



What Policy Options can Promote Agricultural Innovations for Climate Change Adaptation and Food Security in the West African Sub-region?

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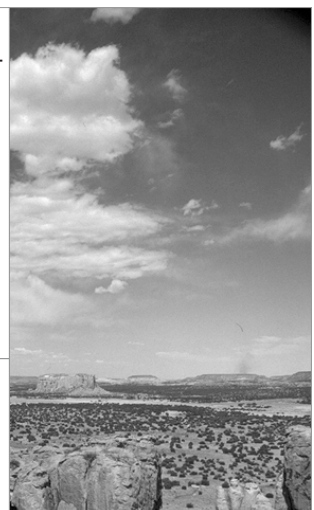


Table of Contents

Acknowledgement	4
Introduction	5
What Policy Gaps Limit Innovation on Climate Change Adaptation & Food Security in West Africa?	5
Policy Considerations	8

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Introduction

Agricultural production is bisected with several factors among which are climate change and food security issues. Climate change is a major development challenge that has made the global community to take extraordinary actions aimed at mitigating or adapting to its impacts on the earth system and livelihoods in general. It is a serious threat to poverty reduction and threatens to undo development efforts. Climate change is a global phenomenon but its effects are more severely felt by the poor people and poor countries of the world.

A predominant feature of agricultural production pattern in West African countries is its smallholder agriculture nature. Poverty and hunger are closely interrelated, though presently, there are considerable improvements in the food system; food security still remains a problem in the West Africa sub region. The first Millennium Development Goal aims at halving poverty and hunger by 2015. This is increasingly unlikely to be achieved within the timeframe because of uncertainties posed by climate variability, absence of a strong policy base as well as absence of strong institutional capacity to implement existing policies within the sub region.

Climate change is taking a serious toll on livelihoods in the sub region and farmers are the major stakeholders affected in the climate change discourse. Unfortunately, the trend in the manpower structure across the three countries show an unstable trend for farmers in Sierra Leone, which are dominated by poor farm labourers. The absence of technical and managerial staff on the farms in Nigeria, Sierra Leone and Liberia reveal the need to strengthen and bridge the gaps that are existing in order to link the divide between agricultural innovations on climate change and food security.

What Policy Gaps Limit Innovation on Climate Change Adaptation & Food Security in West Africa?

Traditionally, the agricultural research systems in the region are characterized by a system of top-down, centralized, monolithic and isolated structures. Linkages, interactions and learning mechanisms among the component actors are notably weak and/or often non-existent. Empirical evidence revealed several linkage gaps and missing links among and between the actors in the systems.

Institutions, for example, universities and research institutes innovate in isolation and although research is taking place at various national and international organizations, the coordination is dysfunctional, and poorly linked to the productive sector, as the existing reward system favours the publication of research endeavours in peer reviewed western journals. Besides, research has revealed that farmer innovations were not being included in the knowledge system because traditional approaches such as the NARS (National Agricultural Research System) perspective and AKIS (agricultural knowledge and information system) depict research as the sole source of innovation. Without research, it implies, there is no innovation.

At the moment, there seems to be no specialized trainings on climate change adaptation and food security issues in the West African sub region. The absence of a specialized training is a reflection of the unstable manpower structure especially in Sierra Leone and Liberia. A well balanced training on the subject matter will not only boost manpower growth but will also enhance and increase productivity.

The absence of a special training or programme on climate change and food security has a direct effect on the adaptation options available to the farmers. It is obvious that farmers are innovating through indigenous adaptive measures. Though efforts are presently being channelled into more scientific ways of adapting to climate change, these are not yet accessible or available to the farmers who are the end users of such innovations. A possible reason for this could be that research has not adequately covered the issues of climate change adaptation and food security or that the available information is yet beyond the reach of the farmers. This points to the poor agricultural extension contacts the farmers have had with agricultural extension outfits of the different countries.

Another factor directly connected to the issue of innovative adaptive measure is the extent of collaboration existing among the different stakeholders. Studies on innovation indicate that the ability to innovate is often related to collective action and knowledge exchange among diverse actors, incentives and resources available for collaboration, and having in place conditions that enable adoption and innovation e.g., by farmers or entrepreneurs. However, there was a poor intensity of collaborations with foreign partners across the three countries, even though there appeared to have been more collaboration with local institutions, especially in Nigeria. Foreign collaboration is needful to bridge the gap in

knowledge and experience on innovative adaptive measures to climate change and food security. Collaboration with foreign partners will also help in the transfer and build up of strong teams of experts which could pull resources together towards the generation of more innovative ways of adapting to climate change and also ensuring that the sub region has better chances of being food secure.

