



Ahmadu Bello University, Zaria

TWO SIDES, ONE COIN:
A GEOGRAPHER'S EXPLANATION
OF DEVELOPMENT DECISION,
PSEUDO-DEVELOPMENT & DEPRIVATION

AN INAUGURAL LECTURE

Series No. 08/26



Prof. Rafiu Olalekan Yusuf

B.Sc, M.Sc, Ph.D (Unilorin), PGDE (UDUS), MANG, FNYA

**Professor of Rural Development, Agricultural Geography
& Geography of Development**

Ahmadu Bello University, Zaria

DATE WEDNESDAY, 30TH SEPTEMBER, 2026



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30th September, 2026

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Dedication

To the living memories of my late father, and my grandmother, as well as my mother, brother for all their sacrifices. And to my immediate family for their love.

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All adorations be to Allah, the Creator and Lord of the worlds and the Most Exalted. Peace and blessings of Allah should be on Prophet Muhammad (SAW) and all the believers till the end of time (Amin). I am indeed grateful to “Allah-Ar-Rafi” the Most Exalted after Whom my parents Yusuf Oyeyipo Aselegbe and Nimota Ibironke Lawal named me “Abdul-Rafi’u” It is a day I will long live to remember for Allah Has shown me that He is the One that has Exalted me. These acknowledgements do not come in order of importance but represent my appreciation of those who have contributed to shaping me to who I have become and who I am yet to become. It is a great day for staff members of the department of Geography and Environmental Management, Faculty of Physical Sciences, Ahmadu Bello University, Zaria that one of their own is presenting this inaugural lecture, the first in the department.

To start with, I appreciate my teachers at various levels of education, I am deeply grateful that their collective and cumulative efforts have made me who I am. Those with indelible marks include Mama Dada in my pre-nursery day school and late Mr. Musa Ajetunmobi in my nursery primary school. In my secondary school, I thank Mrs. Grillo (Nee. Karim), my English teacher who motivated me with Silas Marner as the prize for the Best English Student in JSS One. Same goes for Mr. Wale Odebade and Prof. Yunusa Bashorun (now in KWASU). By this extension I thank my AIGS 1992 set who we still interact together.

In the department of Geography, University of Ilorin, I am humbly grateful to all my teachers but I am duty-bound to mention Prof. A.F Adedayo under whose headship I was admitted as an

undergraduate student and who later became my mentor and supervisor for my M. Sc and Ph. D theses. I am equally grateful Prof I.P Ifabiyi and Prof. LT Ajibade whose support during postgraduate days were immeasurable. Thankfully, these relationships still remain till today. I am equally grateful to my Unilorin Geography 2000 Graduation Set for the relationship we cherished then and now.

In Ahmadu Bello University I must register my appreciation to Professor M.M. Mamman, who has the HOD conducted the interview leading to my employment. I appreciate the current HOD, Dr. I. Mukhtar all the previous HODs under who I have served in various administrative duties. I fondly remember late Prof. J. A. Ariyo for the mentorship. I thank Professors. JO Adefila, Yusuf Obadaki Yakubu, B. Akpu, and Y.A Arigbede and their families with whom my family and I share special bonds. I am equally grateful to all my academic and non-academic colleagues in department of Geography and Environmental Management, ABU, Zaria, those of Northwest University Kano and those of Nigeria Defence Academy, Kaduna for their academic fraternity. I am grateful to all my students who we have learnt and will continue to learn from one another through teaching, research and supervision.

A few friends have encouragingly asked me about my inaugural lecture and some of them are Coker Ayoola, Yusuf Yakubu Obadaki and Yetunde Arigbede. I am particularly grateful to Dr. Daniel Okere for his constant but gentle reminder of presenting this inaugural lecture. I hope I can be promoted from a ‘professing professor’ to the rank of ‘distinguished professor’ (smiles). I remember with gratitude Late Dr. Hajara Usman Sami for her unequal support in my personal development and pray that her soul continues to find peace with her Creator, (Amin). I am indeed grateful to my parents. Late Yusuf Aselegbe of blessed memory

and my mother, Nimatallahi for the love of giving me life and naming me. I, with a deep sense of loss, appreciate the memory of Alimotu Olatohun, my loving grandmother who raised and supported me till I became independent. I appreciate my elder brother, Alhaji Tajudeen Aselegbe who have acted *in loco parentis* since my childhood and who still remains a strong pillar now. I am grateful to Alhaja Shifawu Yusuf and equally thank my siblings from the Aselegbe lineage and the extended family in Ile-Adifa, Ijomu Oro. Their supports and prayers are immeasurably important. I am grateful for having a wife like Zainab Mokesade, who has been a confidant, friend, support, and the mother of our children. I fondly call her ‘*Iyawo mi*’ for many reasons. I am equally thankful to all my ‘children’. Naturally I lack the sense of calling anyone nephew and nieces so I call them all children. I appreciate friends like Ayoola Coker and Abdulazeez Oluwanishola, Ismaila Orire, Kazeem Babamale, Kamal Lamidi and Yahaya Taiwo and others for their innumerable supports at different stages of my life. I appreciate my neighbours in Hayin Dogo (especially Mr. Bamaiyi Ezekiel and his family and Malam Abdullahi) as well as those in Ungwa Nomi, Dogarawa, such as Prof. A.K Babajo, Alhaji Mufutau Bakare, Alhaji Taofeek Oluwanishola and several others.

Equally important are the people who have participated in my researches. All of them are sources of inspiration in my paths to personal and professional growth and development. And to everyone reading this, I am humbly grateful. All thanks start with Allah and equally end with Him. And I cannot thank Him enough for still validating my belief that I still did this one only through Him.

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Management
Heads of other departments,
Professors and other Members of Senate,
My Lords Temporal and Spiritual,
Your Royal Highnesses,
My Academic Colleagues,
Other academic and non-academic staff of Faculty of Physical
Sciences
The Congregation and Other Staff of our University,
My Special Guests, Friends and Well- Wishers,
My nuclear and extended family members
Students of the Department of Geography & Environmental
Management
My esteemed supervisees
Great Students of Ahmadu Bello University,
Gentlemen of the Press,
Social media influencers and practitioners
Distinguished Ladies and Gentlemen.

Preambles

All praises to Allah, The Lord of all the Worlds. He Knows everything and He teaches man what he knew not. He is Ar-Rafi, The Exalted. And He exalts His creatures by His wisdom and choice.

Writing this gives me a question and an answer. As a post-graduate student in University of Ilorin, I have learnt that Inaugural Lecture is an avenue for communication between the ‘gown and the town’. Also, it is a summary of professional and partly that of life progresses, the account which is made by university academics who have reached the pinnacle of their careers. However, it is dependent on institutional and individual dispositions. I have always believed that for inaugural lecture, no professor is indispensable but we should all make ourselves available as a responsibility to the university and the community. It is not ambiguous that this is the first inaugural lecture to be delivered by a staff in the Department of Geography and Environmental Management, Ahmadu Bello University, but I have learnt the art and science of crafting inaugural lectures from my teachers in University of Ilorin. These include Professors J. O. Oyebanji, J.F. Olorunfemi, J.O. Olaniran, A. Adedayo and R.A. Olawepo. Among all these, those of Professor J. O. Oyebanji (Coat of Many Colours), Professor Adedayo (How the Other Half Lives) and Professor Olawepo (Learning from the People: A Geographer’s Mandate for Sustainable Rural Development) have great impact on my academic and professional growth as both a rural geographer and development geographer with a lens for socio-spatial disparity in human conditions of life. Outside the University of

Ilorin, the inaugural lectures of Professors B. Dogo, O.F Ati and M. Dankani have provided insights as well

To me, inaugural is autobiographical, but in an anecdotal form. Through my learning experience, I have preferred knowledge to academic grades. Thus, I read more books than usually prescribed. I choose academic as a profession intentionally. While preparing for our NYSC, my bosom friend, Coker Samuel Ayoola and I were talking about the future. He said his intention was to do professional Master in Business Administration and work with corporate organization. I told him “I will do my M.Sc and Ph.D and become an academic”. These decisions neither of us (most especially I) have regretted. And here I am presenting this inaugural lecture.

Geography is quite broad a discipline having both physical and human perspectives. For several reasons, I chose rural geography and the link between rural area and agriculture makes a agricultural geography an added advantage. These two are connected with development and the spatial variation in development between communities and countries spurred my interest in Geography of Development. These are the two sides of a coin and it is either one part is the head while the other is the tail. However, being the head is the outcome of the decision made and actions taken. Therefore, the myriad of development issues associated with rural areas and developing world have been my core concern which its explanation is the theme of this inaugural lecture. This explanation is the outcome of my researches which have been done using several approaches including survey, participatory rural appraisal techniques, experimental research and mixed methods with several foci. These are discussed in different sections of this lecture.

After this preamble, what follows is a generic idea about development, deprivation, Geography as a discipline and a brief sketch of my autobiography. The next subsection provides the essentials of my modest academic contributions focusing on my researches individually and with others. The dilemma of Paradox of Pseudo Development Deprivation is also examined. The other issues are the contextual clarification of pseudo development and the paradox of deprivation are also explained. The last section is the concluding remarks where recommendations are suggested and my focus for the future is presented.

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1. AUTOBIOGRAPHICAL SKETCHES AND THE INAUGURAL LECTURE

1.1 The Formative Years

Vice Chancellor and my august audience, I was born in the mid-1970s in Ijomu-Oro, a rural community in Irepodun Local Government Area (LGA) of Kwara State. I was born a Yoruba Muslim into a polygamous home consisting of sixteen children. Exigencies of geopolitical designs in Nigeria make Kwara State to be in North-Central Nigeria. Therefore, I call myself “a Yoruba man from Northern Nigeria”. I had my primary and secondary education from the community-own Ansarul Islam Nursery and Primary School (where I was the first pupil to be enrolled in 1979), and the community-established Ansarul Islam Grammar school (where I emerged the Best Art and Social Science student in 1992). As we grow from children to teenagers, I and other siblings from the extended family in the popular Ile-Adifa regularly fetch water from Asan stream, cultivate farms owned by our grand-parents, fetch firewood for domestic purposes and engage in myriads rural activities. My first seventeen years of life were therefore partly rooted in understanding the circumstances of rural life.

Apart from some unpublished poetic lines on rurality in “Masks of the Muses”, I have devoted my academic efforts to understanding the challenges of rural underdevelopment and rural poverty in Irepodun LGA. These were my concern in Bachelor of Science Project in 2000 and Master of Science dissertation in 2004. The finding of these formative researches was that cooperative societies are appropriate for solving rural poverty. Cooperatives are established by people with similar interest, goals and objectives based on the philosophy of using the strength of the group to overcome the weakness of individual members. Cooperatives in rural areas include agricultural

cooperatives, multipurpose cooperatives. They have been used to mobilize saving, create investment, provide service for members and other community members and improve rural welfare. The cooperative ideals have thus become a model for rural development and poverty alleviation interventions. These are revealed in many projects for improving the welfare and quality of life using social protection initiatives and social investment programmes in Nigeria.

The mandatory National Youth Service between 2000 and 2001 took me to Borno State where I was posted to Government Secondary School, Kwaya Kusar in Borno South Senatorial district. For that whole year when I remained in Borno State, I realized the challenges posed by the environment to rural life. Basic theoretical positions of environmentalism (determinism, possibilism and probabilmism) deepen my understanding of the rural landscape of the northeast. These issues formed the basis for my doctoral thesis where the multidimensional aspects of rural deprivation (food, water, energy, health, transportation) and the adaptation strategies are examined. Several journal articles find their origins in these ideas.

1.2 The Ahmadu Bello University Experience: Then and Now

My Vice Chancellor Sir, becoming an academic in the prestigious Ahmadu Bello University (ABU) is indeed a destiny. I got admission to study B.Sc. Political Science in ABU during the 1993-94 academic session in the defunct Faculty of Arts and Social Sciences. Then, all my elective courses were in departments of Geography and Mass Communication. The crises of ABU in these years made me to realize that I was a victim of fake admission racketeering which led to my decision to buy a new JAMB Examination form and change to University of Ilorin during the 1995-1996 academic session. Again, on

completing my National Youth Service in 2001, I was among the earliest applicants to obtain the post-graduate form to study M.Sc. Geography in ABU but circumstances never made this a reality. So, I returned to University of Ilorin for my M.Sc. in 2002 which I completed in record time, 2004.

I was waiting to start my Ph.D. in 2004 when my friend, Mr. Kazeem Babamale (who later became a Registrar in Federal University of Health, Ila Orangun) informed me about the job advertorial for academic staff in Ahmadu Bello University. Literally I waived it aside saying “*is it the ABU that could not give me admission that will give me job?*” However, not to be an ingrate to my friend, I applied but did not tell anybody. Of course, I had little hope in it until I received a letter inviting me for interview in 2006, two years after the application. I was elated and my teachers in University of Ilorin especially Professors Adedayo, Ifabiyi and Ajibade were happy for me. I came for the interview. I was successful and I assumed duty in April 2007.

As a staff in the department, I have immensely benefited from colleagues and students to whom I am still grateful. As a geographer, I have to teach and supervise courses outside rural development for which I was primarily employed. These experiences continue to make me a better geographer by seeing the diversity of development challenges using different lens. This perhaps led to my interest in Geography of Development, and culminate in my choice of inaugural lecture titled: **Two Sides, One Coin: A Geographer’s Explanation of Development Decision, Pseudo-Development and Deprivation.**

While in school, both primary and secondary levels, English language was amongst the subject I have some natural gifts and for which I have won prizes. Albeit my parents were unlettered, in fact, apart from the ability to scribble his signature my late

father could barely write anything. Yet, as a trader he acquired Pidgin English language for business communication with his non-Yoruba acquaintances and partners who are Hausa, Igbo, Ghanaian and Lebanese. These and other reasons convinced me that language and knowledge are different though connected. Language is a medium of communicating knowledge hence I should not deny my children the use of Yoruba language. Thus, I speak with them at home using Yoruba. They learn Hausa from their playmates and friends and learn English at schools. This has helped me a great deal. Language is a cultural aspect of human development and without mincing words countries and nations that have conquered the world and will still dominate the world in future must use their indigenous languages. I hope that teaching and learning Nigerian languages will not become an insurmountable challenge for our children in the future. Sadly, many of our children are being deprived of speaking our indigenous languages.

