



Food and Agriculture  
Organization of the  
United Nations



**The International Treaty**  
ON PLANT GENETIC RESOURCES  
FOR FOOD AND AGRICULTURE

**Views, Experiences and Best Practices as an example of possible options for  
the national implementation of Article 9 of the International Treaty**

*Note by the Secretary*

*At its [second meeting](#) of the Ad hoc Technical Expert Group on Farmers' Rights (AHTEG), the Expert Group agreed on a revised version of the [template](#) for collecting information on examples of national measures, best practices and lessons learned from the realization of Farmers' Rights*

*This document presents the updated information on best practices and measures of implementing Article 9 of the International Treaty submitted by AfricaRice on 23 July 2019.*

*The submission is presented in the form and language in which it was received.*

## Africa Rice

### Basic information

**Title of measure/practice:** Applying an innovation-system approach in rice value-chain analysis and development for competitive markets in Nigeria; Involving farmers as partners in research and development projects; and documenting efforts made by the Centers and partners to promote farmers' rights in the countries concerned, and sharing them to help inform farmers' rights-related policy development

**Date of submission:** July 2019

**Name(s) of country/countries in which the measure/practice is taking place:** Nigeria

**Responsible institution/organization (name, address, website (if applicable), e-mail address, telephone number(s) and contact person):**

Africa Rice Center, Sali A. Ndindeng, [S.Ndindeng@cgiar.org](mailto:S.Ndindeng@cgiar.org), +22588331222

**Type of institution/organization (categories):** CGIAR

**Collaborating/supporting institutions/organizations/actors, if applicable (name, address, website (if applicable), e-mail address, telephone number(s)):**

NCRI, Bakare Oladele, [oladelebakare@yahoo.co.uk](mailto:oladelebakare@yahoo.co.uk)

### Mandatory information:

**Short summary to be put in the inventory (max. 200 words) including:**

The Federal Government of Nigeria has put in place policies to reduce rice imports and increase domestic production. To be successful, this policy must be accompanied by investments in the local rice sector, including through research and innovation. Main objectives of the current research are to increase the productivity and competitiveness of the rice value chain in Nigeria through implementation of an innovation systems model. AfricaRice and its national partners have started implementing the rice value chain development component in the Middle Rima Valley Irrigation Scheme (MRVIS) in Goronyo, Sokoto State of Nigeria, since 2018. Key components include creating linkages between rice value-chain actors; understanding strengths, weaknesses, opportunities and threats of the rice economy in MRVIS; identification of 1-2 high-yielding, processor- and consumer-preferred rice varieties; and installation of a rice-processing facility for the Goronyo Rice Innovation Platform (GRIP) that will help develop quality products and services for the market. Expected outcomes include increased productivity and quality of paddy rice in the target area and training of youth groups to become part of the innovation platform by providing services around the use of innovative technologies. Furthermore, rice husks will be used as fuel for household cooking.

**Implementing entity and partners:** Africa Rice Center

**Start year** 2018

**Objective(s):**

- Increase paddy yield and quality through the adoption of improved seeds, good crop management practices and small farm machineries,

- Improve efficiency and synergy along the value-chain for sustainable agro-business development,
- Improve quality of locally milled rice through simple, adoptable, gender friendly post-harvest technology to enhanced competitiveness,
- Create an image for rice produce in Nigeria with attractive packaging, branding and labelling to boost large sale in urban and niche markets.
- Increase utilization of rice by-products for the improvement of impoverished soils and thermal energy generation.

### **Summary of core components**

#### **Component 1: Innovation Platform Approach.**

- Value chain analysis (SWOT)
- Analysis roles of actors and linkages between actors
- Analysis of existing infrastructure
- Determination of production constraints and costs
- Determine the willingness of actors to organize into an innovation platform
- Facilitate the creation of an innovation platform with specific entry points
- Develop linkages between actors through contractual arrangements

#### **Component 2: Production and productivity**

- Facilitate the acquisition of ICT-based tools to improve fertilizer application and soil fertility management
- Training of extension agents and farmers on the use of ICT-based tools to manage soil fertility.
- Training of extension agents on Good Agricultural Practices (GAP)

#### **Component 3: Post-harvest processing and marketing**

- Facilitate the acquisition and installation of modern post-harvest equipment.
- Training of extension agents and processors on the production of quality parboiled rice.
- Facilitate the design and production of attractive packages for urban markets

#### **Component 4: Rice by-product utilization.**

- Facilitate the acquisition and installation of husk utilization technologies for household cooking.
- Training of extension agents and women on the use of rice husk for household cooking.

#### **Component 5: Value-chain research, studentship and project management**

- Training of students on value-chain analysis and fixing
- Study the effect of technologies/tools on yield, grain quality and loss reduction.
- Analyze the major determine of rice prices in the market through experimental auction and laboratory analysis
- Monitor project implementation based on performance indicators.
- Measure outcome changes at the level of actors.

