

# **FINANCING AND TRAINING IMPERATIVES FOR RESILIENT AGRICULTURE IN NIGERIA**

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# INTRODUCTION

- Traditional roles of agriculture Provision of: food, income, raw materials, foreign exchange etc
- Beyond the traditional roles , agriculture plays transformative role in a modernizing economy by being at the centre of economic diversification from oil (Eboh, 2010)
- With projected population increase to between 230 and 430 million people by 2050, Nigeria must transform agriculture
- Transformed to adequately meet the needs of the population while simultaneously decreasing the environmental impact attendant to the transformation programme.

## INTO' CONTD'

- Globally, agriculture is responsible for more Greenhouse Gas Emissions than any other human activity (Baumert, Herzog, and Pershing, 2005).
- Global scenarios do not automatically translate to those of Nigeria.
- For instance, Nigeria agriculture contributes a small extent to global warming through bush burning and other poor land management practices, however it bears the full brunt of climate change impacts.
- Agriculture is central for Nigeria development; also a major driver of environmental decline.

## INTRO' CONTD'

- In addition to projected population increases are problems of climate change.
- So, policies and institutions are required to enhance the ability of individuals, households and production systems to recover from the incidence of shocks and stresses on the agriculture sector as a result of climate change.
- Globally, there is high pressure on land use as 20% of forests and 50% savannahs, grasslands have been converted to agriculture (Ramankutty, and Rhemtulla,2012; Pereira, 2010).
- Land cover change for agriculture, which is one of the key drivers of biodiversity loss , could increase extinction rates a hundred fold over the 21st century .

## INTRO' CONTD'

- An approach to develop technical, policy and investment conditions for sustainable agricultural development for food security under climate change is the notion of Climate Smart Agriculture ,CSA.
- Sponsored by the FAO, CSA entails:
- (i) sustainably increasing agricultural productivity and incomes;
- (ii) adapting and building resilience to climate change; and
- (iii) reducing and/or removing greenhouse gases emissions, where possible
- To all intents and purposes, resilient agriculture is an integral part and parcel of climate smart agriculture.

## INTRO' CONTD'

- It is argued: Nigeria needs a programme devoted to a new generation of farmers that trains young educated people interested in agricultural entrepreneurship and provides financial and technological support (Nwajiuba, 2012).
- The foregoing views were stated in the context of a proposed twin-track approach to addressing the challenge of agriculture as a development issue in Nigeria.

## INTRO' CONTD'

- The twin-track approach involves encouraging agri-business and supporting the large population of smallholder.
- On the basis of encouraging agri-business and supporting the large population of smallholder farmers, this paper seeks to highlight the financial and training support needs for the efficient practice of resilient agriculture.

## INTRO' CONTD'

- Discussions in this paper are based on secondary data obtained from relevant sources.
- The rest of the paper is organized as follows:
  - what resilient agriculture is,
  - characteristics of agriculture in Nigeria,
  - enabling environment for agricultural resilience, financing and training needs for resilient agriculture.
- The paper concludes with recommendations.

# Resilient Agriculture

- Resilience can be viewed as the presence or absence of such capacities as: react to a phenomenon or a disturbance and prevent or lessen harm to an existing state;
- Effortlessly rebound to a stable state after a disturbance to an existing system; and
- Alter an existing state to one that is more responsive to disturbance.
- The presence of these capacities can be described as resilience while absence can be referred to as not being resilient.
- It is the ability of a system to withstand or absorb stress or shocks and adapt to change.

# Resilient Agriculture

- Resilient agriculture, RA, refers to the capacity of agricultural development to resist or recover from stresses and shocks and so rebound to the previous level of growth.
- RA meets the food and the development needs of the people over both the short-term and the very long-term, from local, through, state, national, regional, to global scales, without destabilizing the earth system.
- It aims to maintain or grow the full natural capital of the ecosystem.

## Resilient Agriculture

- Additionally, RA also aims to maintain and grow such broader set of mechanisms as *social networks*, *governance*, and *leadership* to meet the immediate needs of the people without undermining the long-term stability of social and natural systems
- It creates agricultural growth out of **knowledge**, *investment* and *innovation*, while simultaneously building the capacity of farmers, particularly smallholder farmers to counter environmental degradation and climate change

## Resilient Agriculture

- The goal of RA may seem at odds with agricultural growth.
- It is possible to experience a highly resilient agriculture but stagnant agricultural growth, or a rapid agricultural growth that is destructive and highly volatile.
- The ideal is somewhere in between where appropriate resilience is built into growth at the outset in a way which exploits the synergies between growth and resilience.

