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# Innovative PPP Model for Promoting Financial Deepening and Inclusion in the Rice Value Chain in Nigeria

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## Glossary

ATA - AGRICULTURAL TRANSFORMATION AGENDA

CRG - CREDIT RISK GUARANTEE

FAO - FOOD AND AGRICULTURE ORGANISATION

FMARD - FEDERAL MINISTRY OF AGRICULTURE & RURAL DEVELOPMENT

GES - GROWTH ENHANCEMENT SCHEME

GIZ - DEUTSCHE GESELLSCHAFT FÜR INTERNATIONALE ZUSAMMENARBEIT

IFAD - INTERNATIONAL FUND FOR AGRICULTURAL DEVELOPMENT

NIRSAL - NIGERIA INCENTIVE-BASED RISK SHARING SYSTEM FOR AGRICULTURAL LENDING

OECD - ORGANISATION FOR ECONOMIC COOPERATION DEVELOPMENT PPP –

PUBLIC - PRIVATE PARTNERSHIP

SMEs - SMALL AND MEDIUM SCALE ENTERPRISES

UNDP - UNITED NATIONS DEVELOPMENT PROGRAMME

WFP - WORLD FOOD PROGRAM

## **Abstract**

The goal of the proposal is to provide a practical and scalable innovative solution for improving access to customized financing for small holder farmers in the rice value chain towards sustainable poverty reduction in Nigeria.

This proposal examines the challenges of small holder farmers in the rice value chain in Nigeria. Some of the issues include inadequate Institutional frameworks and Agricultural policies; limited access to financing and lack of adequate storage facilities. Social issues related to gender particularly, the land tenure system make it even more difficult for women small holder farmers to acquire land for cultivation, hence inhibiting their ability to reach their full productive and income generating potential.

The proposal proffers the development of an Automated Warehousing Receipt System for improving access to customized financing for small holder farmers in rice value chain in Nigeria. It demonstrates this via an innovative PPP Model, the potential of private sector capabilities and public sector resources to improve small holder farmers' access to financing using movable assets such as inventory as collateral to secure loans and get better access to agricultural inputs.

For the implementation of our solution, a consortium is proposed with the government, private sector partners such as Agribusinesses and SMEs, Financial Institutions including Micro-Finance Institutions and Small Holder Farmers/Cooperatives. Factors for success of the solution include a clear understanding of roles and responsibilities, risk and benefit sharing while also mainstreaming efficiency enhancing IT innovations and Gender to ensure equal participation of men and women.

## **Explanation of problem and context**

With the reducing ability of Donors to devote sufficient funding to International development, new sources of development finance have been recommended by institutions such as the World Bank, The Leading Group on Innovative Finance for Development and the Organisation for Economic Co-operation and Development (OECD) to be explored to bridge the funding gap. These challenges provide opportunities for exploring innovative sources of finance for development and/or to make them more efficient. Innovative finance is truly vast as it comprises of innovations in the way funds are raised as well as innovations in the ways funds are spent on International development (UNDP 2012).

Recently, there has been a growing need to explore new mechanisms and incentives to address market failures and/or scale up ongoing development in Agriculture and Food Security in Africa. This is because the current global trend shows that with world population growth (particularly in developing countries), it is expected that the global demand for food will increase by 60% by 2050.<sup>1</sup> Meeting this challenge in Africa particularly sub-Saharan Africa is important because the continent is expected to experience the highest population growth but it has also experienced stagnated yields in recent years as well as negative impacts of climate change on agricultural productivity.

The recent drop in Global oil prices have caused a re-thinking for more sustainable restructuring to renewable energy and generating economic growth through non-oil sectors. Currently in Nigeria, significant efforts have been made to shift from a mono-product (oil) economy to a more diversified one that is sustainable and can also bridge the inequality gap in the society.

Particularly, the government has made significant investments in revamping the agricultural sector. This is based on recognition of the huge potential the sector can make in increased productivity, food security, job creation and poverty reduction for sustainable development in Nigeria. About 85 per cent of Nigeria's total land area is agricultural land (78.5 million hectares) out of which 39.5 million ha is arable. Of the arable land, only 60 per cent has so far been cultivated. Presently, only 13 per cent of the country's agricultural land is irrigated (Eluhaiwe, 2010). A major focus has been on improving rice production as Nigeria is one of the largest importers and a major consumer of rice with an annual spend of about \$2 billion on rice importation. The Government has set a target for Nigeria to become self-sufficient in rice by 2015.<sup>2</sup> To achieve this, various policies including The Agricultural Transformation Agenda and the Growth Enhancement Scheme have been established to improve the accessibility and affordability of agro-input support such as improved seeds and fertilizers for small holder farmers across the country. Additionally there have been notable efforts by the

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<sup>1</sup> FAO, IFAD and WFP: The State of food insecurity in the world (SOFI) 2012: Economic growth is necessary but not sufficient to accelerate reduction of hunger and malnutrition : <http://www.fao.org/publications/sofi/en>

<sup>2</sup> Federal Ministry of Agriculture, Rice Transformation Project Proposal

government to boost dry season farming activities in various parts of the country in a bid to improve rice and other crop production.

