

CLIMATE CHANGE AND THE RURAL POOR: RETHINKING RURAL DEVELOPMENT STRATEGIES IN NIGERIA

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Abstract

The axiom that climate change poses one of the greatest challenges to poor households is widely recognized by both national governments and world bodies. These challenges are more monumental in rural communities among rural households where a larger proportion of the poor live. There is no doubt that past administrations in Nigeria had severally made one effort or the other aimed at addressing the problem of poverty in the country but these efforts had been more in favour of the urban poor than the rural poor. The majority of the country's poor live in rural areas and their livelihoods are heavily dependent upon agriculture and natural resources, which are now severely affected by climate change with serious implications for food security, health and their well-being. This has triggered several response strategies across rural communities in the country and many developing countries. One of such response strategies is the massive rural-urban drift which has generated the phenomenon now referred to as "urbanization of poverty." The proportion of the Nigerian population living in urban centres has increased phenomenally over the years. While only 7% of Nigerians lived in urban centres in the 1930s, and 10% in 1950, by 1970, 1980 and 1990, 20%, 27% and 35% lived in the cities respectively. Over 40% of Nigerians now live in urban centres of varying sizes. This phenomenon or trend has serious implications for both rural communities themselves and urban areas. Addressing the urban problems in the 21st century in Nigeria must therefore commence with a rethink on rural development strategies in the light of the increasing vulnerability of the rural poor to the vagaries of climate change. This paper assesses the challenges of climate change to the rural poor and rural development options for rural communities in Nigeria. Drawing mainly from secondary data sources, the paper among other things identifies poor agricultural yields, low income and loss of vegetation, ill-health and resource conflicts as some of the challenges posed to rural communities by climate change. It calls for the mainstreaming of the rural non-farm sector in the current rural development framework in Nigeria to increase the resilience of rural communities to the impacts of climate change.

Climate change constitutes one of the most serious and long-term threats to sustainable development. The impacts of climate change are already being felt in many sectors and significant harm from it is already occurring. Recent evidence indicates that the world has already warmed by 0.8°C since the pre-industrial era (FME, 2010). Climate change is a scientifically proven phenomenon that includes "any change in the climate, whether due to its natural variability or as a result of human activity (IPCC, 2007). The description of the characteristics and implications of climate change shows that it is a multi-dimensional problem whose causes and consequences are clearly related to the present development activities, which has led to more inequality and poverty (UNDP, 2009).

The predicted impacts of climatic changes are not uniform across the globe (Onwuemele and Olorunfemi, 2010). In the international sphere, the impacts are expected to be more in developing countries to which Nigeria belongs. At the country level, the impacts will vary from one ecosystem to another and from one sub-population to another. Generally, it is believed that the impact will be most felt by the poor due to their weak capacity to adapt to climate change among other factors. Of the poverty stricken peoples on a global scale, more than 3 billion people live in the rural areas of developing countries. Most live on less than US\$2 -a-day and depend on agriculture for their livelihoods. This explains why poverty has been described as a rural phenomenon. In addition, many live in remote, marginal areas such as mountains, dry lands and desert areas with poor quality natural resources, limited communication and transportation networks and weak institutions (IFAD, 2009).

In Nigeria, about 73% of the poor are concentrated in the rural areas where illiteracy prevalence is high, potable water and health facilities are rarely available, road and electricity infrastructures are either unavailable or ill-managed. The predicted climate change impacts on the

rural poor have serious implications for rural development strategies in the developing countries and therefore calls for a re-examination of existing rural frameworks.

There is no doubt that past administrations in Nigeria had severally made one effort or the other aimed at addressing the problem of poverty in the country but these efforts had been more in favour of the urban areas than the rural areas. This has triggered several response strategies across rural communities in Nigeria. One of such response strategies is the massive rural-urban drift which has generated the phenomenon now referred to as “urbanization of poverty.” The proportion of the Nigerian lived in urban centres has increased phenomenally over the years. While only 7% of Nigerian population living in urban centres in the 1930s, and 10% in 1950, by 1970, 1980 and 1990, 20%, 27% and 35% lived in the cities respectively. Over 40% of Nigerians now live in urban centres of varying sizes. This phenomenon or trend has serious implications for both rural communities themselves and urban areas. Addressing the urban problems in the 21st century in Nigeria must therefore commence with a rethink on rural development strategies in the light of the increasing vulnerability of the rural poor to the vagaries of climate change. This paper assesses rural development options for rural communities in the light of the increasing climate change impacts in rural Nigeria.