2. GENERAL OVERVIEW

2.1. Explanation: A Geographer's Interpretation

Explanation of any phenomenon according to David Harvey in his iconic 1969's book 'Explanation in Geography' can be done by making unexpected outcomes to expected outcome or making curious events seem normal or natural through deductive-predictive approach, relational view or analogical modelling. Harvey somewhat likened the deductive approach to Thomas Kuhn's Paradigm which is defined an objective-subjective suppositions of practitioners of science which changes over time. As such, innovation in a given community will become obsolete in another community (or even the same community) at different time. This is the crux of explanation itself since development is not static but dynamic based on the accepted criteria of development. Infusing moral-philosophical

ideas into geographical issues is a practice among Geographers. Similarly, using the place-based perception is equally relevant. The antipodal position of Capitalism and Marxism/Socialism as well as Idealism and Realism/Materialism are all relevant in constructing and deconstructing the meaning of development over space and time.

The independence of development decision lies in autochthonous self-determined indicators that are found relevant to the needs and aspirations of the people involved. This is more realistic than adopting an externally defined, *others-conceived, outwardly-advantaged* definitions that make people struggle to meet the development objectives that leave them in a *pseudo-development* comatose.

Geography focuses on interaction between people and places. Thus, rural geography focuses on the interaction of rural people with their places. Rural areas are locations that are distinct from urban areas in demographic size and composition, housing characteristics; social structure and stratification, infrastructure and facilities and economic activities. Rural geography is concerned with theoretical, analytical, descriptive and prescriptive synthesis of rural area.

2.2 Development: Measures and Indicators

Throughout human history, and particularly in the 21st century, no word has been used so nebulously as development. Different definitions of development abound as many as the practitioners of development itself. Development has been interpreted in cultural, political, spiritual, economic, social, technological, physical and several other contexts (Mayhew, 2009). It has been used to classify people and places both in peace and war times and have been used to glorify or vilify places and people based on adversity or prosperity. The term is so used and mal-used to

the point of generating sub-terms like underdeveloped, overdeveloped, developing, and redeveloping, less-developed, more-developed. These have been used to classify the world into “haves” and “have-nots” (Hobbs and Salter, 2006). Without ambiguity, development in the 21st century equates quantitative materialistic economic consumption and whoever lacks such is considered deprived. Mainstream development organisations like the World Bank, United Nations Development Programmes, International Labour Organisations though realize that development is multi-dimensional, they still use income as a classificatory indicator. A clear example is the classification of countries using Gross Domestic Product and Purchasing Power Parity into More Developed Countries (MDCs) and Less Developed Countries (LDCs) (Table 1).

Table 1: Characteristics of MDCs and LDCs

Characteristics	MDC	LDC
Per capita GNP and income	High	Low
Percent in middle class	High	Low
Percent in manufacturing	High	Low
Energy use	High	Low
Percent urban	High	Low
Percent rural	Low	High
Birth rate	Low	High
Death rate	Low	Low*
Population growth rate	Low	High
Percent underage 15	Low	High
Percent literate	High	Low
Leisure time available	High	Low
Life expectancy	High	Low

Source: Hobbs and Salter (2006)

Unfortunately, non-economic, non-materialistic, and behavioural indices such as inequality, social justice, socio-communal serenity, brotherliness and humanity, spiritual fulfilment, low level of violent homicide/suicide, psycho-social trauma and depression or even positive health indices like low level of carcinogenic diseases, diabetes, obesity, Alzheimer, cardiac diseases associated with consumerism are never listed. Similarly, environmental degradation, human-engineered brutality, political suppression of non-belligerent societies and hegemonic usurpation of resources are not considered elements of maldevelopment. Economic consumption is good but the over valorization deserves a rethink such that societies could make a choice and preferences using appropriate indicators reflective of their peculiarities. Otherwise, the sense of felt deprivation will deepen. This is because development is universal so also is deprivation. These issues are further examined in latter part of this lecture.

2.3 Geography of Development

Geography as a discipline has evolved over the years by shaping itself through the activities of geographers. Several definitions of geography abound (See Harvey 1969, Smith 1977, Mabogunje 1980, Mayhew, 2009). But to me, geography is a field of knowledge that is concerned with the interaction of man with his environment; a specialization that adopts the scientific approach to explain how human beings organize and use their surroundings; a professional practice that generate facts about the variation of phenomena on the Earth; and a systematic body of knowledge that adopts multiple approaches to understand man-environment relations in order to maximize spatial interaction. Thus, geography is concerned the with Earth as the environment of man. This makes Geography a ‘foot-loose’ discipline that finds if focus on environmental issues. Since the development of man is based on the environment, the best-

informed minds for all times are those knowledgeable about Geography.

Geography of Development therefore analyses the variation in development over space using contextual and conceptual indices appropriate for comparison and cross-comparison. Geography of Development provides a basis to clearly appreciate the rationale, processes and pattern of development between areas especially since the 1940s (Potters, et al, 1999). A dilemma in development is breaking from practices and comfort that people are accustomed to even if it provides a direction for self-actualization. Thus, the 'have nots' in the developing countries will prefer the consumption pattern of the 'haves' in developed countries even at a heavy price because they simply live on a borrowed prosperity.

2.4 Rural Geography, Agricultural Geography and Rural Development

Clout (1972) defined rural geography as the study of recent social, economic, land use and spatial changes that have taken place in less densely populated areas which are commonly recognized by virtue of their visual components as country side. According to Gilg (1985) rural geography encompasses agricultural geography, forestry, rural settlements and rural housing, transportation and services, recreation and tourism, land use and land management and rural planning development. Invariably, rural geography is the study of people, places and environment in rural areas with special references to society, economy, politics and culture. Rural geography alternately deals with space and time dimensions in its analysis of rural environment. As posited by Okafor and Akinbode, (1998) studies in rural geography also focus on agriculture, migration, infrastructural facilities and regional issues. Yusuf and Ukoje in their study in 2010 contested the over simplification and

equation of rural geography with agricultural geography. Therefore, issues of concern to rural geography are all-encompassing based on the academic, research and policy objectives of the time. These include but not delimited to sustainable development and environmental stewardship, non-farm employment and livelihood analysis, energy, demographic and health issues, technological issues in rural development and human capital development for rural regions (Yusuf & Ukoje 2010).

There is a strong, almost seemingly inseparable link between rural areas and agricultural-related production. In fact, some opinion makers in the academia and policy cycles take rural area as synonymous to agriculture and exploitation of natural resources. However, there is more in rural than agriculture. And this is one of the major explanations I have strongly advanced in teaching and research. Instructively, urban agriculture is growing in trend and dimensions in Nigeria and many other developing countries as consequences of several factors.

Agricultural geography analyses the patterned concentration of agriculture with emphasis on resource use; input-output relation; challenges and prospect. Invariably both agriculture and rural geography are related, just like one of the laws of geography, everything is related to everything but closer things are more related. Geography of Development is bound to the concept of development itself. Virtually all spatial relationships are connected to, directed towards or emanating from development. Nonetheless, Geography of Development emphasizes the variation in development across places and between people. As cited by Professor Olawepo (2015) in an inaugural lecture, Caincross, reiterated that ‘the key to development lies in peoples’ minds and in the understanding in which their thinking finds expression in the play of ideas and

opportunity'. This means development decision should be taken by the people concerned.

The development of rural areas has been affected by several phenomena to which scholars in related disciplines such as rural sociology, rural economics and agricultural extension, rural transportation, rural health among others have contributed. This is owing to the fact that 'rural' is a space with multitude of interest (Yusuf and Ukoje 2010.). Human geographers from the social geography, regional development, medical geography, transport geography, economic geography, geography of energy, hydrology and water resources, agricultural geography have various stakes in rural issues, however a rural geographer combines and synthesizes all these stakes and processes them to a pattern that can be collectively aggregated and individually explained for a coherent understanding. Thus far my academic and consultancy and community service efforts have enabled me to make some contributions towards this explanation.

Rural areas are better understood beyond the demography using the population threshold alone. A complex weave of socio-economic, productive, consumptive, attitudinal and power relations that define development is more apt. By virtue of academic training, research directions and personal experiences, geographers in rural development may not have a singular scope of research. As long as rural space is characterized by motley of development issues, the geographer follows each line to explain the What? Where? When, How and Why of these issues. Therefore, focuses of teaching and research make us concerned about rural welfare, rural politics, rural settlements, rural transport, rural industry, rural water and sanitation, rural resource analysis, rural technology, rural demographics and several other aspects of the rural. For in all of these we attempt to interpret the landscape of development and identify areas of deprivation.

Globally human concentrations are in both rural and urban areas. Few countries without rural area include Singapore, St. Martin, Nauru, Monaco, Bermuda, and Cayman Island. South Asia has the largest rural population, then East Asia, followed by the Pacific region and sub-Saharan Africa. From 66.4% of global population in 1960, rural population reduced to 60.6% in 1980 and 56.9% in 1990. By the turn of the century, global rural population reduced to 53.3%, which further reduced to 48.4% in 2010 and reduced to 44.3% 2019. The decadal decrease from 1960 to 2020 is between 3.6%. (Macro trends 2021). As at 2020 Nigeria is 52% urban and 48% rural. and now 2026 the urban population has increased to 55.8% while rural has declined to 44.2% (Worldometer, 2026).

In the 1970s, the work of Dupe Olatunbosun on ‘The Neglected Rural Majority’ was an eye opener to the myriad challenges facing rural dwellers in Nigeria. Then, Nigeria was largely rural with a population range of 70% to 75%. The work exemplified the poor quality of life of rural dwellers, even when they are the majority in population. Now in 2026, available statistics are indicating increasing urbanization in Nigeria. This is occurring amongst several factors including rur-urbanization (Yusuf 2017). Rur-urbanization is the unabated conversion of rural lands to urban usage with consequences on rural development. The fear is that by 2050 when it is projected that Nigeria urban population will be between 70% -80% while rural will range between 20%-30% (UN Habitat, 2026), will it not be a case of “the neglected, deprived and abandoned rural minority?” Signs of the post rural are already manifesting at different scales in different parts of the world. It is hoped that the biases that have truncated rural development will not lead to total forsake of rural areas in the not distant future.

2.5 Deprivation: the hydra-headed challenge

Deprivation being a social construct has different meaning based on location, time and contexts. Deprivation is usually a situation in which individuals or groups of people experience disadvantage not experienced by others. Thompson (2000) conceived it as the inability of individuals to achieve activities that are considered as basic necessities, and necessities are those things which everyone 'should be able to afford and which they should not have to go without'. Deprivation is a consequence of inequality which wears coat of many colours (Oyebanji, 1986) hence Chambers (1991) captured it as 'The Deprivation Trap' which include interlocking manifestations such as poverty, physical weakness, vulnerability, powerlessness and isolation. Theoretical stands to explain deprivation include Relative Deprivation Theory as conceived by Stouffer and expatiated by Ted Gurr, and Cycle of Deprivation Theory of Richard Berthoud. Other theoretical perspectives include Ecosystem Theory, Culture Theory, Political Economy Theory and Political Ecology Theory (Yusuf, 2011).

The environment includes physical, social, economic, cultural and policy surrounding of human beings. And these components no doubt are interconnected with one another. In the early 1970s to the early 2000s, the physical environment of North eastern Nigeria, faced challenges where drought and aridity appeared prominent. There is a degeneration to social and policy environment challenges with poverty becoming manifest which interfere with the hitherto peace and security enjoyed in the Northeast. It becomes obvious that welfare policies (Who gets what? When? Where? and How?) misdirected the culture and consciousness of the people. Thus, insecurity emanates as a challenge (Onwuaroh, et al, 2017; Aina, et al, 2024). The initial conflicts over resources degenerated to large-scale insurgency violence that engulfed the Northeast. In the same vein, the

Northwest region has been battling insecurity-induced deprivation (Sulaiman, Harande, Adefila, and Yusuf, 2021)). The study by Onwuaroh, et al. (2017) indicated that insurgents firstly attack and occupy outlying settlements and rural areas and, in that process, destroying the socioeconomic stability of those communities. Similar outcomes were reported by Suleiman, et al (2021) on banditry in Katsina State emphasising the destructive effects on agriculture, income of farmers, communal instability and forced relocation. Presently the Southern parts of Nigeria have become unsafe. And sadly, the insecurity is affecting more rural areas than urban. Beyond insecurity, other issues like infrastructure deficit, weak market structures, climate change vulnerability have intensified development challenges (Yusuf 2018).

3. MY MODEST CONTRIBUTIONS

Vice Chancellor Sir, in my few years as a teacher, researcher and supervisor, I have come to understand that for successful teaching and research, academics should understand the socio-cultural peculiarities of people, space-time dimension of activities, recognition of disparity and inconsistency in official documents and reality and ethical acceptance of people's suspense and fatigue with researchers. And these have guided me in my modest contributions to knowledge till this day.

Development of rural areas has been affected by several phenomena to which scholars in related disciplines such as rural sociology, rural economics and agricultural extension, rural transportation, rural health among others have contributed. This is owing to the fact that 'rural' is a space with multitude of interest (Yusuf & Ukoje 2010). Human geographers from the social geography, regional development, medical geography, transport geography, economic geography, geography of energy, hydrology and water resources, agricultural geography

have various stakes in rural issues. However, a rural geographer combines and synthesizes all these ideas and processes them to a pattern that can be collectively and individually explained for a coherent understanding. Thus far, my academic and consultancy experiences and community service have enabled me to make some contributions towards this explanation.