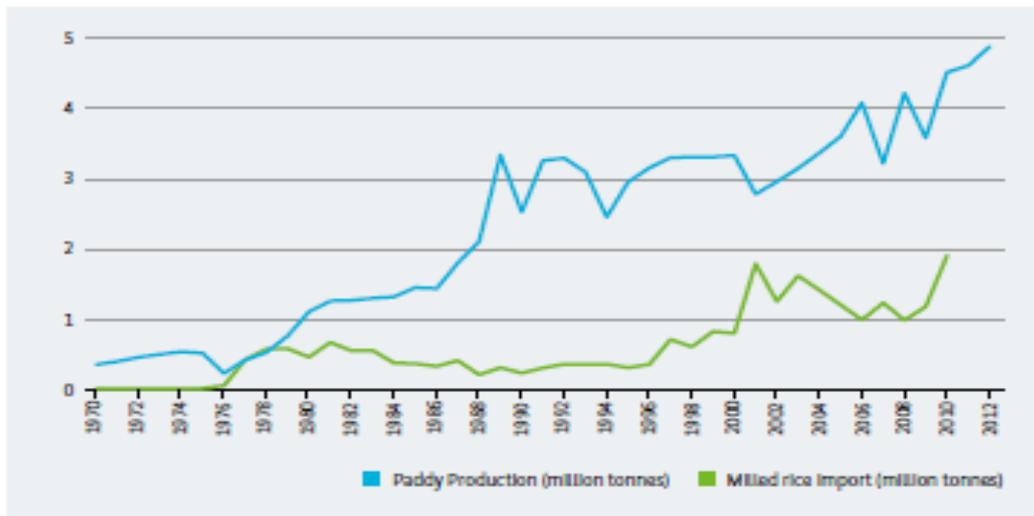
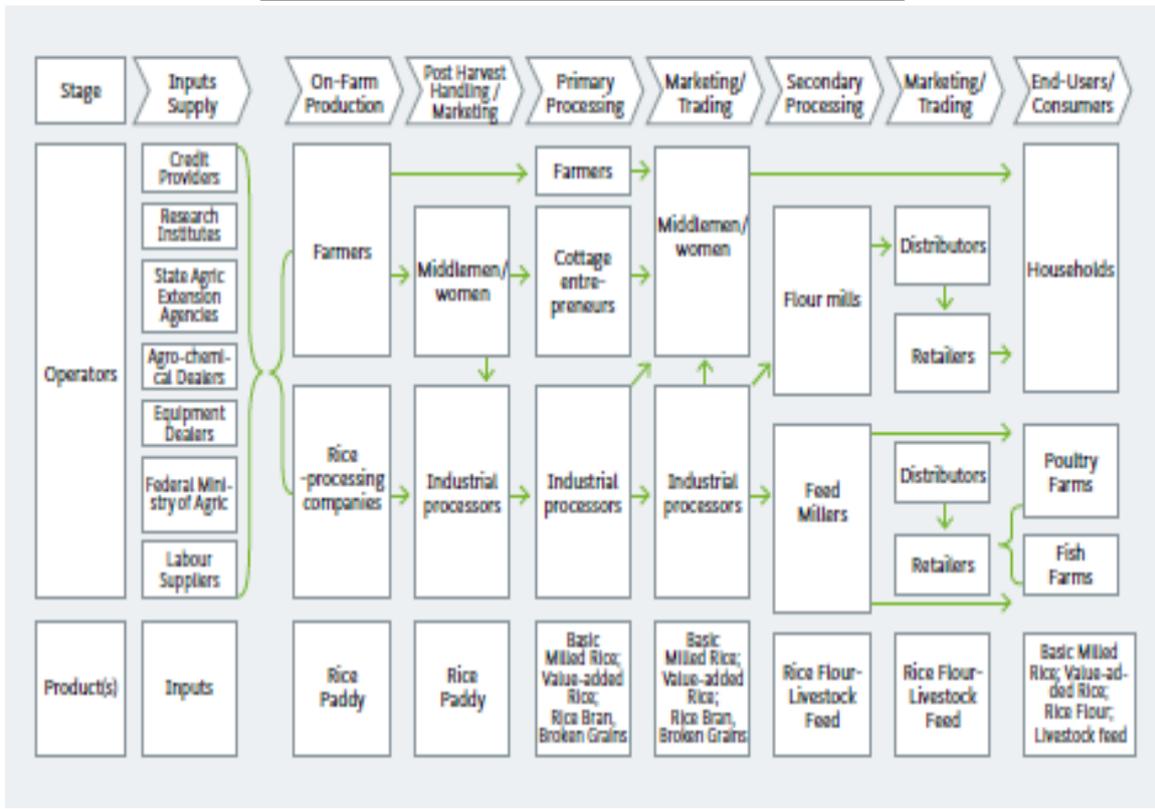


Figure 1 – Graph showing Rice Paddy Production and Milled Rice Import in Nigeria from 1970-2012  
Source FAOSTAT (2014)

Despite efforts by government, some issues such as Land Tenure System and access to finance still remain a major constraint to achieving self-sufficiency. This is because Nigeria’s land tenure system is not favourable to the poor, especially women who constitute more than 50% of small holder farmers. In many parts of Nigeria, women have no farm lands due to economic and social-cultural issues which pose a difficult challenge in achieving their optimal production capacity. In addition, most small holder farmers have limited fixed assets and rarely keep accounts in standard and comprehensive formats (much less audited formats) which are prerequisites to access current credit schemes initiated by the government. There is also the lack of legal and regulatory environments that encourage the use of movable assets (equipment, inventory, accounts receivable, etc.) as collateral.