Methodology

The paper mainly utilizes secondary data through content analysis of books, journals, reports and electronic sources (published and unpublished). Documents from government, international development agencies and various poverty reduction institutions were explored. Key documents were content analysed and results were presented qualitatively.

Organization of the Paper

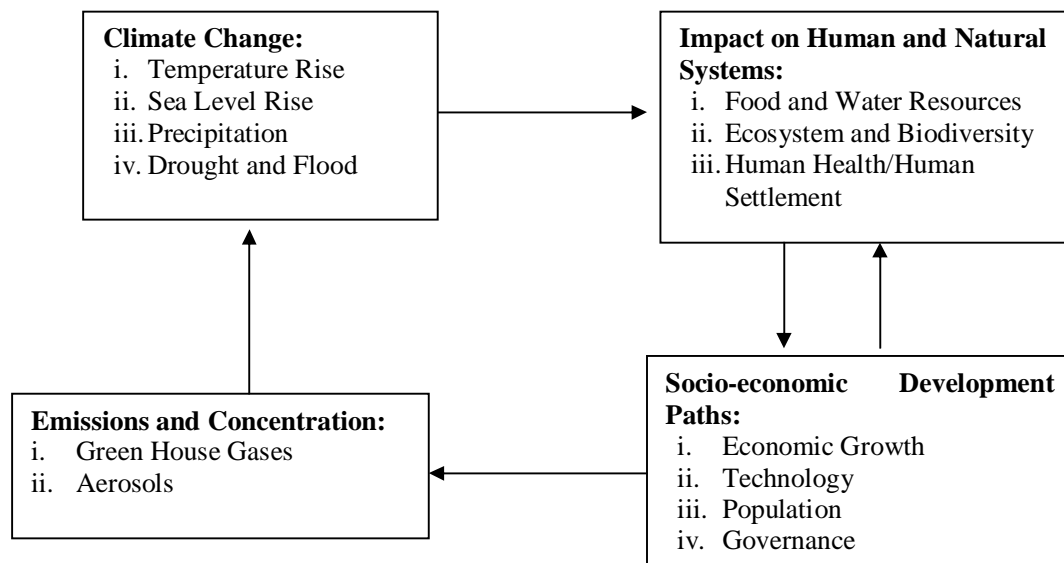
The remaining part of this paper is divided into four parts. The first part after this introductory section provides the conceptual framework while the second section assesses previous rural development strategies in Nigeria. The third section explores rural development options in the light of the changing climatic conditions in Nigeria. The last section concludes the paper.

Conceptual Framework

Climate change is a significant and lasting change in the statistical distribution of weather patterns over periods ranging from decades to millions of years. It may be a change in average weather conditions or in the distribution of weather around the average conditions (i.e., more or fewer extreme weather events) (Wikipedia, 2012). Climate change in IPCC usage refers to a change in the state of the climate that can be identified (e.g. using statistic tests) by changes in the mean and/or the variability of its properties that persists for an extended period, typically decades or longer. It refers to any change in climate over time, whether due to natural variability or as a result of human activity (IPCC, 2007). However, this definition slightly differs from that given by the United Nations Framework Convention on Climate Change (UNFCCC), where climate change refers to a change of climate that is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and that is in addition to natural climate variability observed over comparable time periods (UNFCCC, 2006).

The atmosphere contains gases such as water vapour, carbon dioxide, methane and other gases, which trap some of the outgoing heat energy from the sun thereby retaining heat within the earth’s atmosphere. This maintains an average global temperature, perhaps not suitable for human habitation (Nelson and Naa Dei, 2005). However, what has aroused concern is the increasing amount of these atmospheric gases, which have enhanced the heat-trapping potential of the earth’s surface. This has in turn led to increases in the earth’s surface temperature, sea level rise, more precipitation, droughts and floods. These in turn have impacts on human and natural systems brought about by human activities which have a dual effect on increasing greenhouse gas emission at the same time have a direct effect on human and natural systems (Nelson and Naa Dei, 2005) (Figure 1).