There is a strong, almost seemingly inseparable link between rural areas and agriculture-related production. In fact, some opinion makers in the academia and policy cycles consider rural area as synonymous to agriculture and exploitation of natural resources. However, there is more in rural than agriculture and this is one of my explanations.

Whether spatially appropriate and socially justified or not, the need for rural development actually becomes an issue due to the deplorable quality and conditions of rural life in comparison to urban areas (Yusuf, 2012). Since scholastic pursuits have various dimensions, rural development practitioners are also varied. Thus, rural development is a meeting point of ideas, themes, concept, theories, and knowledge. For all these, Geography of Development provides a basis to clearly appreciate the rationale, processes and pattern of development between rural areas and urban areas especially since the 1940s (Potter et al., 1999). Rural areas have their distinct (serene, cultured, healthy, peaceful, primary production) characteristics in contradistinction to urban areas with their attributes. The subsections that follow present some of my research and experiences.

3.1: Poverty and Deprivation in Rural Areas

Characteristics of rural areas as listed by Adefila and Yusuf (2014) include reliance on primary economic activities, small size of settlements, low population density, sociocultural homogeneity, close social interaction and contact. Others are demographic predominance of women, children and the aged as well as extensive use of land and other resources that signifies dependence on nature. Poverty has remained a paradox in rural areas. This is because rural dwellers are the producers of primary products on which other secondary activities depend. So, it is unclear whether poverty in rural areas is imposed or assumed. This is because some farmers in rural areas are in monetary terms richer than urban wage earners. Nonetheless, poverty alleviation which has been rebranded as social protection will always require continuous investigation owing to its pervasiveness in rural areas. A major self-determined measure to reduce poverty and accelerate development is cooperatives (Adedayo & Yusuf, 2004 a & b; Yusuf, 2008).

Rural poverty and poverty alleviation are usually explained and addressed using Top-Down policy approach based on consumption of goods without understanding the perception of the rural people considered as “the poor”. Thus, Yusuf (2008) employed participatory methodologies to understand the perception of the rural poor on poverty and discovered that perception of rural poverty mirrors the spatial and socio-economic characteristics of rural areas, socio-economic policy as well as physical-environmental factors. The perceptions of poverty in Irepodun LGA (Kwara State) which is a Yoruba community was hinged on cooperative as a self-help approach while in Sabon Gari LGA (Kaduna State) poverty is perceived as a consequence of misgovernance hence government should provide the interventions. Chambers (1997) concluded that rural poverty reflects deprivation which is hinged on five interlocking

dimensions: lack of assets and flows of food and cash, physical weakness, vulnerability to contingencies, powerlessness and isolation.

There are two major approaches to rural poverty reduction. The first one is the sector-specific and multi-sectoral programmes initiated by economic planners of government and non-governmental organizations. Interventions such as Agricultural Development Projects (ADPs), the Directorate for Food, Road and Rural Infrastructural (DFRRI) and National Poverty Eradication Programme (NAPEP) and other women-focused programmes like Better Life Programme (BLF) and Family Economic Advancement Programme (FEAP) are typical examples. Other social protection interventions include Youth Employment and Social Support Operations (YESSO), Community and Social Development Project (CSDP), Farmer's Money, Nigeria Covid-19 Action Recovery and Economic Stimulus (NG-CARES), Livelihood Productivity and Resilient Support Project (L-PRES) among others. The second approach involves the initiative of the rural dwellers themselves which is mostly through formal cooperatives or informal self-help efforts. Cooperatives for rural poverty alleviation can be multi-purpose which provide support, thrift, investments and loans for members or single purpose such as the service provision impact of Kinti-Lafiagi tractor owners cooperative society. Although situated at Guyedoko in Lafiagi district, its activities cover the three districts (Lafiagi, Tsonga and Tsaragi) of Edu Local Government Area in Kwara State (Adedayo & Yusuf 2004b).

A major challenge to social protection is the use of equitable, effective and efficient targeting of the deserving poor that will be devoid of double-dipping and undue preference of the politically exposed persons. Using the Community Based Targeting (CBT) adopted by YESSO, Bidoli, et al (2018) revealed that CBT can be highly cost-effective. The doctoral

thesis of Hajara Usman Sami (2023) indicated that CBT as deployed under YESSO in Bauchi and Osun States costed between ₦700.00 and ₦800.00 per person which was cheaper based on the number of households covered and documented in the Single Register (SR). The Single Register of Poor and Vulnerable Households developed by YESSO has been found useful for subsequent social protection initiatives in Nigeria.

3.2. Periodic Markets and Marketing

Rural markets and marketing are another important area of my research trajectory. A schema was developed which shows the typology of merchandize in periodic markets in Kwara State (Yusuf 2009). This schema (Appendix I) has been modified and adapted in subsequent researches such as that of my first doctoral candidate in 2013, Dr (Mrs) R.F Dyaji, (who is now a professor). Other M.Sc candidates are Hanatu Babajo (2017) and Yusuf Shamsudeen (2025).

The incomes of traders were discovered to be related to the nature of the periodic markets they attend (Yusuf, 2009). Babajo, et al (2018) reported that participating in periodic markets in Giwa LGA of Kaduna State enables more than 40% traders to earn an average of ₦25,000 monthly profit, as income from participation. Equally, it created jobs for head loaders, shoe makers, grain millers, telecommunication related activities (phone repairs, commercial battery charging, sales of mobile phone SIM cards) welding and other services. Most of the participants in the markets are men (75%): 42% are producers/marketers of agricultural produce, 35% are marketers of non-agricultural product while 12% are in artisanal and service activities and 12% are salary earners in the formal sectors in combination with participation in periodic marketing. Regularity of attending periodic markets is influenced by income of traders, revenue to government, number of people

engaged in non-trading activities and types of innovation diffused are explanatory variables for impact of periodic markets on socioeconomic development. Shariason, et al (2017) also reported similar findings in Kajuru LGA.

Related is the availability of infrastructure for the operation of periodic markets. Bashir, et al (2021 a &b) revealed that in Kogi West Senatorial District, periodic markets were randomly distributed with a Nearest Neighbour Index of R_n 1.84. Nonetheless, the poor state of road infrastructure (unpaved surfaces, saddle depression, narrow width and minimal usefulness in the rainy season) negatively affected the vibrancy and economic potentials of the periodic markets. The challenges associated with commodity sales in periodic market has led to use of Aggregation Marketing Channels. Similarly, the doctoral thesis of Dr. Goni Adamu from which several publications emanated (Adamu et al 2022; 2023) are pointers to this.

3.3 Sustainability and Environmental Issues in Rural Areas

Sustainability in rural environment is another area where I have contributed modestly. For the rural area, sustainable development is that which involves trade-off between conflicting livelihood pursuits negotiated within a straitened social, economic, environmental, technological and cultural dynamics. Yusuf (2007) validated the theoretical underpinning of Sustainable Earth Agricultural System (SEAS) and Sustainable Agriculture and Rural Development (SARD) using Participatory rural appraisal techniques such as Do it Yourself, Participant and Non-participant Observation, Case stories and Seasonal calendar to investigate scarcity of fertilizer. Causes of scarcity are circumstantial factors like increased fuel price, unfavourable government policy and weak implementation of programmes, inadequate infrastructure and poor supervision of distribution, diversion and insubstantial domestic production.

Owing to scarcity, 57% of the farmers purchase between 5-10kg while less than 5% could afford above 40kg. On the average, a 50kg bag of fertilizer cost between ₦3,100.00 for (GoldenTM) NPK 15:15:15 to ₦3,300.00 for (SambukaTM) Urea fertilizer. During field survey in May-August, 2007 a 50kg bag of maize averagely sold for ₦1,600.00 while a bag of regular NPK 15,15,15 was ₦3,200.00. A 1kg measure (locally referred to a "*Tia*") was sold for between ₦70.00-₦80.00 depending on the brand. This means a farmer had to sell two bags of maize to buy a bag of fertilizer! Correlation between farmers' expenditure and their net farm income revealed a high negative value ($r = -0.6$) at 95% confidence level. While finalising this inaugural lecture in April 2026, (about 20 years after), a 50kg bag of NPK fertilizer was sold for between ₦48,000 and ₦55,000. while a 50kg bag of urea was sold for ₦47,000 and ₦50,000 depending on location and brand. Similarly, a 50kg bag of maize was sold for around ₦25,000. This means the situation for rural dwellers have not changed and two or more bags of maize are still equivalent to a bag of fertilizer in 2007 and 2026!

Consequent upon inaccessibility to fertilizer, farmers are induced to adopt SEAS and SARD components. Thus 61.5% combine both chemical and organic fertilizer such as animal dungs, soil from dumpsites and poultry waste. A possible advantage according to farmers is that the non-chemical soil improvers last for more than one farming seasons with sustainable yield compared to chemical fertilizers which lasts for only a farming season Although the environment-friendly, organic fertilizer-supported agriculture has taken root, it still faces enormous challenges of widespread assistance when compared to chemical fertilizers.

Based on the findings on inaccessibility to fertilizer, the use of soils from waste dumpsites then triggered further research interest in Sustainable Agriculture Practices (SAP). Ironically,

this reminds me of a Yoruba saying: ‘*Omo Elefo o, bawo ni efo re se tutu bayi? Efo mi ki se taatan o!*’ Literally translated, it is a conversation between a hawker of vegetable and a buyer. The buyer was curious about the freshness and greenness of the vegetable hence tried to know the source of the vegetable, but the hawker answered that the vegetable was not harvested from dumpsite! This means people are aware of the benefits and harms associated with using dumpsites for farming or eating the foods and vegetables that grow on dumpsites. Thus, Akpu and Yusuf (2011) analysed the composition of soil from waste dumpsite and their use for farming because people now bag soils from dumpsites for sale to farmers or for their own use as farmers (Plates 1&2). The key findings are that soils from waste dumpsites from rural areas contain more biodegradable waste (90%) than urban (63%) but urban waste dumpsites contain more organic matters. For depth analysis, mineral constituents of soils from dumpsites were examined as revealed in the Table 2.

Table 2: Composition of soil from waste from dumpsite

Location	PH Ratio	Per cent Organic Matter	Per cent Total Nitrogen	Phosphorus
Samaru	8.40	14.68	0.72	36.75
Unguwan Sarki	9.20	8.94	0.26	71.75

Source: Laboratory analysis of samples collected by Akpu and Yusuf (2011)

For the purpose of agriculture, soils from urban waste dumpsites are more suitable. The reason is because the rural areas studied have no central waste dumpsites hence each household (or few households) collect their waste at their backyard. Therefore, the volume and diversity of waste likely to decompose are small; urban waste dumpsites are rarely cleared regularly which increase the quality of organic content; and it is a reflection of high standard of living in urban areas compared to rural areas.

Vice Chancellor Sir, the dilemma in the use of waste from dumpsite is the poor awareness of the health implication of the use of such soils. Compared to the dumpsite where Akpu and Yusuf obtained their samples which naturally degraded and decomposed, people now burn waste and apply it directly to their crops (Plates I and II) unaware of the heavy metals in the waste. The paradox is that farmers may be escaping the prohibitive cost, health effects and water pollution associated with chemical fertilizers but falling deeply into bioaccumulation and biomagnification traps of heavy metals from waste. Plates III and IV present a farm along Zaria-Kano highway, a few metres away from SAJ Foods Limited around Mararaba Gwanda where waste from dumpsite was used. Instructively, these pictures were taken in 2024 but are still relevant now. In a study Okoronkwo, et al (2005) reported a concerning levels of lead, cadmium, zinc and copper in both soils and crops cultivated in abandoned municipal solid waste dumpsites,



Plate I: Soils from waste dumpsite collected



Plate II: Soils from waste dumpsite are bagged



Plate III: Soils from waste dumpsite on farm

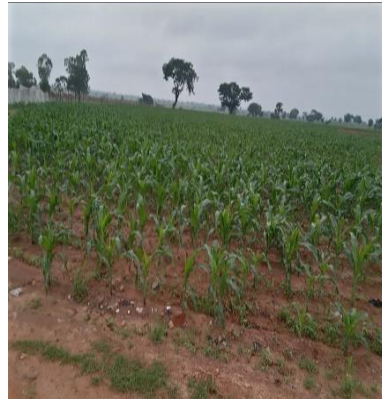


Plate IV: Soils from waste dumpsite with crops

In Sabon Gari LGA, the lens of sustainability was further used to examine urban vegetable farming. The concept of Eco-supportive Infrastructure advanced by Yusuf and Ukoje (2012) was empirically tested by Yusuf, et al (2013). According to the authors *'eco-supportive infrastructure are facilities, resources and services that enhance the sustainable actualization of rural (urban) environmentally-depended livelihoods and simultaneously facilitating environmental remediation'* (Yusuf & Ukoje 2012: 12). Eco-supportive infrastructure that could sustain livelihood should satisfy the following conditions as highlighted by the authors. It should be flexible to overcome some forms of biophysical and fiscal constraints; accessible to and affordable by the most resource-poor rural and urban people and vulnerable groups (women, landless labourers and migrants); based on available physical resources and intermediate technology available within the environment with minimal external procurement; adapted to the perceptual realities of rural (and urban) dwellers over space; and, environmentally sustainable within a participatory framework. Given these conditions, an example of eco-supportive infrastructure deployed for sustainable urban farming is pool of water collected in excavation pits.