**Figure 2 - The Nigerian Rice Value chain Map.**



Source GIZ (2014)

The Map (Figure 2) shows the operators and products at each stage of the value chain. It also indicates links between the operators across the stages. Basic milled rice and value-added rice are the two main final products of the rice value chain. The other products are rice flour and livestock feed.

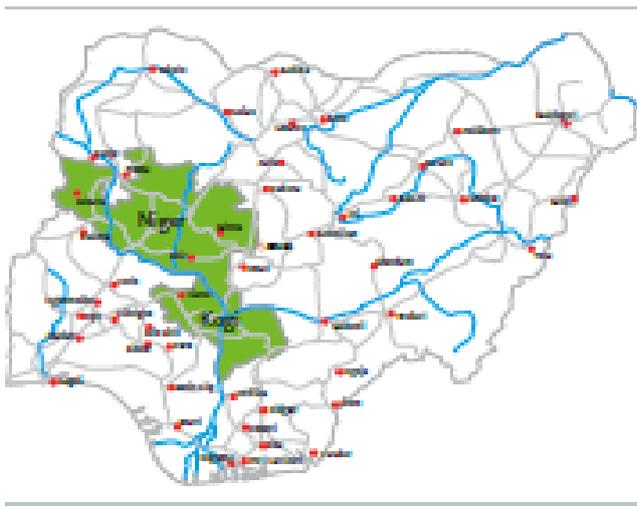


Figure 3 - Administrative map of Nigeria: Source GIZ (2014) Rice is cultivated throughout Nigeria, from the man-grove swamps of Niger Delta to the arid region near Lake Chad. Nevertheless, three States are crucial for rice cultivation: Nassarawa, Kogi and Niger. The

dominant rice systems in these areas are irrigated lowlands, rainfall low lands and rainfall uplands (Longtau 2013).

The pilot location for our solution is Nassarawa State. This is in line with the recent strategic efforts by the Federal Ministry of Agriculture and Rural Development to improve rice value chain. In July 2014, the Nigerian Government inaugurated Olam Nigeria's 105,000 metric tonne integrated rice processing mill in Nassarawa.<sup>3</sup> This is the largest Integrated Rice Mill in Africa.

### **Explanation of Solution**

#### Why is it relevant?

Our implementing solution is relevant as it focuses on increasing access to customized financial services and improves financial inclusion for small holder farmers and SMEs who have limited fixed assets to secure loans in a bid to improve their livelihoods and address poverty reduction. It promotes Public Private Partnerships (PPP) initiatives that can drive economic growth and sustainable development by providing much needed support towards enabling and empowering small producers. Additionally, it mainstreams gender to ensure marginalised populations especially women benefit equally from both opportunities in domestic markets and through globalisation towards sustainable poverty reduction.

#### What is new about it?

Our solution employs new mechanism for Innovative financing in Nigeria, using warehouse receipt financing that caters for the marginalised groups (small holder rice farmers and SMEs – rice processors) who do not have the capacity to access finance they need to ensure increasing sustainable yield or business growth. According to FAO (2009), “Warehouse receipt financing is especially interesting for rural small and medium enterprises, which are often unable to secure their borrowing requirements owing to lack of sufficient conventional loan collateral.”

It provides a sustainable PPP model that improves the efficiency and effectiveness of existing funding in Nigeria as well as via suggestive changes in policies and improvement in institutional frameworks which also has the potential of attracting new and reliable sources of financing. This is supported by the report<sup>4</sup> prepared by the Secretariat of the Post-2015 High Level Panel, which highlights “the pitfalls of trying to assess financing at the recipient country level from a “needs” approach, without also considering policy changes, institutional improvements, and other parts of the development strategy. Instead, financing must be understood as one component of a strategy that includes private sector efficiency and public sector productivity improvements”. Additionally it integrates Gender and Information Technology which enhance equity and efficiency considerations.