### **Key outcomes**

- Increased productivity of rice value chain in the Sokoto-Rima River Basin
- Paddy yield and quality improved in the target area
- Trained youth groups who are part of the IP can effectively provide services using RiceAdvice, ASI-thresher, GEM parboiler and rice mill.
- Trained processors with at least 50% being women and youth are using technologies and innovations to produce high quality milled rice
- Households within the vicinity of rice processing area are using husk as fuel for household cooking.

### **Lessons learned (if applicable)**

- Heterogeneity in the quality of milled rice from site to site due to heterogeneity in the quality of paddy. There are still big issues as to how processors link with growers to source quality paddy.
- Heterogeneity in the quality of locally fabricated equipment (Threshers, Paddy cleaners, Dryers, Rice graders etc..) between countries due to absence of agreed standards and norms.
- Low (adoption) rate of mechanical equipment due to financial constraints associated with smallholder farmers. Innovative service provision models such as those observed for parboiling and milling need to be tested for other equipment.

**Brief history (including starting year), as appropriate**

Sub-optimal production and processing practices are major reasons for the low production and quality of rice in SSA. Rice with a high proportion of impurities, chalky, and/or diseased grains and a low proportion of whole grains is not preferred and records a low market value especially in urban centres (Demont, 2013; Ndindeng et al., 2015; Demont et al., 2017). Consequently, imported rice has gained grounds in markets in urban cities in SSA especially those close to the port (Demont and Ndour, 2015). SSA imports 13 million tons of milled rice annually costing about \$6 billion. Total demand for rice in Nigeria is put at about 5 million metric tons (MT) a year of which about 3.7 million MT is produced locally (IRRI, 2016) while the rest is imported. This trend threatens food and nutrition security and renders rice production in the country unsustainable due to the loss in foreign exchange earnings and low investments in the local rice sector.

Recently, the Federal Government of Nigeria has put in place policies to reduce the importation. However, these policies must be accompanied by investments in the local rice sector. The goal of the current research is to increase the productivity and competitiveness of the rice value-chain in Nigeria through the validation of an innovation systems model that creates and strengthens linkages between stakeholders, improves access to agricultural inputs, technologies and services and reduces barriers that hinder smallholder farmer and processor's access to urban markets.

Within the framework of national policy for sustainable agricultural production for food and nutrition security, the Federal Government with funding from World Bank is implementing the TRIMING project with a Project Development Objective of improving access to irrigation and drainage services and strengthening institutional arrangements for integrated water resources management and agriculture service delivery in selected large-scale public schemes in Northern Nigeria. AfricaRice and its national partners are implementing the rice value chain development component. The work aims at creating linkages between rice value chain stakeholders in the Middle Rima Valley Irrigation Scheme (MRVIS) in Goronyo, Sokoto State Nigeria, understanding the Strengths, Weakness, Opportunities and Threats of rice economy in MRVIS, and progress toward identification of 1-2 high yielding, processor and consumer preferred rice varieties for MRVIS and the installation of the rice processing facility for the Goronyo Rice Innovation Platform (GRIP) that will help develop quality products and services for the market.

**Core components of the measure/practice (max 200 words):** See above

**Description of the context and the history of the measure/practice is taking place (political, legal and economic framework conditions for the measure/practice) (max 200 words)** See above

**To which provision(s) of Article 9 of the International Treaty does this measure relate**

- Art. 9.1   
 Art. 9.2a +  
 Art. 9.2b   
 Art. 9.2c   
 Art. 9.3

**Other information, if applicable**

**Please indicate which category of the Inventory is most relevant for the proposed measure, and which other categories are also relevant (if any):**

No.	Category	Most relevant	Also relevant
1	Recognition of local and indigenous communities', farmers' contributions to conservation and sustainable use of PGRFA, such as awards and recognition of custodian/guardian farmers		
2	Financial contributions to support farmers conservation and sustainable use of PGRFA such as contributions to benefit-sharing funds		
3	Approaches to encourage income-generating activities to support farmers' conservation and sustainable use of PGRFA		x
4	Catalogues, registries and other forms of documentation of PGRFA and protection of traditional knowledge		
5	In-situ/on-farm conservation and management of PGRFA, such as social and cultural measures, community biodiversity management and conservation sites		
6	Facilitation of farmers' access to a diversity of PGRFA through community seed banks <sup>1</sup> , seed networks and other measures improving farmers' choices of a wider diversity of PGRFA.	x	
7	Participatory approaches to research on PGRFA, including characterization and evaluation, participatory plant breeding and variety selection		
8	Farmers' participation in decision-making at local, national and sub-regional, regional and international levels		x
9	Training, capacity development and public awareness creation		x
10	Legal measures for the implementation of Farmers' Rights, such as legislative measures related to PGRFA.		
11	Other measures / practices		

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<sup>1</sup> Including seed houses.