The performance of system based on innovations generated does not reflect adequate research efforts. The slow pace at which innovations are generated could be an indication of poor or virtually non-existence of collaborations with foreign partners. In the transfer of knowledge or innovation, locally available innovations are almost inadequate. There is need to generate innovations blended with modern knowledge in order to increase the performance of systems.

Information is crucial to the advancement of generated innovations on adaptive measures and food security issues. A close look across the three countries revealed that farmers sourced information more from television, radio and other farmers. The internet, universities, Ministries of Agriculture and Environment and extension workers, who are supposed to be repositories/banks of information, are not the first called for information. These bodies should be at the fore front of information dissemination to ensure that current and specific information to the needs of the farmers are tailored and directed to them as and when needed.

The mass media could significantly influence attitude and behaviour. Thus, programmes dedicated to climate change should be aired regularly on radio and television stations preferably in local languages. Awareness programmes which illustrate the impact of climate change, through jingles on television, radio and drama would be pertinent.

It has recently been reported that as of August 2010, Nigeria has a tele-density of 58.52 with mobile GSM having 74,074,793 active lines (Data from: <http://www.ncc.gov.ng/subscriberdata.htm>; accessed 01:11:10). This implies that mobile telephony is accessible to at least half of Nigeria's population. Telecommunication operators in Nigeria, Sierra Leone and Liberia could as part of their corporate social responsibility (CSR) send short messages (SMS) on climate change and food security to their clients from time to time. SMS has been

used extensively in marketing their products and promotion of social events such as the recently concluded world cup tournament in South Africa. This would prove to be an effective way of bringing climate change information to farmers in the sub region.

Policy Considerations

The development challenges are enormous for any country coming out of a protracted civil conflict. Sierra Leone and Liberia are not different. This document, in reviewing the acts and policies relating to agriculture, food security and climate change in Nigeria, Sierra Leone and Liberia, as well as the agricultural innovation system framework, underscores the importance of Government playing a leadership role in establishing a vision and strategy for the reconstruction and development of the agriculture and food sector, environmental sector as well as the ministries of science and technology.

To play this role, government will first need to evolve (in mind and in action) from an implementation agency to one focused on coordination, facilitation, regulation and evaluation. In addition to reorienting its mission to one focused on the provision of key public goods, the government will be challenged in the immediate future to serve as a bridge between managing short-term safety net activities and developing a long term vision and strategy for food security and climate change issues.

In furtherance of this, the following are recommended for policy considerations:

1. Formulation of a comprehensive climate change policy at the a global level and within Africa and especially in the West African sub region will be a necessary first step towards dealing with the challenge of climate change within the West African sub region. A number of climate change conferences have been held in recent years all over the world. Such conferences are platforms which provide necessary input into a global climate change policy, which would in turn be translated or domesticated in the respective countries taking cognizance of their varying agro-ecological and climatic characteristics.

2. A conference on formulation of climate change policy in West Africa is proposed; the essence of this is to solicit for political support from the various governments of countries in West Africa.
3. There should be increased and improved funding and training on climate change and food security issues to boost manpower skill which will subsequently lead to increase in productivity.
4. Collaboration efforts, between local and foreign partners should be intensified. This will bring about the generation of better and improved innovations on food security and adaptive measures.
5. The various systems / Ministries / Parastatals involved in innovations generation should work closely with research institutions and foreign partners to enhance the generations of innovations and also, to blend locally available adaptive measures with those generated over time.
6. There is need to revisit the existing research reward system, which favours the publication of research endeavours in peer reviewed western journals and link rewards to impact on the productive sector in order to achieve functional coordination of research efforts.
7. There is need to create more awareness of climate change and food security as key issues by leveraging on the 2011 general elections in Nigeria.
8. Telecommunication operators should be encouraged to send SMS regularly to their clients on climate change and adaptation measures for climate change.
9. Efforts should be made to promote the work of public and private extension outfits, Ministries of Agriculture and Environment, and Internet in the dissemination of relevant climate change information.



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