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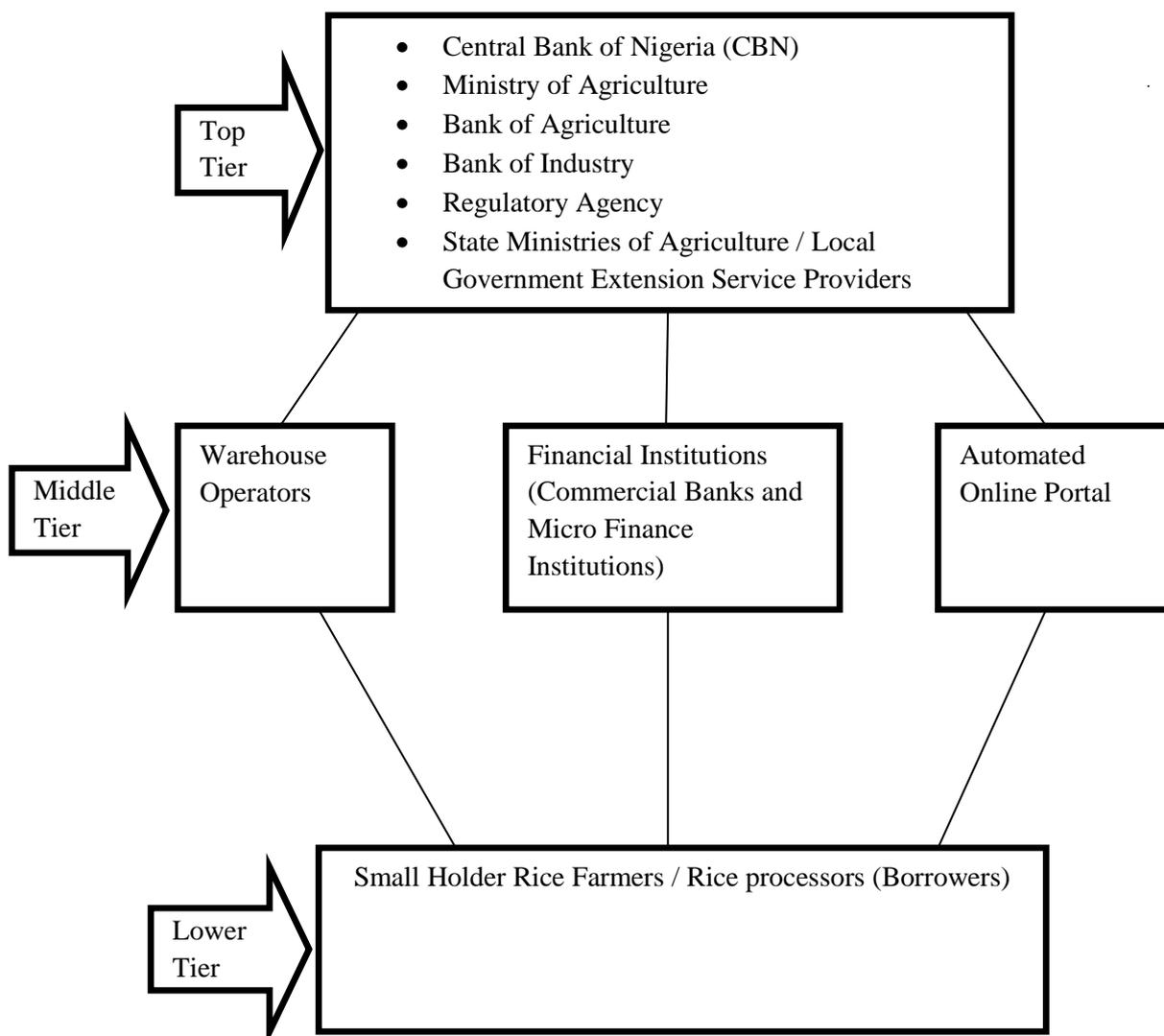
<sup>3</sup> FMARD (2014) [http://www.fmard.gov.ng/media\\_inside/PRESIDENT-JONATHAN-COMMISSION12](http://www.fmard.gov.ng/media_inside/PRESIDENT-JONATHAN-COMMISSION12)

<sup>4</sup> Background Paper for the Post-2015 HLP meeting in Bali, *Summary of Financing for Development*, March 2013.

By who, what, how and when would it be implemented?

For the implementation of our solution, a robust consortium is proposed with the government, private sector partners such as Agribusinesses and SMEs, Financial Institutions including Micro-Finance Institutions and Small Holder Farmer Cooperatives. This is in line with the model proposed in the definition by The Dutch Ministry of Foreign Affairs (MFA, 2010): “A form of cooperation between government and business (in many cases also involving NGOs, trade unions and/or knowledge institutions) in which they agree to work together to reach a common goal or carry out a specific task, jointly assuming the risks and responsibilities and sharing their resources and competences”.

**Figure 4: Governance structure for the Warehouse Receipt System**



The governance structure demonstrates the linkages between various stakeholders in our Innovative PPP Model.

### **Top tier**

The top tier comprises of government agencies such as the Central Bank of Nigeria (which will be instrumental in providing a credit guarantee scheme key to facilitating access to finance for small holder rice farmers and other players in the rice value chain), the Bank of Agriculture (BOA) specializing in agricultural finance and the yet to be established regulatory agency for the warehouse operators. ‘An Act to establish the Nigerian Independent Warehouse Regulatory Agency and Other Related Matters, 2013’ is in its second reading at Parliament (The National Assembly).

### **Middle tier**

The middle tier is made up of key private sector players – warehouse operators, financial institutions (MFIs and Commercial Banks) and private parties providing other infrastructure or services essential to the workings of the warehouse receipt system. The automated online portal is the monitoring platform and data base where critical information is stored and accessed for the smooth operation of the warehouse receipt system.