Excavation pits (or borrow pits) abound in urban areas where soil and or gravels have been mined for construction purposes. The pit left by the mined earth materials accumulate rain water which usually remain after the rainy season and used for farming purposes among low-income, small-scale urban farmers in Sabon Gari LGA of Kaduna State (Plates V-VIII). Crops planted during the 2011-12 farming season were tomato, pepper, Irish and sweet potatoes, onions, cabbage and carrot. Utilizing excavation pits for irrigation activities provide cheap source of water for the farmers; an alternative to sinking boreholes for the same purpose which is beyond the financial threshold of the farmers. To sink standard borehole costs between ₦ 250, 000,00 and ₦350,000.00 (as at year 2012). The production analysis was done only for tomato and pepper since they were common to all farmers. The output was ₦ 341,850.00 while the input was ₦112,225.00 resulting in a profit of ₦229,635,00. (A dollar as at then was 162 naira). The utilization of these excavated pits contributes to food and income of urban farmers at very low cost which answers the economic viability of sustainability. Even now in 2026, urban farming using water from borrow pits is still practiced in Zaria.



Plate V: Excavated pits of clay soil



Plate VI: Excavated pits of gravel



Plate VII: Pump machine in the excavated pit



Plate VIII: Urban farm irrigated using the pit

A major sustainability concern in rural areas is the reliance on wood fuel and fuelwood. Shugaba and Yusuf (2014) in a study on energy utilization in Jigawa State revealed that in rural areas, people mostly use fuel wood while in Dutse, the State Capital, 87.8% used fuel wood. Reasons for use are cheapness, availability, and cultural acceptability. In rural areas availability is a factor while in urban area ease of transfer facilitate availability and use. This means domestic cooking energy transitioning still face uphill tasks as there are no major differences in the daily bundle of fuel wood used and money spent among residents of Dutse and the surrounding rural areas.

These findings resonate with the study on charcoal production in Moro LGA of Kwara State (Yusuf, 2008) but it creates palpable apprehension as the numbers of producers and users of charcoal are increasing. When the study by Yusuf was published in 2008, there was no officially nationally registered organization for charcoal producers but by 2021, National Association of Charcoal Producers, Dealers, Exporters and Afforestation of Nigeria (NACPDEAN) was created as a trade union with membership across Nigeria. The challenges of sustainable environment appear to be deepening in the face of

energy poverty and economic realities of energy access. Like a prediction Yusuf (2008) noted that:

“based on income and consumption pattern, charcoal production appeared (or at least is emerging) to be a veritable source of livelihood diversification. And as long as incomes continue to be useful for basic need satisfaction, numbers of charcoal producers will increase. For instance, in December 2003, the total number of registered producers was 122. By May 2004, it has increased to 168, rose to 209 in October 2004, and 258 by November 2005. Such increment portends grave signals for both rural and environmental sustainability.” (Yusuf, 2008: 73).

Charcoal production and fuel wood extraction are some of the key elements of forest degradation. The trees for charcoal production in their order of preference are *Prosopis Africana*, *Anogeissus leiocarpus*, *Burkea Africana*, *Terminalia macroptera* and *psuedocedrela kotchyi*. Meanwhile, at the inception of charcoal production in Moro LGA around 1999, the Yoruba hosts claimed that charcoal production will not allow the migrant farmers to continue the agricultural wage-labour for which they were given residence. About a decade later, charcoal production became a diversion for both hosts and migrant farmers resulting in competitive names for charcoal such as *Eedu* (Yoruba), *Bun-bum* (Tiv) and *Gawayi* (*Hausa*). Pragmatic evidences indicate that charcoal production has not only shifted to the Sudano savannah ecology, more urban residents are wholesalers, dealers and retailers in charcoal all across Nigeria.

A recent regional study by Sani et al (2026) using data from the 2024 Nigeria Demographic and Health Survey revealed that albeit a low national average of 31% there is a wide disparity in the use of clean cooking fuel between Northern and Southern regions of Nigeria. The South West has the highest utilization

(70.9%), then South South (52 %) and South East (35.1%) compared to the 7.1% for the North West and 4% for the North East. The ecological irony is that Southern Nigeria is more forested and wooded than Northern Nigeria yet use of wood-fuel and fuel wood which are in the group of dirty energy are common in the North. The dilemma is that ecological advantage or availability may not be a major determinant of position in the energy ladder but higher educational attainment, smaller household size, youthfulness of household head, wealth status and residence in urban area.

3.4 Researches in Agriculture

Agricultural geography is another area where I have made my modest academic contributions. Agricultural geography analyses the patterned differentiation in agriculture with emphasis on resource use; input-output relation; challenges and prospect. Invariably both agriculture and rural geography are related, just like one of the laws of geography, “everything is related to everything but closer things are more related”.

In agricultural geography, rural and urban agriculture are complementary rather than competitive. Urban agriculture just like in rural areas varies based on location, culture and countries. Economic characteristics and gender also play explanatory roles in Nigeria. In Ilorin (Yusuf and Abbas, 2011) reported that the small to micro scale producers used pumping machines while the micro scale farmers used watering pans. The micro-scale farmers mostly are women while the small-scale farmers are men. *Okiti* (in Ilorin is the Yoruba term for vegetable gardens by the river side) and *Fadama* (the Hausa name for irrigated farming on hydromorphic soils or lands close to river) were conceptually used in that study. Most of the *Fadama* farmers cultivated spinach, okro, tussa jute, and maize. The major resources which are soil and water are not maximally used by

all farmers but four variables (utilization of pump machine, harvest from farm, utilization of modern inputs and types of labour used) jointly account for about 89% of the variance associated with size of farm as a measure of resources-use. The male migrant Hausa *Fadama* farmers have high harvest, high resources use and income than the female Yoruba dominated *Okiti* farmers. Challenges to urban irrigated vegetable production included inadequate access to input; poor support from policy makers, and pollution of rivers used for irrigation but the gender difference was equally conspicuous.

Spatial pattern of agricultural development of an area is influenced by several factors. For agricultural development programmes in Kano State, Abdulkadir, et al (2018) identified factors such as cultivated land area, cropping intensity per annum, bags of chemical fertilizer used, number of agricultural labourers, financial institutions, access roads, modern equipment used, number of agricultural extension workers, size of livestock (cattle, goat, sheep) and size of poultry (birds). For this, Madobi, Warawa, Danbatta are more advantaged than Gaya LGA. Generally, rural areas closer to the urban seat of governance such as Warawa are relatively advantaged than Doguwa, Rano, Minjibir and Kura. For farm output facilities, Danbatta, Madobi, Warawa, Tofa, Rogo, Kura are advantaged. In terms of farm asset and technology: the most advantaged are Kura while the least advantaged is Gwarzo. Other advantaged LGAs are Rano, Tofa, Warawa, Minjibir, Danbatta, Rogo and Gwarzo. Factors influencing the spatial pattern of agricultural development in Kano State include environmental issues, geophysical and commercial, biophysical, infrastructure and from resources, modern techniques and access to credit facilities.

3.5 Women in Development Issues

The fact that women are in most cases, the larger composition in rural settlements, gender issues have been pertinent in explaining deprivation. Yusuf, et al (2010) explained the constraints women faced in their agricultural activities in Giwa LGA, Kaduna State. As explained, 3.6% of women who engaged in farming in the study area purchased the land they used, 22.3% borrowed the land and 74.1% cultivated the land that is in the family pool through inheritance. Constraints faced include but not limited to finance, inaccessibility to substantial land, religio-cultural rigidities, inaccessibility to government subsidized input, inaccessibility to extension services and inaccessibility to modern production technology. Many women who were interested in farming faced uphill tasks in gender, social, cultural and economic aspects. Therefore, they could not maximize their potentials.

Ozaze, et al (2015) explained that the roles played by women in agriculture in Ovia South LGA of Edo State were application of input such as insecticides and fertilizers, harvesting, transportation and marketing of agricultural commodities. The regression results revealed R-squared of 0.56, implying that 56% of changes that occur in agricultural production could be explained by marital status, years of experience in farming, types of crops cultivated, size of farmland holding, types of agricultural activities and place of residence. The similarity of findings reported by Yusuf et al (2010) in Kaduna State in Northern Nigeria and that of Ozaze et al (2015) in southern Nigeria revealed that challenges facing women are access to land, access to credit, inadequate modern farming technique and the lack of women farmers' cooperative societies

One of the social protection initiatives that serve both agricultural and rural empowerment was National Fadama

Development Programmes (NFDP II). Lauded as a means of women empowerment, Yusuf and Ukoje (2009) found that in Giwa LGA, education and permissive socio-cultural environment, availability of capital for income generating opportunities, availability of farm input, and occupation of rural women explained 72.04% of the variance associated with reduction of poverty among rural women that participated in NFDP II compared to non-participants. In a previous study that included Fadama Community Associations (FCAs), Rafiu (2009) reported that pilot assets boosted the activities of Fadama users. During Fadama II, farmers were requested to indicate the assets they needed unlike previous interventions where the same assets were uniformly given to the farmers. This need-specific, Bottom-Top approach remarkably improved the outcome of Fadama II on welfare of the beneficiaries compared to other programmes before it.

In furtherance, Iliyasu, et al (2018) reported that without rural non-farm activities (RNFA) rural poverty and deprivation among women in Zaria LGA will be intense and rural income will be lower. RNFA or RNFE, has spill-over effect on household farming income. Consistently, RNFA like tailoring, hairdressing/plating, restaurants and food vending, sales of airtime, trading, livestock production have higher returns (and contribution to net income) than wood selling, handcraft, and local barber shop.

Similar findings were reported by Onyebuchi and Yusuf (2020) that in Kajuru LGA women farmers are challenged by socio-economic, ecological and environmental factors therefore Rural Non-Farm Activities (RNFA) provided alternative outlets for income diversification. The RNFA included tailoring, hairdressing, trading, basketry, restaurant and food vending, rope making, pottery, sales of airtime vouchers, poultry and others. Amongst these RNFA, tailoring, poultry, trading,

restaurant and food vending were among those generating high income to empower rural women. Reduction in farm size due to increasing population of farming families who inherit farm land of their parents and physical development were among the push factors for rural non-farm activities.

3.6 Research on my Living Space

Vice Chancellor Sir, many of us who teach and conduct researches on rural issues usually reside in urban areas. In this light, I have reported some issues on rural-urban disparity in education, urban waste management, and urban quality of life as indicative of development.

Living condition in Dogarawa, the headquarters of Sabon-Gari LGA was reported by Yusuf and Orire (2012). Dogarawa is one of the least urbanized wards, hence it has a characteristic of “transitional rural” or “rur-urban” settlement. Factors that influence low quality of life perceived are communicable diseases, insecurity, environmental nuisance and social status related diseases. A holistic appraisal on perception of life quality reveals that Dogarawa mirrors a typical Nigerian rural area in transition (with 66% in agriculture with other non-farm employment, 10% in civil service and less than 10% artisans and other employment categories) As at then, the expectations on quality of life is low compared to expectations from a local government headquarters: Dogarawa is thus interpreted as a rur-urban space. This rur-urbanization was explored in detail by Yusuf (2017).

Yusuf and Onyewuotu (2014) reported that polarization of societies into urban and rural settlements means that all elements of socioeconomic advancements including education are provided along that line. Thus, children from urban and rural centres are exposed to differential learning experience despite

uniformity in nationally approved syllabi. Extra lessons are supposedly to help the poor but educationally gifted children to sufficiently reach their full educational potentials. Based on this realization, extra lessons should be concentrated in rural and backward regions. In a survey conducted in Sabon Gari LGA of Kaduna State, 39.2% participated in extra lessons while 60.8% did not. Of those who participated, 78.2% were from urban areas while 21.8% are from rural areas. Among those who did not participate in extra lessons 65.5% were from rural while the rest were from urban. In this exploratory study, Demonstration Secondary School, Samaru was used as urban school while Government Secondary School, Bomo was used as rural. The proximity of Samaru to Bomo nonetheless did not significantly alter educational opportunities based on rural-urban differences. However, about 88% of students from rural areas perceived extra lesson as a means of improving academic success, but fewer than that actually participated in extra lesson. This is a pointer to the established rural- urban disparity which has become generational and almost insurmountable. More importantly it points to the quality of education because if qualitative learning is provided during regular school hours, students would not have perceived extra lessons as contributing to their academic success.

Rur-urbanization is explained as integral to a broader global development issue. It is more of an intermediary state and process between urbanization in the global South where by urbanism is stimulated by increase in human population rather than expanded industrial activity as observed in the global North. This conceptual clarification becomes necessary particularly considering the emphasis by Knox, et al (2008) that modern urbanization emerged from successful agricultural development which occurs almost simultaneously with industrial revolution. Succinctly, urbanization in the global

North is an accomplishment of industrialization and industrialism which many rapidly urbanizing countries of the South are still struggling in catching-up with. Therefore, Yusuf (2017) conceived rur-urbanization as transformation and conversion of agro-rural land to urban related uses. It emphasizes the historically destructive characteristics of rural land conversion in the “South” which is different from urbanization experience of the “West” or “North”. As long as there is transformation of rural land to urban use, rur-urbanization manifests especially in areas where rural land use planning instruments such as exclusive agricultural zoning are ineffectual or non-existent.

Explained benefits of rur-urbanization include de-agrarianization because settlers of rur-urban space have “dual” characteristics of town and farm; extension of infrastructure, blurred rural-urban dichotomy and increasing the access to agricultural input. The drawbacks include submergence of the weaker people through urban acculturation. This invariably means rural culture will diminish in quality and contexts. Other externalities include premature transformation when rural dwellers are ill-equipped to socio-technologically embrace urbanism, alteration of rural land use types and the increasing conflict over land.

