from Natural Disasters and Emergency Reconstruction. Operations Evaluation Department, The World Bank, Washington, DC.2005b