### **Lower tier**

Small holder rice farmers, processors (millers) and other players along the rice value chain constitute the lower tier of the governance structure.

Table 1: By who, what, how and when would the solution be implemented?

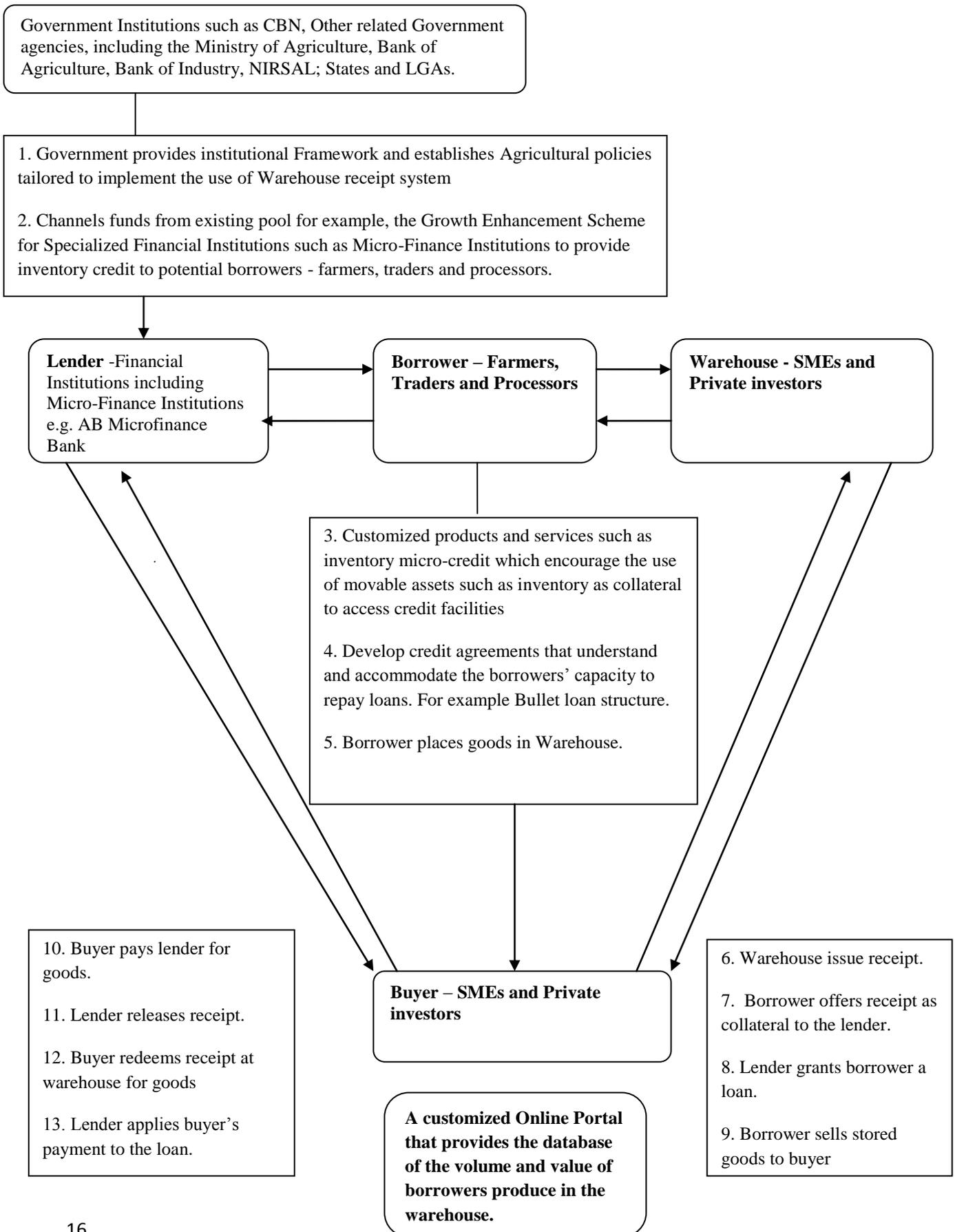
By Who?	What?	How?	When?
<p>Government Institutions such as Central Bank of Nigeria (CBN), Other related Government authorities, including the Ministry of Agriculture, Bank of Agriculture, Bank of Industry, NIRSAL. States and LGAs.</p>	<p>Establishing Legal and regulatory environment that encourages the use of movable asset (such as inventory) as a collateral to access finance.</p>	<p>Government provides institutional framework and establishes agricultural policies tailored to implement the use of warehouse receipt system. The Nigerian Independent Warehouse Regulatory Agency (Establishment) Bill is currently at second reading in Parliament (National Assembly).</p> <p>Government channels funds from existing pool e.g. Growth Enhancement Scheme, Youth Employment in Agriculture Programme (YEAP) &amp; Micro, Small and Medium Enterprises Development Fund (MSMEDF) to specialized financial institutions such as the Micro Finance Banks to provide inventory credit to potential borrowers e.g. farmers, traders and processors through a Credit Risk Guarantee Scheme; creating an enabling environment for financing agribusiness activities.</p> <p>The Credit Risk Guarantee Scheme will be provided by Nigeria Incentive Based Risk Sharing System for Agricultural Lending (NIRSAL), a non bank financial institution (NBFI) and an initiative of the Central Bank of Nigeria. The main goal of NIRSAL is to build confidence of banks to take up more risk in Agriculture. Its mandate is to facilitate the flow of credit to agribusinesses and collaborate with stake holders to make agricultural value chains (including the Rice Value Chain) in Nigeria more efficient. NIRSAL's Risk Sharing Fund<sup>5</sup> will create incentives and catalyze processes to encourage the growth of formal credit (direct or indirect) for Agricultural Value Chains. NIRSAL is dedicated to providing credit risk guarantees associated with agricultural business value chains. Lending can be secured against loss by purchasing a "Credit Risk Guarantee" product (CRG) from NIRSAL PLC over the life of an underlying loan or credit contract.</p>	<p>This will take place after a proper needs assessment and mapping of key actors in the Rice Value Chain in Nigeria.</p>