Waste management is a general environmental, social and development issues. Waste is generated from all human activities hence it is pervasive. The utilitarian value of waste was investigated in the work by Aruya, et al (2019) focusing on agricultural waste streams. The agricultural waste generated in Ikara LGA include: corncobs as the major residue (25.5%), sugarcane bagasse (15.5%), groundnut shells (18.4%) leaves and grasses (7.3%) other crop residues (26.8%) and tree trimming (2.9%). Disposal methods for agricultural waste included burning (27.9%) burying (15.3%) and reuse (sales and

cover cropping, animal feeds, fencing of farm yards, housing, poultry mats and others) 48.2%. Factors influencing poor agricultural waste management are lack of disposal facilities (21.3%), improper planning of farm yards (31.3%) lack of awareness on sustainable agricultural waste disposal methods (31.6%) and indiscipline attitude of farmers (15.8%).

Ogbu and Yusuf (2017a) documented some of the health risks associated with slaughtering activities in Zango Abattoir and Dogarawa Slaughter Slab in Sabon Gari LGA while some environmental implications of butchering activities in Zango Abattoir and Dogarawa Slaughter Slab were contained in Ogbu and Yusuf (2017 b). These studies reveal that using tyre to remove the hide and skin of goat, sheep and cow has far-reaching negative effects on the health of consumers and pollution of air, soil, surface and underground water sources.

On urban solid waste management, Bako, et al (2013) reported sorting and recycling of metal waste in Zaria where about 72% of waste collectors collect from multiple sources, but only 7 % of the respondents usually partake in recycling activities. Moreover, 73.4% of the collectors usually collect assorted plastics for either sale to people involved in re-use from within and outside Zaria. As high as 83.7% dispose their materials within Zaria, about 11.1% (scrap metals) and 4.0% (assorted plastic) collectors convey such goods to Lagos and Kano. These themes of waste recycling have further been expanded in other studies. Similarly, Idris, et al (2017) reported that as at 2016, there were forty-four (44) registered corporate firms in public-private-partnership (PPP) with the Kaduna State government in waste management, but none claimed to engage in sorting reusable and recyclable materials, not even separating biodegradable from non-biodegradable waste. Rather, all waste streams are conveyed to permanent dumpsites. Invariably waste

recycling remains a semi-organised, informal artisanal activities with consequences on practitioners and the environment.

3.7 Climate Change and Water Challenges

Climate change has been observed as a major phenomenon with dire consequences for rural living and livelihood. In Ikara LGA of Kaduna State Ajayi, et al (2016) determined the vulnerability to climate change. The vulnerability index varies across the ten wards such that Kuya (0.46) and Rumi (0.45) were among the relatively moderately vulnerable while Jamfalan (0.38) and Ikara (0.37) were the less vulnerable. The entire study area was observed to be moderately vulnerable to the impact of climate change. The need to change the narratives from that of despondency and helplessness has made it expedient to look at the opportunities in climate change and Adeleke, et al (2025) reported a study conducted in Niger State. Climate induced hazards such as flooding, soil erosion, increased and temperature and heat related water stress are drastically affecting agricultural and rural livelihoods. Factors that influence the capacity of people to harness opportunities in climate change include low educational attainment, low awareness about opportunities in climate change, limited knowledge about utilizing climate change opportunities, low income and weak financial status, technical nature of adopting opportunities in climate change and weak policy framework from institutional sources. Similar results were reported by Aruya et al (2025) in Kaduna State.

Water is among the crucial welfare needs of rural dwellers and this has equally been given attention in my researches. Yusuf (2010) revealed that rain water harvesting is rarely done in rural areas of Kaduna State, despite the increasing water scarcity during the dry season. Equally in Borno State, (Yusuf 2013) explained that water stress apart from undermining welfare

through low productivity also impairs quality sanitation and personal hygiene. Only 13.9% of the respondents had access to a minimum of 50 Litres Per Capita Day (lpcd) while 90.6% did not have access to this quantity of water all year round. Among the sampled LGAs some rural settlements in Hawul, Bama, Kukawa and Monguno LGAs have fairly better access to 50 LPCD. In Hawul, majority of the respondents rely on wells whether dug by individual households, provided by the local government authority or other agencies. Compared to Hawul LGA, the few households with good access in Kukawa LGA are those fishing households that rely on river and streams throughout the year.

Also in Bama LGA, some settlements have community hand dug wells while some villages were provided with boreholes. In settlements found in Bama and Mobbar LGAs, there are wells but with poor yield which reduce their access to sufficient quantity of water. This confirms the inadequate average water consumption of 10 lpcd in rural areas as against the recommended 50 lpcd - 90 lpcd. The distance to water points also points at water-stress. As presented, only 18.9% had access to water at a distance of below 200 metres while 81.1% are above 200 metres. Many of the settlements in Monguno, Kukawa, Mobbar, Kwaya-Kusar LGAs was poorly-served. This reflects both the political and geological underpinnings of the area. Those well-served are in Borno North and Central Senatorial Districts while those poorly-served were mostly in Borno South. The same trend was observed in the distribution of wells where Kukawa, Mobbar, Bama and Monguno had over 60 public hand dug wells dug in the LGAs.

However, a close examination of the scenario reveals that the physico-ecological condition of Borno North (being underlain by the sedimentary rocks in contrast to basement complex rock) support the heavy concentration of wells and boreholes

compared to Borno South. Welfare indicators and implication of water stress include declining farm productivity (60%), reduced livestock/fish production (18.7%); diseases and infection (17.3%) and physiological discomfort (4%). Plates IX and X present the commonest type of water resources in rural areas of Borno State as at 2011.



Plate IX: Women fetching water from a shallow well in Shettimarri (Bama LGA)
Source: Yusuf (2011)



Plate X: A tunnel of Lake Chad in Kwanta Turari (Kukawa LGA)
Source: Yusuf (2011)

Shehu, et al (2015) revealed that most rural household in Kudan LGA depends on well water. Reliance on MDG boreholes falls during the dry season due to low yield or total failure. Use of well water before and after the MDG water projects are 97.9% (before) and 92.4% after meanwhile for 6.4% increment was observed for borehole. Also, there was no significant change in distance to water despite the 15 boreholes sank in rural settlements of Kudan LGA. This is because the boreholes are not centrally located in residential areas but in religious places, schools and houses of traditional authority and political exposed persons. Nonetheless the MDG boreholes helped to marginally reduce incidence of water-based diseases, school absenteeism among children.

Given the advantages of rainwater harvesting, it is disturbing that it is not widely adopted in water-deficit rural settlement of Kaduna State (Yusuf, 2010). In the study conducted in Giwa LGA, most people rely on shallow wells whose yields drop with the progress of the dry season. In fact, between February and May acute water shortages usually hit the rural areas. Based on the water quantity, well water was ranked first (in remote rural areas like Karau Karau) and then borehole (in fairly large settlements like Shika, Giwa and Turawa) The deficiency in water in the face of climate change and increasing population should make rainwater harvesting necessary but factors impeding it include lack of knowledge about rainwater harvesting (69.34%) and paucity of fund to build a rainwater harvesting system (26.0%). Using comparative rural development perspective especially when the findings of Yusuf (2013) are fixed in line with that of Yusuf (2010) and Shehu et al, (2015) it indicates that water needs in rural areas are still largely unmet both in the North West and North East geopolitical zones. There is no doubt that those studies were more than a decade from now, it is unlikely that the water deprivation in rural areas has significantly improved especially considering the destructive impacts of insurgency, banditry and widespread insecurity on rural areas.

The environment provides ecosystem services (protection, cultural, provisioning) hence crops such as tomato can be evaluated on how the environment led to reduction in tomato and the adaptive strategies of farmers in Zuru LGA of Kebbi State. Yusuf (2012) explained that 64% of the farmers claimed to suffer low yield of tomato, while 21.3% of them reported poor structural/morphological quality of tomato fruits while 14.7% claimed changes in the physical unattractiveness in the colour of tomato fruits thus reducing the market value. Combative coping measures include use of chemicals (insecticides),

combination of chemical and organic manure, irrigation, and planting of cover crops. Adaptive coping measures were borrowing from friends, engaging in non-agricultural employment and seasonal migration. Factors perceived to lead to reduction in yield of tomato are rainfall variability, high temperature, diseases and pest and depleted soil nutrients. Rural dwellers are accustomed to producing in large quantity during a farming season but inadequacy of market that can competitively pay farmers for their efforts leads to glut. For vegetable farmers whose produce is highly perishable, usually experience a loss. To reduce the loss, tomato farmers under rainfed and irrigated production resort to sun-drying of tomato to be sold at a fairly higher price during the off-peak season (Adamu & Yusuf, 2017).

In Borno State, Yusuf (2014) reported that the nature of environment-induced deprivation revolves around flood, drought and pest infestation of farmland. The Z score reveals that the rural people are mostly disadvantaged by heavy rainfall phenomenon in Chibok (3.68) Hawul (3.45) and Damboa (.2.96). These are in Borno South ecological zone while the Borno North are mostly affected by low rainfall. Impact of Quella birds is felt across the State but severely affected were Kadauri and Fulatari (Mobbar LGA); Kawuram (Monguno LGA) and Gurori (Konduga LGA). At Monguno, devastating effects of Quella birds were visible as several acres of millet croplands were destroyed by swarms of birds. The farmers usually keep vigil on the farm and also hire children to drive away birds at a cost varying between NGN 500 and NGN 800 (as at 2010) depending on the size of plots and age of the children. Apart from Quella birds, grasshoppers and baboons are other major pests of crops in these areas.

At Chibok and Hawul LGAs, transect walks in flooded villages of Kwada, Kautikari, Kwajaffa, and Hierpaya revealed sand embankments of previous years which villagers used as barriers

to protect flood. Another ironic dimension to these scenarios is that out of fear of the unexpected, farmers abandoned farmlands that were previously flooded. During focus group sessions at Yimirshika and Kukrupiya (Hawul LGA) and Kwada (Chibok LGA), discussants demonstrated their helplessness and vulnerability to variable rainfall. They claimed that flood led to over logging of the clayey soils on their farms, however, after periods of prolonged heavy downpour, dry spells which at times last three to four weeks set in, cessation of rain deprived crops of moisture for a sustained growth and expected yield. Variable rainfall was persistently depriving farmers of expected yield. According to the discussants, this sometimes (for example in 2007) led to inflation in food prices.

3.8 Migration and Mitigation Strategies

A noticeable characteristic of rural area is migration. Adedayo & Yusuf (2012a) published a study on the pattern of environment-induced migration in Borno State, before insurgency became gripping in the north eastern part of Nigeria. The study indicated that factors such as reduced harvest of staple crops, inadequate water for human and livestock, conflict over environmental resources, and lack of electricity were correlated with incidence of migration due to environment-induced deprivation. In all, a co-efficient of 0.834 and r^2 of 0.7346 which indicate about 73.5% of the variation in triggers of migration are accounted for by the four variables. The Z-score analysis depicts the pattern of environment induced migration where Borno State was categorized into three regions of environment-induced migration. Areas with moderate out migration flow are settlements in Damboa and Monguno LGAs, areas with low rural out migration flow are Kwaya-Kusar, Hawul, and Chibok LGAs while rural settlements with high migration flow are settlements in Bama, Kukawa, Mobbar and Konduga. This is revealed in Figure 1.

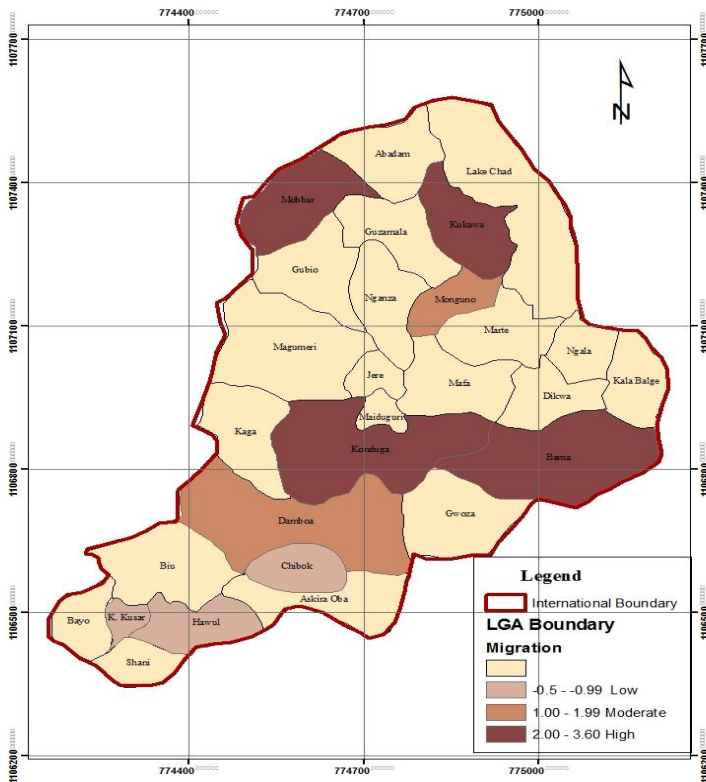


Figure 1: Variation in rural migration in Borno State
Source: Adedayo & Yusuf (2012a)

A little after a decade later, Aina et al (2024) revealed that insurgency has increased the burden of deprivation in Borno State and has equally led to forced migration. Attempt to return migrants when the Federal Government proclaimed substantial victory over Boko-Haram insurgents was met with ambivalent reaction from host communities. Host communities reported challenges such as break down of law and order, unemployment, increase in crime and insecurity, inflation in price of commodities and encroachment into private properties. These

reveal the precarious situations of the return migrants and the host communities. The pattern insurgency-induced migration and resettlement which was reported by Aina, et al., (2024) was a bit different from that reported by Adedayo and Yusuf (2012a). In both studies, migration has negative and positive consequences on rural people and places but the negative weighs heavier.