Figure 1: Climate Change: An Integrative Process



Source: IPCC, 2001

At this juncture, it is vital to note that climate is one component of the climate system made up of atmosphere, hydrosphere, biosphere and geosphere and their interactions. This explains why most literature on Poverty and Climate Change hardly omits environment in the analysis (Nelson and Naa Dei, 2005). Thus, while the focus of the paper is on climate change and the rural poor, the paper recognises that climate change and environment are inextricably interwoven. It is in accordance with this verity that the clear linkages between climate change and poverty will be established, especially given the multi-dimensional nature of poverty reduction. Hence, occasionally the paper makes reference to the environment with the view that this includes climate change (Nelson and Naa Dei, 2005).

Rural poverty refers to poverty found in rural areas, including factors of rural society, rural economy, and rural political systems that give rise to the poverty found there (Janvry et al, 2002). Rural poverty is often discussed in conjunction with spatial inequality, which in this context refers to the inequality between urban and rural areas (Kanbles and Venables, 2005). Both rural poverty and spatial inequality are global phenomena, but like poverty in general, there are higher rates of rural poverty in developing countries than in developed countries. Of the 1.4 billion people living in extreme poverty (defined as those living on less than US\$1.25/day) in 2005, approximately 1 billion – around 70 percent-lived in rural areas. In East Asia the rural share of total poverty has been reduced to just over 50 percent, and in Latin America and the Caribbean, and the Middle East and North Africa, the most urbanised regions, a majority of the poor now live in urban areas. In South Asia, South East Asia and sub-Saharan Africa, by contrast, over three-quarters of the poor live in rural areas (IFAD, 2011). Eradicating rural poverty through effective policies and economic growth remains a challenge for the international community (Otsuka, 2009).

Rural development strategy is an approach designed to raise or even change social and economic conditions of rural dwellers. The targeted group is primarily the rural poor who live in abject or absolute poverty. Hence, the basic objectives of rural development strategy are to improve economic and social conditions of rural communities, in an integrated manner, with a view to eradicating poverty. Policy options for rural development range from one extreme to another with some middle road approach strategies. Keith Griffin has categorised them into technocratic, reformist and radical. The objectives of technocratic strategy are to increase agricultural output by encouraging farmers, make use of imported technology based on the free market forces, steep competitions and dispersed private holdings. The reformist strategy is characterised by inconsistencies as a result of its eclectic vacillating of policies. The aim of the policy is to redistribute resources to some sections of

the community. The third strategy is the radical approach with socialist outlook. Its objective is a complete social change, redistribution of political power and factors of production. Essentially, the major beneficiaries are the small peasants and landless labourers. Irrespective of the rural development approaches adopted, it is necessary to take into cognizance the vulnerability of the rural poor to the vagaries of the changing environmental conditions.

Three areas of poverty research have attracted the attention of scholars. These are its multidimensionality, duration and dynamics. These three perspectives of poverty have triggered the emergence of social protection as a policy framework for rural poverty reduction. Social protection interventions are based on a multidimensional perspective on poverty, which is reflected in the widening scope of social assistance programmes with an emphasis on combining and integrating interventions. One particular dimension of poverty is its duration and persistence. Again, new forms of social assistance pay special attention to this issue and aim to break the persistence of poverty across generations and to prevent vulnerable household falling into poverty.

Baulch and Hoddinott (2000) and the Chronic Poverty Research (2005) have examined the conceptual and empirical knowledge on poverty duration in developing countries. The findings indicate that around 40 percent of those in poverty in the developing world are in persistent or chronic poverty, confirming that poverty duration is a significant issue. The current focus in poverty research is its vulnerability. Vulnerability can be defined as the probability that individuals, households or communities will be in poverty in the future. As with multidimensionality, there are significant difficulties involved in identifying and measuring vulnerability. The core difficulty is establishing, on the basis of present and/or past information, the likelihood that people will be in poverty in the future. Vulnerability is not only a dimension of poverty, but can also be a cause of poverty and its persistence (Barrientos, 2010). In the last decade, social protection has emerged as a policy framework in tackling poverty and vulnerability in developing countries. A large number of national government in the developing world are adopting national social protection strategies within their poverty reduction planning. The overall objective is to reduce the economic and social vulnerability of poor, vulnerable and marginalised groups and, in particular, to support the poor to overcome the demand-side barriers which prevent them from accessing basic economic and social services. Households with high vulnerability to poverty are also directly or indirectly vulnerable to the impact of climate change. Therefore, social protection policies must not only target poverty vulnerability but also climate change impact vulnerability.