<sup>5</sup> NIRSAL Seed fund of N75bn (Seventy five billion naira) is to be used to operate its five pillars namely; Risk sharing, Technical Assistance, Insurance, Bank Rating and Incentives. Stakeholders such as the Federal MDAs, State and 3<sup>rd</sup> Parties (domestic and foreign, government and private) can co-invest in the Fund.

<b>By Who?</b>	<b>What?</b>	<b>How?</b>	<b>When?</b>
Financial Institutions(Government and Non-Government)	<p>Providing Soft loans to Agribusinesses and Small holder farmers/Cooperatives.</p> <p>Providing capacity building trainings to improve financial and credit management of clients.</p>	<p>Through the intervention of Micro-Finance Institutions such as AB Micro Finance Bank who provide customized products and services like inventory micro-credit which encourage the use of movable assets such as inventory as collateral to access credit facilities financial services.</p> <p>Develop credit agreements that understand and accommodate the borrowers' capacity to repay loans. For example, bullet loan structure.</p> <p>Groups will be trained on financial literacy, financial management and skills development packages for entrepreneurship and agricultural productivity. Capacity building support to the State and Local Government staff should focus on training related to group formation and management, data collection and reporting, rural business plans and innovative group based delivery models such as bullet loan structures.</p>	<p>This will take place after the Institutional/Implementation Framework has been developed by the Government as a result of the findings of the needs assessment.</p>
Private Sector Players	<p>Develop the business strategy for the workability of the warehouse receipt system as well as necessary business infrastructure for its implementation</p>	<p>Through developing a business case and exploration of possible funding.</p> <p>The business case will be backed up by the market opportunity that exists for warehousing facilities for agricultural storage in Nigeria. Apart from providing the necessary platform for the operation of the warehouse receipt system, warehousing could also significantly reduce post harvest losses and wastage of agricultural produce estimated at about 40% of total production in Nigeria.</p>	<p>This will take place after the Institutional/Implementation Framework has been developed by the Government as a result of the findings of the needs assessment.</p>
Small Holder Farmers/ Cooperatives, Traders and Processors	<p>1. Organising themselves into established groups with aligned commercial and development objectives.</p>	<p>1. Through the formation of cooperatives and farmer groups. Specifically, the formation of organized groups of producers/processors, with attention to women/youth groups. There will also be clear eligibility criteria to select groups and organizations which include among others, the size of the land of group members and the processing capacity of small-scale processors of rice. Good governance, social inclusion and participation will be considered as criteria for selecting participating organizations where the solution will be implemented. In addition, other attributes of the farmers groups will be investigated including sources of funding,</p>	<p>1. Some of these groups are already established but have very limited access to financial products and services tailored to meet their unique needs.</p> <p>When the funds are released based on signed credit agreements with the lenders.</p>

By Who?	What?	.How?	When?
<p>Small Holder Farmers/ Cooperatives, Traders and Processors (Contd.)</p>	<p>2. Linking up with reputable MFIs with capacity to support them to access finance using inventory as collateral</p> <p>3. Producing quality and competitively priced agricultural commodities (Rice) that can be used as collateral to access loans and acquire better agri-inputs and services to improve production.</p>	<p>levels of income as well as types of assistance received in the past. The current levels of the operations of these groups with regard to these attributes as well as other findings will help make recommendations on the possible types of intervention to build institutional capacity based on specific needs assessment, incentivizing the participation of youth groups, encouraging the mobilization of women groups and the delivery of technical assistance through organized grassroots NGOs and CBOs for effective participation of the more relevant farmer groups in the rice value chains.</p> <p>2. These cooperatives will start off as savings and loans associations and after cycles of demonstrated borrowing and loan repayments, go on to open cooperative and small group accounts with MFIs such as GUFAX Bank (with a strong track record in small scale agricultural lending) that could possibly participate as lenders under the proposed inventory credit scheme.</p> <p>3. Employing Modern farming techniques and practises. These cooperatives will receive Pre-Season, In-season and Post-harvest training in a bid to strengthening them to increase productivity of quality agricultural commodities which can be used to access finance to generate more income. The training programs will include farm site selection, land preparation, sowing/transplanting/broadcasting, fertilizer application, weeding, pesticide application and harvesting. Demonstration plots will be established and Extension Agents will provide practical farm demonstrations using modern farming techniques and practises.</p>	<p>3. When the cooperatives have been organised and need assessment conducted.</p>