Out-migration has a major positive impact which is remittance. The pattern and use of remittance were reported by Yusuf and Adefila (2012) in Irepodun LGA of Kwara State. Socio-culturally, the people of Irepodun LGA are *Igbomina*, a tribal stock of the Yoruba found mostly in Kwara South Senatorial District and parts of Osun State in South-western Nigeria. The *Igbomina* are prominent traders and highly migratory. In fact, their mercantile prowess makes them a popular tribe in Lagos State. Due to this migratory tendency, remittance to the study area is a major source of fund for community infrastructure development and assisting the aged to cope with challenges of ageing. Cash is the dominant form of remittance as claimed by 65% of the respondents. Cash indeed is the most liquid, appreciable and easy form of transfer that can be used for several purposes. This is followed by food, medicines and other basic need items. Similar findings were reported by Otupuru et al, (2023) in Kogi State

In the attempt to address rural deprivation, the responsibilities of the People's Bank of Nigeria, Family Economic Advancement Programme and Nigerian Agricultural Cooperative and Rural Development Bank were merged leading to establishment of Bank of Agriculture (BOA). Compelling evidence shows that the growing diversity in rural living and livelihood needed to be understood. Thus, beneficiaries of BOA interventions are not farmers or agriculturists alone but include several less privileged classes such as victims of violence, victims of

disaster, underemployed youths, physically challenged, social outcasts, orphans and other less privileged persons. BOA has succeeded in improving the savings and investment capacities of beneficiaries, built human capacity building through training and advisory services, project initiation, backstopping services (Uba, Adefila & Yusuf 2016).

The increased lethargy of government to meet the basic needs of rural dwellers has motivated participation of people in community development especially, projects. Nwabuzor, Adefila & Yusuf (2016) revealed that the types of community projects are markets, skill acquisition centres, community's bank, electricity, motor parks, health facilities, schools, town halls, roads and library. Forms of participation are supply of manual labour, fund raising, and provision of security. Constraints to participation are poor finding, greed or selfishness; lack of unity and inadequate sensitization of community.

Deprivation from infrastructure and services is a fundamental factor in rural areas and has attracted several studies. Although, in Nigeria, the national average of doctor to population ratio is disproportionate, it is grossly skewed against the rural areas. Nigerian rural dwellers among the most deprived in terms of sanitation. Access to doctors, nurses, midwives and other orthodox health personnel in rural areas is remarkably low (Adedayo and Yusuf 2012b). Apart from inadequately equipped facilities in rural settlements, accessibility to health care facilities in terms of physical accessibility (distance and time) and socioeconomic accessibility (affordability of services) are two indicators of health deprivation.

Pattern of health deprivation in Borno State (Figure 2) showed that highly deprived areas were settlements in Kukawa (5.11), Monguno (2.68), Kwaya Kusar (1.26) and Mobbar (1.15)

LGAs. These rural areas are found across the State's geopolitical zones although three are from Borno North. Moderately deprived were Chibok (0.68) and Bama (0.47) LGAs while relatively advantaged are Damboa (-5.94), Hawul (-2.24) and Konduga (-2.01) LGAs. This pattern revealed that areas with fairly high access to health care facilities and have favourable weather conditions, to some extent, have low deprivation score and vice versa. Largely, the pattern reflects interaction of policy failure and environmental incapacity. To arrive at these findings, participatory rural appraisal techniques such as Force Field Analysis and Transect Walks were deployed (See Appendix II).

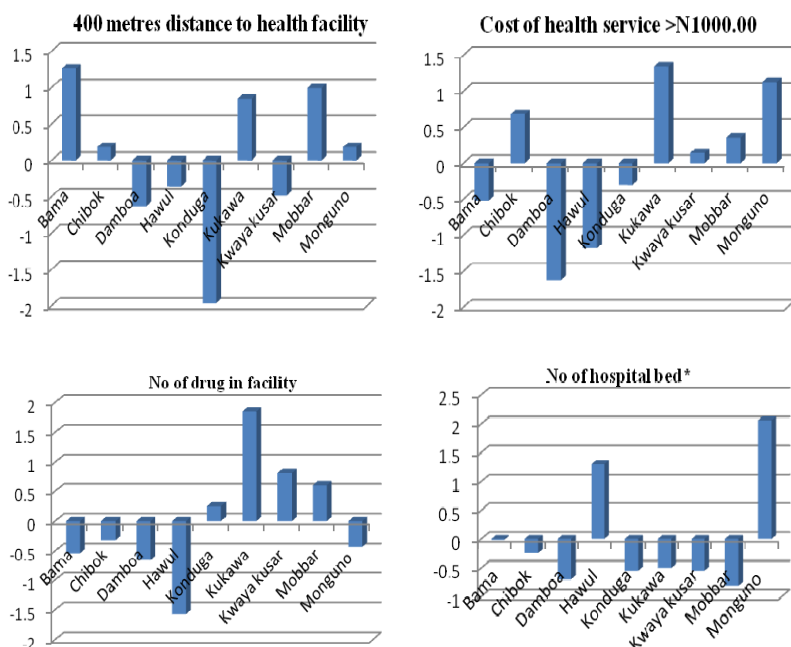


Figure 2: Divergence bar graph on sub-indicators of health deprivation

Source: Yusuf (2011) (*Extracted from Borno State Statistic Year Book 2005-2006)

Participatory appraisal of basic needs as deployed by Yusuf (2014) classified basic needs into three namely: basic consumption goods (foods, clothing, shelter); basic services (health, potable water, transportation and communication) and basic right to freedom and empowerment to make decision in aspects that affect one's lives. Food and income of pastoralists are affected in the production consumption domains. Artisanal mat makers rely on gamba grass for making "*Zana*" mats and wood-carvers make locally carved stools "*Kujerun mata*". Reduction in these biomass stocks forces rural dwellers to work further distance to access them. There is intensive conflict over resources among fishing households. Reduced water availability results in reduced agricultural (farming and livestock) production, incidence of diseases and infection and physiomatic discomfort among rural dwellers.

As coping strategies, both public policies and use of indigenous knowledge and peace building in conflict related to environmental resources scarcities are deployed. Farmer-farmers conflict are settled by village and district heads, and when unresolved, are passed to the law enforcement agencies. In farmers-herders conflict the village heads, occupational heads and the law enforcement agencies are usually involved. Also, demarcation of grazing zone (*Butali*) is done as a means of resolution. Appendices III and IV present the Conceptual frameworks of environment-induced deprivation and Force-Field Analysis of deprivation and mitigation strategies.

Reliance on agricultural income alone by rural dwellers has been established as a constraint to economic prosperity of rural dwellers hence income diversification has become pertinent. Income diversification is reported by Adefila and Yusuf (2012) Ilyasu et al. (2018) and Onyebuchi and Yusuf (2020). As a non-farm and non-agricultural activity, Adefila and Yusuf (2012) reported that ecotourism in rural areas has a great prospect to

facilitate improved health and growth of small scale agro-industry; provision of fresh farm products for consumers; beautification of the environment; satisfaction as alternative opportunities to agriculture; infrastructure development; peace and tranquility and respect for local culture and heritage by tourists.

3.9 Community and Consultancy Services

Vice Chancellor Sir, as an academic in the university, community service is also paramount. And since 2007, I have deployed the cartographic tradition in providing some of these services. While residing in Hayin Dogo, Samaru, I attempted a sketch map of Hayin Dogo which was later used by some of my students for their BSc. Projects. Similarly, when I started living in Angwa Nomi, Dogarawa, there was a need to do street naming and house numbering and I was called upon to provide a sketch map. This was used for documenting the demographic characteristics of the community. Through this and other efforts, I was made the secretary of Dogarawa Union and Development Association (DUDA). Thus, my contributions to the development of my immediate environment as a geographer extend beyond teaching and publication of research.

My community service includes some non-profit, non-remunerative activities and some development consulting engagements. In these I have provided assistance to some organisations, government agencies and corporate establishments. In development consulting I have participated several World Bank Interventions between 2018 and now. Few of these are training core staff of Youth Employment and Social Support Operation (YESSO) on Environmental and Social Safeguards in 2018, and Training on Results Based Monitoring and Evaluation for Staff of Federal Ministry of Humanitarian Affairs, Disaster Management and Social Development under

the Social Investment Programme including GEEP, NHGSFP, N-Power and CCT in 2021 and 2022.

I participated in North west and North East Validation Meeting of the Second Generation of the Draft National Agriculture Investment Plan (NAIP), in 2019 and was involved in Intermediate Outcome Evaluation of YESSO project in Yobe State and Third-Party monitoring of the YESSO intervention in Adamawa and Kogi State between 2018 and 2020. Another is Training of Ginger Commodity Interest Group in Kaduna State under APPEALS Project in 2021. I also conducted the Environmental and Social Audit of Nigeria COVID-19 Action Recovery and Economic Stimulus (NG-CARES) programme in Kogi State between 2022 and 2024. The same applies to Livestock Productivity and Resilience Support Project (L-PRES) in 2025. All these activities broadened my horizons on social protection and human development.

4. PARADOX OF DEVELOPMENT AND DEPRIVATION

So far, My Vice Chancellor Sir, and my distinguished audience, the lecture has addressed my teaching and research outputs part of which earned me the professorial rank in my chosen profession. This section focuses an equally important and contemporary issue which is the paradox of development and deprivation. In Geography of Development using social lens, concepts such as “growth”, “standard of living”, “equity”, “welfare”, “deprivation”, “inequality”, “poverty”, “vulnerability” “positive discrimination” and “core-periphery” are some of the technical and linguistic registers used in explaining the variation in the wellbeing and quality of life of people across the fluidly or rigidly created global development divide. There is the quantitative mechanistic definition of development propagated by the development thinkers of the supranational institutions that revolves around material

prosperity. There is also the qualitative organic conceptualization of the alternative thinkers in different parts of the world that revolves around humanism. For variants of conceptualization and indicators of development as conceived by authors and authorities, see Seers (1977), Mabogunje (1980), Sachs (1992), Esteva (1992), Stohr and Taylor (1981) Goldthorpe (1984), Hobbs and Satter (2006) Knox, et al., (2008) Adedayo (2012) and Abbas (2014) amongst listless others.

The 20th century development thinking revolves around sustainable development; and goals meant to universalize prosperity are set such as the Millennium Development Goals (MDGs) and the Sustainable Development Goals (SDGs). A dilemma is the attainment of intragenerational equity between ‘rural’ and ‘urban’ settlements on the one hand and ‘Developed’ and ‘Other-Developed’ countries on the other (Yusuf, 2012). Production and consumption are typified as primary, secondary, tertiary, quaternary and other levels, hence consumerism is associated with different levels. Rural areas and ‘Other-developed’ countries produce and consume more on primary levels than urban and ‘Developed’ countries who consume more on secondary and other levels. Modern societies are in the race for economic prosperity at the expense of the environment, and the consequences are already staring at us in the face. A dilemma is the incapacity to disaggregate the conflicting aspects of environmental utility, ecological stewardship, economic growth, socio-economic trade-offs, environmental geopolitics, ecological myths, and complex psycho-social consumption from the vague concept of sustainable development.

Intra-generational equity between the people of developed countries (DCs) and less (or least) developed countries (LDCs) on the one hand as well as the rich urban dwellers and the poor rural dwellers (of the poor countries) on the other hand is always contentious and glaring (GoldThorpe, 1984). The latter groups

are captured in the Inaugural Lecture of Professor Adebisi Adedayo as the ‘The Other Half’. Precisely, the other half is inter alia conceived as “*. people who experience discrimination, disadvantage, or deprivation on grounds of place, sex, religion, ethnic or linguistic association contrary to one of the fundamental objectives and directive principles of ...policy*” (Adedayo, 2012: 7.8).

A critical analysis of multidimensional issues on non-sustainable exploitation and utilization of rural bio-physical resources and natural resources of developing countries points to the indirect and direct impacts of globalization. Globalization has been defined as the development of social and economic relationships stretching worldwide (Giddens,1990) or the various processes responsible for the growing interdependence of the world economy (Knox, et. al., 2008). This is the preliminary ideas of global village whereby the physical separation of different areas is overcome through information and telecommunication technology. It is not arguable that globalization for rural area and developing countries, though has its merit in bridging physical distance and access to productive input such as fertilizer, HYV seedlings and other nonproductive assets (Menjo-Baye, et al, 2001), the long-term profit always infinitely returns to the sources which are either the urban centres or the rich countries depending on the core-periphery institutions.

Issues like these are within the ambit of globalization but the direct and tangible benefits to rural dwellers and developing countries, apart from cash crops or mineral commodities whose price will ultimately be determined by the urban or industrialized country buyers, are not precise. Similarly, many countries including Nigeria are marked by real and imagined low quality of life, violence, and worst forms of wellbeing despite increasing prosperity around the world. The real essence

of development which is people-defined does fade away in the face of material consumerism defined by the culture of the 'Developed' countries. Just like urbanization is fueled in the global south by increasing population rather than real economic growth, attaining increasing global consumerism in the global south is amongst the factors influencing the unethical individual and collective mis-behaviour such as financial corruption, political irresponsibility, shocking criminality and moral debauchery such as kidnapping for ransom aimed at wealth accumulation. These attitudinal and behavioural deficiencies are amongst the triggers and outcomes of development inertia in Nigeria and many poor 'Other-Developed' countries. It is instructive that this is not an opportunity or excuse to put the blame of underdevelopment misfortune of one country on the other, rather it points to the need for redirecting development 'missiles' in order to reach the 'target'. Therefore, the idea of individual compound in a global village becomes necessary.

The basis of individual compound in a global village is the advocate for the need to examine the peculiarities and particularity of individual communities and countries as the determinants of their participation in the global economy and sustainable development of resource utilization. This is the self-reliance that Dudley Seers (1977) added to reduction in poverty, unemployment and inequality as evidences of development. This draws inspiration from a typical rural settlement where decisions to contribute to the community are made at the household, then village level and not the opposite. In this sense, people should indigenously decide what development is and channel resources to achieve it rather than externally influenced outsiders who dictate what resources to be used and how to use them. After all, before the integration of countries into global economy people have survived using indigenous resource

management practices and growing at different rates (Goldthorpe, 1984).