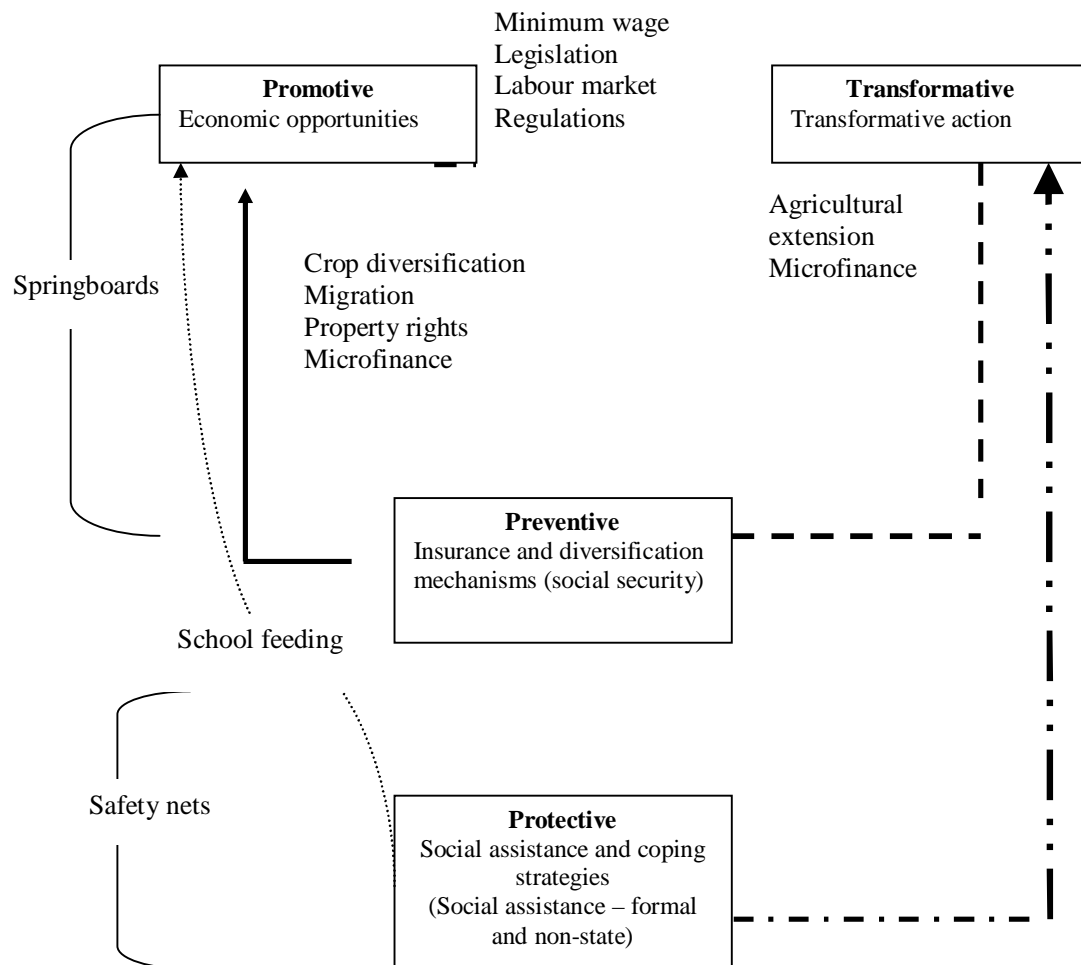
Devereaux and Sabates-Wheeler's (2004) offer a framework for the planning and implementation of social protection policy. The framework identified four social protection measures to include:

1. **Protective:** This provides relief from deprivation. (Protecting household's income and consumption, which includes social assistance programmes such as cash transfers, in kind transfers, fee waivers to support access to basic and social services).
2. **Preventative:** This seeks to avert deprivation (preventing households from falling into or further into poverty, including, for instance, health insurance programmes, subsidised risk pooling mechanism).
3. **Promotive:** This aims to enhance real incomes and capabilities, which are achieved through a range of livelihood-enhancing programmes targeted at households and individuals, such as micro finance and school feeding. (promoting household's ability to engage in productive activities and increase incomes, for example through public works employment schemes, agricultural inputs transfers or subsidies); and
4. **Transformative:** Seeks to address concerns of social equity and exclusion, such as collective action for workers' right, or upholding human rights for minority ethnic groups (addressing social inequalities and discrimination, which include, for example, core social protection programmes which tackle gender inequality and promote child rights and linkages to awareness-raising programmes or tackling discrimination).