# Resilient Agriculture

- Modern agriculture has substantial impacts on the biophysical environment.
- These impacts can work against the very processes that support the functioning of agricultural systems, and consequently reduce the long-term sustainability of agriculture itself .
- Therefore, there should be conscious efforts toward sustainable intensification of agriculture which aims to optimize crop production per unit area while accounting for social, political, and environmental impacts.
- So, efforts should be in the direction of policies and practices that focus on increased production efficiency at lower environmental and resource costs.

## Resilient Agriculture

- RA entails building an agricultural production system capable of meeting current, forthcoming, known and unknown challenges.
- We must modify our views on sustainable agricultural development from its current emphasis on optimization of production in relation to *immediate* economic, social, and environmental costs.
- To be profitable, agriculture must be resilient; to be resilient, cost considerations must transcend immediate economic costs and focus on environmental cost.
- Successful agriculture is mostly perceived as high yields with low economic cost; this also includes high yields at low environmental cost

# Characteristics of Agriculture in Nigeria

- ~85% of Nigerian agriculture is rain-fed; so vulnerable to climate variability and change
- Technology used is simple and rudimentary with little or no mechanization
- Productivity is generally low; as a result, inability to meet domestic food requirements
- Increased agricultural production can be accomplished through ***expanding areas under cultivation*** or employing ***intensive production techniques***.

# Characteristics of Agriculture in Nigeria

- Expanding Nigeria's cultivatable land area to boost food security is not an acceptable sustainable option
- Land may be available for clearing, but doing so will incur a major biodiversity loss and large Greenhouse Gas emissions
- So, we should seek to increase agricultural productivity through sustainable intensification which is desirable for building resilience
- Nigeria's drive towards increased agricultural production should be guided by sustainability-related intensive agricultural production techniques

## Characteristics of Agriculture in Nigeria Contd'

- Investment in agriculture is low .
- The Comprehensive Africa Agriculture Development Program (CAADP) calls for at least 10% of the national budget for agriculture to achieve a target of 6% annual agricultural growth
- Nigeria's budgetary allocation to agriculture in 2013 budget was 2%. It was less than this in 2012.
- 2016 Appropriation Act, the total budgetary allocation to the FMARD, equivalent to 1.25% of the national budget.

## Characteristics of Agriculture in Nigeria

- Youth are leaving agriculture in Nigeria.
- The exit by Southern Nigeria's youth is more pronounced than the exit from their Northern Nigeria counterparts .
- The exodus of youth from agriculture invariably creates a generation of older farmers who tend to be technologically less savvy than the younger farmers.

# Enabling Environment for Resilient Agriculture

- To achieve resilient and sustainable agriculture, we look for *towards a mosaic of solutions operating across scales*.
- NOT one-size fits all single solutions,
- To achieve agricultural growth with resilience governments in partnership with local and international private sector organizations should build resilient markets, resilient agriculture and resilient people (Agriculture for Impact, 2012).

# Enabling Environment for Resilient Agriculture

- **Enabling environment** -- market forces alone, whether within a country or on a global scale, will not create food security; benefits will only flow if there is an appropriate enabling environment.
- **Resilient market** entails reduction in price volatility, facilitating private sector investment in agriculture, and building better environments by governments and private sectors.
- **Resilient agriculture** entails enabling resilient and sustainable intensification, combating land and water degradation and building climate smart agriculture.
- **Resilient people** entails scaling up nutrition, focusing on rural women, and youth, and building diverse livelihoods.

# **Enabling Environment for Resilient Agriculture**

- Governments at all levels working with local and international private sector organizations require investments to bring about resilient markets.
- Similarly, appreciable investments are required for generation, dissemination and adoption of resilient agricultural technologies and practices.
- Making people resilient requires reasonable investment in capacity building and income diversification.

# Enabling Environment for Resilient Agriculture

- A common thread runs recommendations for achievement of agricultural growth with resilience: finance for investments in human and natural resources.
- Investment in human resources also entails capacity building and training

# Fundamentals for Financing Resilient Agriculture

- The basis for government investment in the agricultural sector is rooted in the justifications for public-sector intervention in the macro economy.
- arguments in support for public-sector involvement in the economy include: *market failure* and *the inequality or poverty arguments*
- Market failure: when the competitive market system either produces the “wrong” amounts of goods and services or fails to allocate any resources whatsoever to the production of some economically justified goods and services
- governmental action or policy can correct all types of market failures.