This position is in line with that of Knox, et al., that a “*radical aspect of sustainable development is to move away from wholesale globalization toward increased ‘localization’: a desire to return to a more locally based economy where production, consumption and decision making can be oriented to local needs and conditions*” (Knox, et al., 2008:27).

As proclaimed by the Andhra Pradesh Rural Livelihoods Programme (APRLP) (2002), “the new focus of development initiatives is to align the needs of specific communities with the paths to reach there”. It is only through this that sustainable development can begin to take root.

It is undoubtful that achieving this might be herculean given the low capacity of the people in developing countries to articulate their ideas in a world dominated by formal and increasingly complex computer and information technology culture. The fast pace at which human intelligence is being replaced or displaced by artificial intelligence (AI) is alarming! The print and electronic media that shape people’s opinion about ‘development’ is owned by the affluent, rich, and the privileged politically exposed persons. Similarly, the ubiquitous social media are not out of censorship. Hence, people hear and learn what they are programmed to know or learn. And, this is a dilemma! Nonetheless, the onus lies on development geographers and development practitioners, to genuinely commit their professional expertise to issues that will guarantee development through ideas that emancipate and empower people to make key decisions on their development.

5. PSUEDO-DEVELOPMENT AND DEPRIVATION

Lexicographic explanation of pseudo- is equivalent to fake, not-genuine, spurious, look-alike, sham, but nothing like the real object of interest. Psuedo-development is therefore conceived in this lecture as “the appearance of structures, functions, agents and processes aimed at advancing the progress of a society that do not provide lasting impact on the society to assure and ensure the equitable access to the common good and prosperity for all”. Psuedo-development manifests when the underlying conditions of collective prosperity are described, determined, and distributed without a collective decision of all concerned. This is entrenched when the sociopolitical and technological apparatuses that specify who gets what, where, when and how are deliberately manipulated to benefit a half of the society to the disadvantage of the other half. These invariably leads to deprivation of the other half who are in most cases the majority. Thus, our world is *One Coin with Two Sides*. One side of the coin is deliberately made the head while the other is made the tail!

Vice Chancellor Sir and my audience, in the earliest part of this lecture, allusion was made to the equivalent of development to wealth of individuals and nations that accompany the peak of the 21st century. Wealth of nations provide a basis for comparative development but relegate the strength of individualistic conviction about growth and development. This therefore heightens the sense of real and perceived deprivation. Development and deprivation have been dualistic concerns of human geographers using a social lens (Knox, 1975, Smith, 1977; Oyebanji, 1986; Adedayo, 2012). Rather than look at it as a subject of poverty or lack, a more contextual view may be when it is viewed as an outcome of pseudo-development because what is vigorously pursued by policy actors and implementers as development policies are not inherently tenable

within the socio-cultural percept, preferences and peculiarities of the people for which development is defined. Or how it is explicable that resources are expropriated from the land of the local people to which they have no decisions on its use? Even when they make some decisions, hegemonic global power decides the use, values and price for the resources because of being classified as primary produce. And logically, primary produce are the building blocks for secondary and other forms of production. And there lies another paradox!

The Real development alternative which is advanced in this lecture, is possible when there is autonomous decision-making through development revolt, development renaissance and development auto-rectification. Development revolt is the practical upturning of the prevailing development order where socio-cultural consumption of some countries is foisted on others as the goal to struggle for. Development renaissance is the re-awakening that individuals, communities and countries can decidedly choose their development pathways based on the share goals and aspirations as defined by the people and communities concerned. Development auto-rectification is when the lopsided structure of development is re-aligned with the self-willed and self-determined intents and purposes of the people.

Of course, these are not precepts that are easily achievable, and there lies another dilemma! The world has become a global village strewn together by advancement in digitalization and telecommunication. Total rejection of this innovation diffusion may no doubt draw back the progress achieved (Goldthorpe 1984, Yapa 1993) but real development lies in dissecting the composition and composites of 'development' innovation to select which is more appropriate and relevant to the development pathways of individuals, communities and nations. Otherwise, the deprived shall continue, and interminably, to pay

hidden prices for technology, products, culture, and other items which are not only evidences of pseudo-development but deepeners of deprivation.

The paradox of development lies in the fact that what is branded as “development” for many developing countries and societies are ‘*pseudo-development*’ because they were not purposively created to facilitate their material progress using their own definitions of development. Real development is only achievable when the choice is made decidedly by people who seek development. And if they fail in attempt to develop, they would be able to understand the processes for self-rectification.

Another dilemma is the fact that development is transient and transitory and people cannot ‘auto-develop’ in a world where they have been enmeshed in ‘other-develop’ trappings of development (Knox et al, 2008). A way out of the dilemma is an intentional definition of development choices to make, development decisions to pursue and the collective will to stand by the choices and decisions towards its actualization to the benefit of the people concerned.

6. DEVELOPMENT, PSEUDO-DEVELOPMENT AND DEPRIVATION

Vice Chancellor Sir, development is cumbersome because it means there is an understanding of what is not development. Moreover, development is complex because the variables of composite are not only under constant change, they are also being changed by ‘development’ itself. As such what is considered as development in 2006 will not be the same as that of 2026. Yet the indicators of development in 1996 may return as neo-development in 2036. Thus, development is based on the definer using some acceptable variables with convincing statistics and rhetoric. Development is defined by the power that

creates underdevelopment as both conceptual and contextual terms. As emphasised by Esteva (1992), no term has brought so much socioeconomic disparity to the world as the creation of the term 'development'. Instructively, the use of the term to separate countries started after the second World War in 1949. And both development and underdevelopment term has created social, economic, technological, cultural and psychological divisions across human history (Esteva, 1992:7).

Deprivation has several manifestations which exemplify the absence of the desired object of need that negatively affect the wellbeing of individuals, communities and countries. Pseudo-development is not an exact opposite of development or lack of development. Rather it is a situation of not having what you think to you have; a dimension of half-truth that is presented as truth. Pseudo-development is a state that is not considered as true development since the ultimate rewards are hidden from the achievement but yet presented as part of the achievement.

Development decision is both an individual and collective responsibility of people and society working with concerted energy to achieve goals meant for the wellbeing and prosperity of all concerned. Poor people and communities are to be intentional in deciding and participating in the achievement of the desired goals. In doing this, there is a need for immediate, short term, long term needs of the people in order to discern pseudo-development elements in their goals and aspirations. In most cases, it is innate, self-made, self-directed and self-executed. The contrary to this self-willed development is deprivation in multidimensional forms. Basic geographic theories of environmental determinism, environmental possibilism and environmental probabilism are explanatory that living a temperate life in a tropical environment and vice versa is impossible without a heavy receipt, it is evident pseudo-development and catalyst for deprivation. This applies to man

in terms of food, clothing, shelter, culture and other basic needs mentioned earlier in this lecture.

Rural communities initially have paternalistic identities where the organic existence is derived from the combined focus and development ambitions of the members of such communities. The drivers of development ideas are the sage (old people) and the strength (youth) of that community who combined their resource potentials for community-defined prosperity of the people. Each community is made of households whose members utilize resources and capitals to advance the development of their clans and lineage. The introduction of rules of supra-powers lead to supplanting the traditional authority and their development yet, the individual compounds in each community foster their own development aspirations.

Development and deprivation are two sides of a pendulum for HICs, LDCs and MDCs as well as rural areas and their urban counterparts. Development is pronounced and magnified by reducing deprivation and vice versa. However, the decision to develop is the gravitational force that facilitate or prevent the swing in either direction. In many communities when and where the decision to develop are strong, advancements are visible in terms of agricultural production, infrastructure provision, community peace and security, selective adoption of purposeful technological innovations, enthronement of focused leadership, efficient utilization of community pool resources and other elements perceived as collectively identified. Contrarily, deprivation always manifest where the will is weak or lacking. This is not to assume that development is always and only auto-driven, external supports can be invited when it will not be to the detriment of the community or country. This has been tagged as Indigenous Approach, Centre-Down, Bottom-Top, Bottom-Up (Storh and Taylor 1984) which is distinctively contrary to Top-Bottom, Outsider-Determined approaches and obviously

they are more goal-focused and result-oriented (Overseas Development Administration, 1996).

Before colonialism, economic production in some developing countries is influenced by the conscious use of resource with different levels of technology that have been proven to be more sustainable. Using Nigeria as an example, exploitation of resources in many traditional societies is predicated on the use of cultural tools which reduce the tendency for avaricious, selfish and overwhelming motive for profit or monetary gains by individuals. This eliminated or reduced the manifestation of deprivation since it fairly guaranteed equitable access even with the existent of the tragedies of the commons. However, post-colonial modernity and materialism made the taboos that are the bastions of self-regulation and environmental preservation to be replaced with unconscionable exploitation tendencies. In the 21st century these previously abandoned self-regulating principles are now touted as sustainable development practices. Similarly, cultural-environmental products that were previously condemned as traditional are now valorised as organic. Will it not be appropriate to state that sustainable development has always been part of the rural landscape and materially-conscious developing countries?

In traditional taboo of many Nigerian rural areas, some fruits like cherries must not be eaten until they ripe and dropped off by themselves. This allows for sustainable use by community and consumption of healthy fruit. Today, many fruits are harvested prematurely, force-ripe and freighted to urban centres with attendant negative consequences on both human and the environment. Worse still, some extremely profit-oriented people use toxic chemicals to cultivate and preserve food crops, harvest fish and pursue other livelihood activities which harm the people and the ecosystem.

The global 19th and 20th century legacies of economic growth championed by the need to increase the per capita income, maintain the law of comparative cost advantage, and deepen the foreign reserves have bifurcated the world to distinctive class of developed and deprived countries, or core and periphery regions. Regrettably, most of the countries that rely on agriculture are considered as ‘Banana Republic’. The international classification of their products as “primary” places them as cheap commodity that are organic and or semi-processed because they have not undergone industrial mechanistic processes.

The supranational global economic decision-makers still group some nations as suppliers of primary produce to be transformed into secondary products by industrialized nations. Nonetheless and regrettably, industrial commodities command high market values than primary produce. Should rural agrarian products be of lower market value than industrial products? A clear decision to develop should inform discerning minds that a farmer can eat his maize roasted, boiled, ground-and molded to pap. Without the maize grains, what with an industrial pop-corn or corn flakes maker do? The decision to develop obviously lies in the reality of understanding and achieving self-worth based on real needs rather than frivolous wants. The opposite of this development decision is pseudo-development and deprivation.

Rather than focusing on only the agrarian-industrial development dichotomy, the will to develop and eliminate deprivation lies in the realization of modest, conscientious and moderate essence of human needs. This has been adopted by nations and countries that uniquely combine rural agrarian, mineral resource exploitation, urban industrial development and contemporary technologies such as Singapore, China, India and Indonesia among others. This has been demonstrated by the rising tides of China and India. Despite the fast-growing

economic trajectories of China, it is still considered as a developing country. This points to the fact that development may just be a matter of definition or description of the definers. Among developing countries, those in sub-Saharan Africa, where in Nigeria lies, is considered backward in terms of material prosperity. Thus, there have been ‘South-South’ economic collaborations such Indo-African pacts and China-Africa development summits. In a Yoruba adage, it is advised that “someone should cry with the eyes opened” thus development thinking should make all parties be conscious of pseudo-development composites in order to avoid deprivation.

Industrialized agriculture and commoditization of agricultural input by corporate giants has led to complete and unwilling dependence of farmers on industrial seeds and seedlings (Yapa, 1993). Seeds are expected to be genetic replica of the parent stocks where farmers simply keep viable parts of the harvests as seeds to plant in the next farming season. Industrial-genetic development of seeds and seedling in agro-allied laboratories are being touted as improved or high yielding varieties that will transform agriculture and rural sector. The irony of this development is the struggle by farmers to acquire the seeds and input with little resources at their disposal. This situation has made many farmers to be incapacitated and relied on assistance, and for the majority who may not have access to such support, their deprivation is widened. Commoditization of seeds not only ultimately benefits the commoditizer (manufacturers and merchants) and not the users (farmers), it equally magnifies dependency and tighten the deprivation noose around the necks of peasant farmers. The same applies to consumption of ‘developed products’ from DCs and MDCs by LDCs which not only increase the burden of debt and waste, they equally deepen perceived deprivation!

Vice Chancellor Sir, and my attentive audience, this section of the inaugural lecture partly addresses the unending search for development in Nigeria and other developing countries in the 21st century where globalization blended with information technology appears to deepen the deprivation of previously disadvantaged countries. The global race for adopted innovation which is to an extent is masked by the recipient mentality has made it difficult to see the innate need for self-conscious contentment at individual, societal and national levels which ultimately magnifies the manifestation of deprivation. For most part of the developing world, the evergreen works of Walter Rodney ‘How Europe Underdeveloped Africa’ (1972) and that of Frantz Fanon “The Wretched of the Earth” (1963) are classics. Similarly, the Wolfgang Sachs’s edited “The Development Dictionary” (1992) provides a stimulating of Alternative Development thinking to the mainstream econometric prescription and description of development options for the LDCs. Discussing the epistemic or dialectical interpretations of these works are not the focus of this lecture, suffice however it is that development policy implementers for countries like Nigeria may find wisdom in decisions that prioritises the country’s development. Moreover, if any lessons are learnt from the realities of the 2026 drifts and shifts in global power balance and alliance, then it should be clear that only self-determined development of nations can ultimately reduce deprivation.