**Figure 5: PROPOSED MODEL FOR IDEAS FOR ACTION COMPETITION**



## The Customized Online Portal for the Warehouse Receipt System

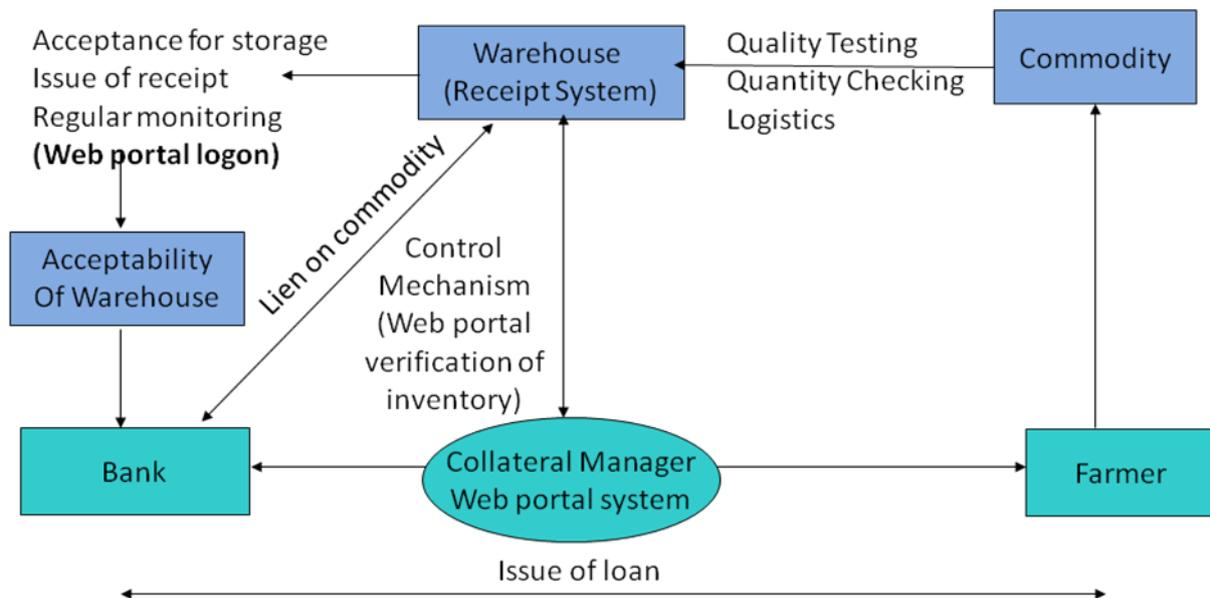
The web portal system will be designed with flexibility to address the time for performing on the spot checks by bank/lender in assessing the borrower for a loan facility.

The lender will be provided with a logon credentials to access the portal and verify the warehouse receipt information as well as quality of the commodity stored in the warehouse.

### Methodology of the Receipt System and Portal

- The Commodity deposited by the farmer will be checked against a list of standards/requirements to meet quality testing at an accredited warehouse.
- This will be logged on the portal at the time of storage by the warehouse manager. Examples of quality data to capture will include: rice variety, harvesting date, grade, weight etc. Other non-quality parameters include location, monetary value of the rice based on its prevailing price, date of storage and number of bags.
- The warehouse receipt issued to the farmer will be captured and uploaded on the web portal, to enhance physical verification and authenticity by lender/buyer.

Figure 6 – Online Portal System Mapping Illustration



What is the expected impact?

The provision of a practical and scalable new mechanism for improving access to tailor-made micro-credit services for small holder rice farmers, traders and processors as well as related SMEs in Nigeria for financing in addition to inputs supplies and other investment initiatives to improve their livelihoods.

Additionally, our proposed solution has definite potential to open up access to remunerative markets, enhance liquidity in the Nigerian rice value chain and reduce post harvest losses of small holder rice farmers.

**Are there similar examples that can be provided? If so, where and how? Please elaborate**

Warehouse receipt finance is used widely in Africa, from Egypt to Zambia, from Liberia to the Sudan, in all parts of the supply chain, for commodities and for manufactured products. In Tanzania, for example, after the warehouse receipt system was introduced, farm gate prices increased leading to an immediate and positive impact on farmers' income. It enabled farmers to improve the quality and increase the quantity of their produce and access financial services and loans. Generally, warehouse receipt finance is based on field warehouses, mostly at ports (for international trade) but also inland. Financiers are local, regional and international banks, and clients include local, regional and international traders, cooperatives, processors, distributors and manufacturers. Both local and international collateral management companies are active. Apart from rice, warehouse receipt finance has been successfully implemented with wide-ranging commodities/products such as: cocoa, coffee, sesame seeds, tea, fish, logs and timber, petroleum products and vegetable oil.