The implication of the framework for the rural development strategies is that for rural development programmes to achieve their objectives, they requires complementary measures such as the provision of basic social services such as quality health, education and social welfare services, as

well as economic services including infrastructure, functioning markets and opportunities for financial inclusion such as microcredit and microfinance etc.

Figure 2: A Conceptual Framework for Social Protection



Overview of Rural Development Strategies in Nigeria

Rural development effort in Nigeria can be examined under two eras:

- a. **Pre-independence:** The colonial administration prepared and implemented the Ten-Year Plan of Development and Welfare for Nigeria from the period 1946 – 1956. The sole objective was to improve cash crop production and urban infrastructure, particularly roads and communications. Little attention was paid to rural development as it had little relevance to the imperial interests.
- b. **Post-independence:** with the attainment of independence in 1960, the development of rural areas assumed greater importance in the national development agenda. Thus, the First National Development Plan: 1962 – 1968 allocated 13% of the gross capital outlay to agriculture and primary production. In addition, the Third National Development Plan: 1975 –

1980, allocated 7.2% of the N43.36 billion budget estimates to agriculture and rural development sector. This was essentially continuation of the development process and policies begun in the preceding plan. The post – 1975 period witnessed series of measures including the Operation Feed the Nation (OFN), Agricultural Development Programmes (ADPs), River Basin and Rural Development Authorities (RBRDAs), and the Green Revolution Programme. By the second half of 1970s and early 1980s, emphasis shifted towards addressing development and poverty issues at the grassroots in rural areas with the belief that the rapid growth in the rural economy is the most promising way to reduce poverty and check rural-urban drift.

In 2001, the Federal Ministry of Agriculture and Rural Development in collaboration with relevant stakeholders developed the National Policy on Integrated Rural Development (NPIRD). The overall policy objective of the National Policy on Integrated Rural Development is drawn from the national objectives of developing the rural areas, raising the quality of life of the rural people, alleviating rural poverty and using rural development as a basis for laying a solid foundation for national development. In order to achieve integrated and even development on a sustainable basis, the policies to be adopted are intended to empower rural dwellers through the development of productive employment, enhancing their income, ensuring protection of the environment, promoting gender responsiveness and ensuring adequate care for vulnerable group.

The policies to be implemented through the National Policy on Integrated Rural Development lay special emphasis on five priority areas. These are:

1. **Promotion of Rural Productive Activities:** In this regard, emphasis is placed on employment and income generating opportunity and activities. The policy areas under the promotion of rural productive activity are:
 - i. Agriculture, Fisheries, Animal Husbandry And Forestry
 - ii. Mineral Resources Development
 - iii. Manufacturing and Industry
 - iv. Marketing and Distribution, and
 - v. Rural Financial Systems
2. **Supportive Human Resources Development and Utilization:** Under this activity, the emphasis is on recognition of the critical and dynamic role of the total man in rural and national development. The policy areas under this are:
 - i. Health and Population
 - ii. Culture and Social Development
 - iii. Education, Technology and Skills Development
 - iv. Research and Extension Services, and
 - v. Information and Communication
3. **Enhancement of Enabling Rural Infrastructure:** This places emphasis on government taking adequate measures to promote the development and improvement of rural infrastructure with a view to stimulating and promoting sustainable growth of rural productive activities. The policy areas under this include:
 - i. Transport infrastructure and facilities
 - ii. Communication infrastructure
 - iii. Housing
 - iv. Environment
 - v. Energy
 - vi. Water and sanitation
4. **Special Programmes for Target Groups:** This is premised on the fact that the powerless, marginalized and deprived rural people deserve special attention. This policy targets the following:
 - i. Women
 - ii. Youth

- iii. Children
- iv. The elderly and retired
- v. Beggars and destitute
- vi. Emergencies and national disasters
- vii. Economically disadvantaged areas; and
- viii. Border areas.

5. **Rural Community Organisation and Mobilisation:** This policy recognises the fact that the need for full participation of members of the rural communities in the development process is critical to the quality and sustainability of the development efforts of government. The strategy to be employed in achieving this priority policy area is through special and appropriate provision for the support of community initiatives and programmes through managerial, technical, financial and other appropriate assistance.