# Enabling Environment for Resilient Agriculture

- The inequality or poverty argument: based on majority of the population in developing countries are small-holder farmers engaged in agriculture.
- So, incentivizing and subsidizing agriculture improves incomes and strengthens livelihoods of the majority of the people thereby alleviating poverty should concern a responsible government.
- Small-holder farmers usually face various forms of poverty such as weak property rights, poor access to markets and financial services, and severely limited ability to manage risks (FAO 2012).

# **Enabling Environment for Resilient Agriculture**

- The various forms of poverty can be explained by the Vicious Circle of Poverty.
- The Vicious Circle of Poverty can be broken through external injection of capital.
- In agricultural production process, this external injection of capital comes in the form of agricultural credit.
- despite the importance of the agricultural sector in the Nigeria, the sector remains grossly underfunded at all levels of government.

# Enabling Environment for Resilient Agriculture

- The low budgetary allocation to agriculture is a challenge in financing the required investments for the achievement of agricultural growth with resilience
- It is also a clear indication for the need to additionally explore innovative financing mechanisms.
- The innovative financing mechanisms are in no way a substitute or an alternative to public funding.
- *Innovative financing mechanisms are innovations to the extent that they depart from traditional approaches to mobilizing development finance.*

# Enabling Environment for Resilient Agriculture

- Innovative financing entails non-traditional applications of solidarity, public private partnerships, and catalytic mechanisms that
- (i) support fund-raising by tapping new sources and engaging investors beyond the financial dimension of transactions, as partners and stakeholders in development; or
- (ii) deliver financial solutions to development problems on the ground.

# Enabling Environment for Resilient Agriculture

- E.g. of innovative financing: new approaches to attract private and public revenues for funding activities that benefit partner countries;
- new revenue streams for developmental activities (e.g. voluntary contribution scheme, a new tax etc); and
- new incentives that address market failures (corporate social responsibility, rewards etc).
- . Innovative financing is essential to the extent that it enables the mobilization of private funding.

# Enabling Environment for Resilient Agriculture

- By its nature agriculture is a private sector activity: all the organizations that produce agricultural goods and services are owned and operated by private entities and units such as firms and households.
- The private sector in Nigeria therefore has a lot to offer by way of investments in agriculture

# Fundamentals for Training for Resilient Agriculture

- There is the challenge of youth insufficient access to *knowledge, information, education* and *training*.
- Poor and inadequate education and training limit productivity and acquisition of skills.
- To raise a new generation of young educated farmers that are interested in the use of improved technologies and modern management approaches that help ensure farm profitability and sustainable resource requires training.
- It also requires re-orientation.

# **Fundamentals for Training for Resilient Agriculture**

- Building resilient people who will practice resilient agriculture embraces building the capacities of the people.
- Training and education are needed to develop new and relevant technologies and processes.
- Training and education are also needed to efficiently disseminate and effectively adopt the new technologies and processes.

# Fundamentals for Training for Resilient Agriculture

- Resilient people are capable of generating profitable and diverse livelihoods that ensure stable incomes, sufficient nutrition and good health in the face of recurrent stresses and shocks.
- Therefore, there is need to improve present and prospective farmers' (especially women and youth) access to the requisite skills and competences relating resilient agricultural practices.
- So, governments in partnership with private sector should enable access to education and training for women and youths from the outset in all development programmes.

# Fundamentals for Training for Resilient Agriculture

- Additionally, a critical and rigorous re-assessment of the quality and content of teaching and learning of agriculture in all levels of education in Nigeria is also fundamental to the achievement of resilient agriculture in Nigeria.
- Education is paramount in making green economy operational— green economy, a related concept to resilient agriculture, defined as an economy that improves human well-being and social equity and significantly reducing environmental risks and ecological scarcities.

## Recommendations

- There is the need for Nigeria to design special funding mechanism that is suited to finance food security and climate resilient agriculture.
- Private sector investment in financing agriculture is recommended.
- In the long term and with respect to training, ensuring resilient agriculture will necessitate a renewed focus on the quality and content of instructions in institutions of learning as they relate to resilient agriculture.

## Conclusion

- Resilient agriculture entails enabling ***resilient*** and ***sustainable intensification, combating land and water degradation*** and ***building climate smart agriculture***.
- To achieve resilient agriculture, ***special funding mechanism*** and ***formal*** and ***informal agricultural training*** programmes for present and prospective farmers especially ***women*** and ***youth*** are advocated.

The End

- Thank You!