**Table 2: What are the challenges you might confront and how might they be addressed?**

<b>Challenge</b>	<b>Mitigation measure</b>
Inconsistency in policy formulation	The Nigerian government has to a large extent followed through on key policies. In the event of a drastic policy shift/change, civil society organizations could raise the necessary awareness and put pressure on the government to ‘stay the course’.
Government bureaucracy	The main government institutions involved in our model have proven over time to be more efficient at project implementation and delivering on their objectives when compared with other departments and agencies of government. Development partners with keen interest in the rice value chain could also help facilitate timely implementation using their leverage with government.
Non-acceptance of the solution by financial institutions	The proposed credit guarantee scheme in our model should allay the fears of participating financial institutions on the potential for default. Additionally, Government policy will also help ensure compliance.
Cost of funds	Our model proposes soft loans which will offer flexible terms of payment at below commercial/market rates affordable to small holder farmers.
Security of warehoused commodities/products	This can be mitigated by the engagement of seasoned/experienced warehouse practitioners with a strong track record in providing warehousing services/facilities such as Africa Exchange Holdings (AFEX) already in talks with the Nigerian Government on establishing warehouses across the country. Warehouses will also be insured by reputable insurance companies.

<b>Challenge</b>	<b>Mitigation Measure</b>
Default risk by small scale farmer cooperatives	Cooperatives in themselves going by their structure create checks and balances to reduce/prevent the occurrence of outright defaults but in case of that eventuality, the credit guarantee scheme reduces the risk of exposure of lenders. Lenders will also build the capacity of the cooperatives on proper financial and credit management to address this risk.
Engaging a reputable company to develop and manage the WRS portal	Ensuring due diligence is carried out during selection of the company. When selected, a stringent contract will be signed with clear roles, responsibilities and sanctions in carrying out task.
Sluggish system with possible time out issues due to low bandwidth to accommodate high traffic.	Provision of large bandwidth to accommodate high traffic on the portal.
System hacking	Back-end access to portal will be restricted a trusted Web developer. Constant update of state of the art firewalls and security will be employed.

## **Gender Mainstreaming Strategy**

Since women constitute over 50% of small holder rice farmers in Nigeria and constrained by aforementioned issues such as the land tenure system, lack of collateral and its attendant lack of access to capital, we will adopt The Gender Action Learning System (GALS), a community-led empowerment methodology that brings women and men together, used for individual life and livelihood planning; collective action and gender advocacy for change and institutional awareness raising and changing power relationships with service providers, private sector stakeholders and government bodies.

GALS consists of:

1. A set of principles related to gender justice, participation and leadership;
2. A series of visual diagramming tools that are used for visioning, analysis, change planning and tracking by individuals, households, stakeholder groups or in multi-stakeholder settings
3. Peer learning mechanisms and structures for ongoing action learning in communities
4. Mechanisms to sustainably integrate GALS in organizations or interventions such as financial services, business development services and agricultural extension

GALS is designed as a complementary methodology and can be integrated in various economic development interventions. In the context of value chain development, the starting point of GALS is: (1) Developing gender action learning skills of vulnerable stakeholder groups in the value chain, to enable them to identify and implement sustainable strategies to increase incomes, resources, economic choices and negotiation power. (2) Engaging skills, energies and resources of more powerful private sector and institutional stakeholders in the value chain to change gender inequalities, based on a clear human rights and business case, through promoting collaboration and negotiation of win-win strategies.

The GALS process starts with creating community ownership and action priorities for gender justice in entry point events with community members and the professional staff of local service providers. The methodology then takes participants through four stages, all of which are participatory and depend on the use of visual, rather than written, material to work with. This makes it ideal for inclusive and effective joint analysis and planning by non-literate (together with literate) participants.

- Stage 1: Preliminary value chain mapping of gender issues and power relations.
- Stage 2: Participatory action research with vulnerable stakeholder groups to identify the poverty and gender issues at each level, identify and implement immediate short term change strategies and strengthen collaboration and peer sharing.
- Stage 3: The identification, planning and negotiation of multi-stakeholder win-win strategies. At this stage the more powerful stakeholders are involved.
- Stage 4: The promotion of sustainable action learning process including peer up-scaling, policy advocacy, and ongoing change planning in existing platforms.

GALS has proved its effectiveness for creating beneficial collaborations between marginalized communities and businesses, service providers, government agencies and traditional authorities, and changing gender relations including property rights, decision making and violence. It has been piloted and/or implemented in more than 11 countries in Africa, Asia and Latin America.

### **Impact Measurement/Monitoring and Evaluation**

Impact measurement of our PPP intervention through the warehouse receipt system to facilitate access to finance for small holder rice farmers and other players in the rice value chain in Nigeria by means of inventory credit will be done based on a scientific and proven approach using propensity score matching. This statistical method matches individuals from a large population of non-participants, who are observationally similar, with participants in terms of general characteristics (e.g. sex, level of education, marital status) not affected by the intervention (i.e. inventory credit facility). Each target group member is matched with a similar control group member. The average difference in outcomes between the two groups is then compared to get the impact of the intervention (e.g. microfinance). Research factors of interest will include incomes, living standards, economic empowerment and food security.

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