The review of rural development strategies shows that none of the strategies specifically mentioned climate change. Although environment was mentioned in NPIRD, the emphasis was on rural infrastructure. In addition, vulnerable communities and sectors were mentioned only in NPIRD. However, it was not specifically directed at climate change but to risks generally. Climate change risk factors such as drought, floods, erosion, rainstorms, food losses due to pest which constitute a serious threat to agriculture and fishing which are the main rural livelihoods were hardly mainstreamed in NPIRD. In other words, a general analysis of how droughts/aridity, erratic rainfall, floods, sea level rise, tropical cyclones, extreme heat and extreme cold affect vulnerable rural community or sector were never explored in any of the rural development strategies in Nigeria. In addition, the rural development strategies have no climate change institutional framework as it relates to rural areas. Again, there is no specific institution mandated for the full implementation of NPIRD. The result is that the three tiers of government and other rural development partners are busy implementing diverse projects in rural communities often resulting to duplication of projects which have little or no impact on rural poverty. Social protection programmes are the contemporary approach for rural poverty reduction. The current NPIRD document lacks the basic element of social protection as identified by Sabates-Wheeler's (2004), thereby limiting its capacity for rural poverty reduction.

The rural development strategies focus on the critical role of agricultural productivity, under which increased smallholder yields can address both growth and equity goals at once, and lead to multipliers in the rural economy. However, with climate change the ability to stimulate agricultural growth becomes less likely. There are different types of risks for rural development associated to climate change:

- i. Loss of productivity due to physical risks (increase in frequency and severity of natural hazards, reduced crop yields and area of arable land). However, in some regions, climate change is expected to have a positive impact on agricultural production.
- ii. Increased economic risks in terms of market and trade, for instance affecting intra-regional trade in Africa.
- iii. Increasing difficulties for multipliers to materialise under conditions of climate change. If agricultural production is not growing, it will be difficult to sustain non-farm rural growth. This will require additional investments.
- iv. Social impacts, such as migration (for instance, in Burkina Faso the impacts of climate change are increasing migration from the North to the South West, where conflicts over access to resources already exists)(Natasha, 2008).

In this context, climate change adaption measures become a pertinent issue. Adaptation reduces the impacts of climate stresses on human and natural systems. It consists of a multitude of behavioural, structural and technological adjustments. Adaptation measures can vary in their timing (anticipatory vs. reactive; ex ante vs. ex post), scope (short-term vs. long-term; localised vs. regional), purposefulness (autonomous vs. planned; passive vs. active) and adapting agent (private vs. public; societies vs. natural systems). Examples of adaptation measures include changing crop varieties and altering farming practices, developing heat-and drought-resistant crops, diversifying livelihoods, building flood defences and land use planning (OECD, 2009). However, the issue of climate change

adaptation was absent in the various rural development strategies in Nigeria. The 2012 flood disaster in Nigeria which covered over 20 states in Nigeria destroying rural people's property and livelihoods underscores the need for mainstreaming of climate change adaptation into rural development strategies in Nigeria.

New thinking in Rural Development Strategies in View of Changing Climate

The ultimate goal of every rural development strategy is to reduce rural poverty and improve the quality of life of rural households. But climate change negative impacts pose greatest challenge to attaining this goal in many developing countries. While the National Integrated Rural Development framework provides a solid foundation for rural poverty reduction in Nigeria, the framework needs to be blended with the current realities in rural communities especially climate change.

A proper analysis of how climate change impacts affect rural communities and their livelihood should be explored in the NIPRD documents. This is necessary as it will facilitate the development of appropriate community based adaptation measures geared towards mitigating the impact of climate change on rural people and their livelihoods. While various poverty reduction institutions exist at the national level; there are no specifically dedicated poverty reduction institutions in rural areas taking cognisance of the fact that this neglected region hosts a larger proportion of the country's population. In addition, there is no specific institution responsible for the implementation of the NPIRD. It is therefore vital to create one at the national and sub-national level. This will assist in the actual monitoring and evaluation of programmes geared towards rural poverty reduction in Nigeria. The basic elements of social protection mechanism should be mainstreamed into our NPIRD documents. This is vital to reduce the economic and social vulnerability of the poor, vulnerable and marginalised groups in rural communities in Nigeria.

Conclusion

Although the direct linkage between climate change and poverty is high on the international development agenda, Nigeria's policy framework for rural reduction is yet to integrate this into its national poverty reduction framework. The result is that the little progress in rural poverty reduction effort in Nigeria are easily wiped off by environmental hazards such as flood and drought occasioned by changing climatic conditions. It is therefore important that existing poverty reduction strategies in Nigeria explore poverty-climate change linkages and develop appropriate community based adaptations into the poverty reduction frameworks in Nigeria.

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