The Vice Chancellor Sir, before concluding this lecture, it is required to state that being a geography student was not by default but remaining a geographer is my decision. Geography is not only glorified to be the ‘mother of all sciences’ many centuries ago, the truism of essence of Geography is even more pronounced in the 21st Century. Today, the landscape seems not to have changed any significantly to make geography and

geographers obsolete and redundant. Rather, virtually all the development issues and challenges of the world still find solutions in the critical mind of geographers. Climate change, disaster risk management, population-resources management, pollution control, sustainable development and several others still require the attention of geographers to solve at mini, micro and macro scales since they are all environment-related. The fact that the accommodation of geography in physical, social, management and humanities confer more advantages on geography (Adedayo, 2012) cannot be disputed. However, it is concerning how Nigeria's educational curriculum development planners unilaterally decide the obsolescence of a subject at the secondary level. It still reflects the inability to make decisions on what development is needed and how to achieve them. Geography and geographers will continue to play prominent roles in a world where environment cannot be disregarded as a component of development. It is therefore not surprising when David Harvey in 1969 concluded that 'geography is what geographers do'.

7. CONCLUDING REMARKS

Vice Chancellor Sir, and my distinguished audience, my career as a geographer really started in 2004 with the completion of my M. Sc programme which was used to strengthen my B.Sc. towards becoming an academic. The Ph.D. provided a fertile phase for my progress and starting a career in Teaching and Research in the prestigious Ahmadu Bello University in 2007 provided the needed launchpad for who I am today. I started teaching developing world and rural development since then and this stimulated my interest in development issues. These have resulted in my teaching, researching and authoring core and adjunct publications on development which partly culminate in the choice of my inaugural lecture.

The contents of this lecture are summaries of my professional academic contributions as a geographer and personal loud musings on development. Therefore, summarizing them simply leads to a recommendation that rural areas and developing countries should have a new development decision agenda that is based on self-originated ideals in line with their individual goals, aspiration and available resources for achievement. This should be rigid enough to specify targets to be met and flexible enough to accommodate changing aspiration based on the collective objectives of the people. A conclusive summary is that continued failure to make a development decision not only results in pseudo-development, it will continue to deepen, widen and broaden deprivation. My Vice Chancellor Sir and noble audience, I believe, I have demonstrated the need for new development decision at all spheres of our live: homes, schools, professional associations, departments, faculties, universities and the nations at large. I hope the decision will be made and positive actionable steps taken such that development will not continue to fail all of us.

7.1 Recommendations

A lecture such as this need not necessarily have several recommendations, because meaningful lessons are usually lost in the verbosity of lengthy discussions. Therefore, my recommendations which are prescriptive, descriptive, inductive and deductive are tersely presented.

- i. On what I called ‘ROY’s Ladder of Development Decision’, the first is moral patriotic individualism where persons who have ‘no price’ should make and take development decisions on behalf of the people, communities and nations. On a higher rung is selfless elitist philanthropism whereby only elite of impeccable character should make development decisions. The

highest rung is for community participation. This means all stakeholders in any system should participate through collective self-mobilization. There should be internal independence in decision-taking but when external assistance is required, it should be minimal. Government, NGOs, CBOs and the people are the agents to facilitate this. These should apply to all spheres of lives from agriculture to education, politics to administration, innovations to industrialization, science to security, warfare to peace building, and internal governance to external relations.

- ii. On waste and environmental management, incentivization-enhanced stewardship is recommended. This is because a system is ‘self-healing’ based on the strength of real benefits to the components, and it is rare that people will deliberately harm a system if there is an assurance of benefits from it. Incentivization should follow the Ladder of Development Decision.
- iii. On the bias faced by rural areas and poor countries, development recalibration is recommended. Development recalibration is a decision to re-evaluate the ‘real’ rather than the ‘made-believe’ value of primary products of rural areas and developing countries. It is unambiguous that all other forms or secondary and tertiary production are non-existent without the primary bases. If recalibration is difficult because of the dilemma of globalization and other inherent factors, then development renegotiation should be pursued. Renegotiation is based on deliberate realignment of actions and reactions using the quality of what one possesses compared to what one can disposed of. Instructively this should equally follow the Ladder of Development Decision.

7.2 Focus for the Future

Lastly, The Vice Chancellor and my valued audience, I believe inaugural lecture should not only be a summary of past academic accomplishments. It should also present a direction for the future. Hence, I have critically assessed and realized that for many rural areas in the developing world, the challenges of livelihood and living will continue to be prominent development issue owing to increasing spate of rur-urbanization and environment-induced changes. Also, rural and urban areas will continue to have fluid boundaries such that dichotomy may leveled out to uniformity. In addition, insecurity is and will be a key determinant of welfare in Nigeria and other parts of developing world. They are all connected to development, and regrettably, the agents and measures for addressing them have not been effective and the consequences have manifestly led to deprivation.

I have therefore, God willing, choose to direct my energy at these issues using two concepts; RUSILLIP and CIPEILCOSS. RUSILIP is an acronym for Rural-Urban Sustainable Improvement in Living and Livelihood Processes while CIPEILCOSS is Citizen's Participatory Engagement in Innovative Livelihood, Community Security and Self-defence. Already, some of my postgraduate students have sown the seeds of these themes and it is clear that pursuing these approaches has inherent challenges, but they are not insurmountable. And if there will ever be the opportunity to present a valedictory lecture, I hope it will be titled "From Deprivation to Development, A Geographer's efforts at addressing the Insurmountable".

The. Vice Chancellor Sir, distinguished scholars, ladies and gentlemen, I am immensely grateful for your attention. God Bless us all, Amen.

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APPENDIX I:

CATEGORIES OF MERCHANDISE IN RURAL PERIODIC MARKET

1.	Immediately edible rural foods and refreshments Cooked food: rice and stew, beans, <i>eba</i>, <i>amala</i> etc refreshment roasted/steamed maize and groundnut, <i>fura</i> and <i>nono</i>, bean-cake, pap, puff-puff, fried yam, fried fish, bread and tea etc. Fruits peeled orange, pineapple, sugar cane, mango, and walnut, garden egg etc. Meat (beef and mutton), fresh. frozen fish, snail etc. Stimulant: cola nut, bitter-cola, alligator pepper, tobacco local snuff, OU, shea butter, palm kernel, oil red oil etc.
2.	Rural durable, good/items Domestic assets: local grass/wool stocked mattress, zinc windows/doors Grass mats and grass fences (<i>Zana</i>) and grass stuffed head and arm rest Soap/ (Black and Soda) Earthen wares: clay spots whetstones Bronze wares ports ladles, spoons Local leather bags and pouches, leather scandals Sandal from rubber tyres, rubber-made well water drawers etc.
3.	Livestock/poultry and related items Sheep, goats, cattle, pig, donkey Hens, cocks, ducks dove etc.
	Rural artisan service and products: Blacksmith; cutlass axe, sickle, Dane guns, knives Aluminium and iron smith, firewood stoves. Aluminium box Repair and sales of watches and clock and their spare parts. Electrical electronic related and sales repair of radio, tinkering services and sales of tinkered materials tailoring service and sales of dress and clothing accessories etc.
5.	Consumable urban origin (consumer) good: Confectioneries: biscuits, sweets, chewing gum etc. Food additives: seasonings, canned food products etc. Soap and toiletries: toothpaste, powder, cosmetic and beauty accessories etc. Imported rice brands, ground oil, salt, sugar, matches etc. Fuels and energy: kerosene, lubricant in barrels and Gerry cans

6.	Fresh (raw) fruits and vegetable (wholesale and retails) Pepper, spinach, tomato, okro etc Sugar cane, mango, banana, cashew, plantain etc.
7.	Agricultural produce (small scale) Roots and tuber: cassava, yam, seet potatoes, coco yam Grain (local variety): maize, guinea corn, millet Groundnut, melon, soya beans
8.	Rural processed consumable food products Yam flour, cassava flour, <i>gari</i> Dried/ smoked fish Locust bean, melon, tamarind, beans Dried pepper, tomato, pumpkin etc.
9.	Agricultural produce (medium/large-scale) Rice, maize, millet, guinea corn etc.
10.	Durable urban industrial (capital) goods Industrial grinding machine and parts Foot wears: shoes slippers and sandals Stainless-steel, ceramics enamel and glass-wares Agrochemicals and fertilizers, veterinary products, and patent medicines Electronic gadgets (radio's, television, DVDs) parts and accessories Stationeries: torchlight, batteries, lantern etc. Cloth and textile: new and old cloths, unsown appeal e.g lace, brocade, Ankara wax etc.

APPENDIX II

SEASONAL CALENDAR OF VULNERABILITY AND COPING STRATEGIES IN BORNO STATE

Month	Environmental and climatic conditions	Welfare constraints, basic need deprivation and socio-economic vulnerability	Livelihood and Societal Coping strategies
January	Cold-dry; Harmattan	Diseases of livestock and poultry; shortage of food and water	Wild food harvesting, migration, and borrowing
February	Cold-dry; Harmattan	Livestock and poultry infections; water shortage	Irrigation, wild fruits and foods
March	Warm-dry	Human ailments; rashes, fever, water scarcity.	Wild fruit harvest, cultivating 'Firki' land.
April	Warm-dry; high temperature	Fever, rashes, dysentery water problems	Migration, wild food gathering, assistance from religious organizations
May	Hot-dry; high temperature	Fever, rashes, Acute water shortage	Off-farm employment, biomass harvesting
June	Hot-dry; high temperature	Acute water shortage	Herding, irrigation activities.
July	Hot-dry; cloudiness	Acute water shortage	Wild food harvesting, scooping water from dug holes of dry river beds
August	Hot-wet cloudiness & rain shower in southern Borno	Flooding & cessation of rainfall leading to drought condition	Return migration; farmland clearing planting of crops.
September	Cold-wet (in south); warm-wet (in north);	Effect of windstorm sporadic flooding in Borno south	Peak of agricultural activities in Borno north & south; construction of flood barriers using communal labour
October	Warm-wet; cold-wet variable rainfall.	Flood and windstorm; effect of; crop pest and disease	Biomass/grass harvesting; wetland farming.
November	Cold-dry (dry season)	Water shortage (in north); damage from Quella birds	Peak of harvest season
December	Cold dry; Harmattan	Water shortage	<i>Cirani</i> migration, biomass harvesting

Source: Author's Field Survey, 2009

APPENDIX III

CONCEPTUAL FRAMEWORK OF ENVIRONMENT-INDUCED DEPRIVATION

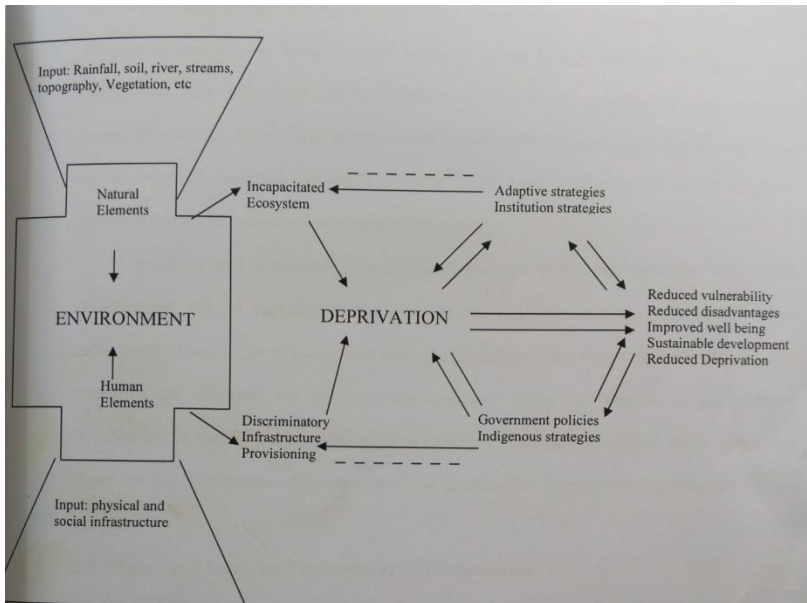
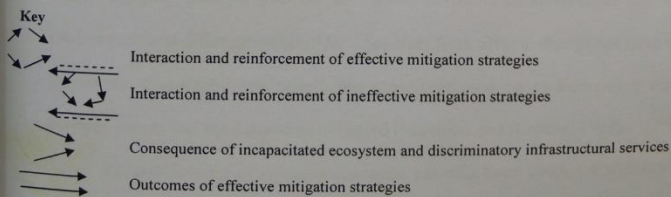


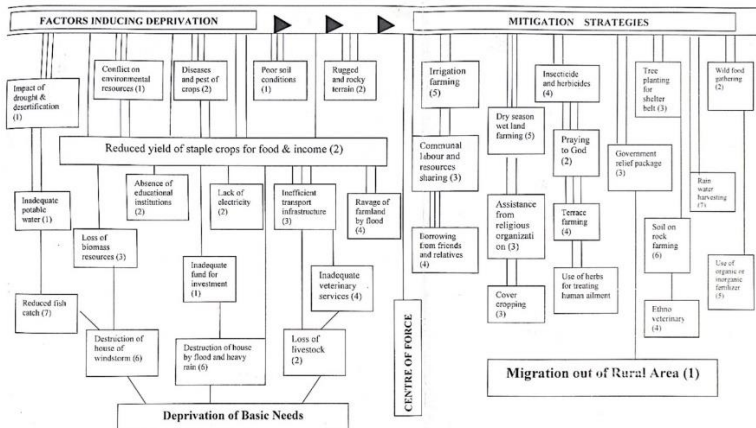
Fig. 6: Environmentally - induced deprivation and mitigation strategies



Source: Author.

FORCE-FIELD ANALYSIS OF ENVIRONMENTALLY INDUCED DEPRIVATION AND MITIGATION STRATEGIES

FIG 34: FORCE – FIELD ANALYSIS OF ENVIRONMENTALLY – INDUCED DEPRIVATION AND MITIGATION STRATEGIES



(b) is the weightiest factor as either factor of deprivation or mitigation strategy while 7 has the least weight. Here it is reversed such that phenomenon with 1 has a value of 7 and vice – versa.



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