

## SUMMARY

Rice is a priority food crop in Rwanda. With an average productivity of 5.8 t/Ha, rice is grown over 12,400 Ha of marshlands in two seasons. Although there has been a rapid rise in rice production in the past decade, the country has not yet achieved self sufficiency. Rwanda annually imports an average of 26,736 t of milled rice. Furthermore, the quality of locally produced rice lags behind that of imported rice. Thus Rwanda's rice sector is confronted with how to sustainably raise both the production and quality of locally grown rice to meet the consumer demands.

Coalition for African Rice Development (CARD) is an initiative of AGRA, spearheaded by JICA that aims to double rice production in Sub Saharan Africa. Rwanda joined the second group of countries under the CARD initiative in May 2010, and has since developed its National Rice Development Strategies (NRDS).

Rwanda's NRDS is aligned with the government's Vision 2020 which through its economic development and poverty reduction strategies (EDPRS), aspires to transform the subsistence nature of farming into market oriented agriculture.

The four key strategic axes of NRDS viz., (i) expansion of area under rice cultivation, (ii) increasing productivity to 7 t/Ha, (iii) improving the quality and competitiveness of rice by establishing linkages with market, and (iv) capacity building of institutions and stakeholders along the rice value chain are in accordance with the government's Program for Sustainable Transformation through Agriculture (PSTA II) which is deemed as the vehicle for investments in Rwanda's Comprehensive Africa Agriculture Development Program (CAADP).

CARD has organized two working weeks for Rwanda's NRDS taskforce to identify the needs (demands) of the rice sector through a sub sector intervention element matrix approach. After matching the needs with the resources (on-going and pipeline programs/projects), the taskforce has prioritized those sub sector interventions that require immediate attention from the stakeholders through the next cycle of funding. Here the taskforce presents 16 concept notes on such priorities for consideration by the stakeholders.

## Estimated Budget (USD) of Concept Notes:

Sl. No	Project Title	Estimated Budget (USD)	Percentage of Total
1	Encouraging private sector in rice seed production and distribution in Rwanda	350,000	0.45
2	Institutional Support for improving quality and competitiveness of rice in Rwanda	1,750,000	2.26
3	Infrastructure development for rice improvement in Rwanda	950,000	1.23
4	Capacity building for testing the purities of seeds produced in Rwanda	900,000	1.16
5	Stimulation of procurement and distribution of fertilizers in rice growing areas	1,520,000	1.96
6	Validation and site-specific recommendations of fertilizer use in rice schemes	940,000	1.21
7	Rehabilitation and Maintenance of reclaimed marshlands in Rwanda	9,000,000	11.63
8	Reclamation of marshlands to increase rice cultivation in Rwanda	49,000,000	63.30
9	Empowering rice growers on water sharing and integrated soil and water management in marshlands	1,650,000	2.13
10	Capacity building for improving soil and water management for sustainable rice production in marshlands	1,150,000	1.49
11	Promoting public-private partnerships in extension services in rice growing areas in Rwanda	550,000	0.71
12	Monitoring and Evaluation of the effectiveness of extension service systems	510,000	0.66
13	Capacity building of rice extension services in Rwanda	700,000	0.90
14	Regular and periodical training of rice growers through Farmer Field School and other approaches	3,600,000	4.65
15	Improve quality of locally produced rice through training and provision of post harvest management technologies in Rwanda	4,700,000	6.07
16	Capacity Building of milling, grading and quality testing standards	134,000	0.45
	Total	77,404,000	

12. Put in place an effective monitoring and evaluation system of assessing the quality of information/technologies, their impact and effectiveness of delivery of extension services in rice growing areas
13. Capacity building of technical and extension staff and other service providers in rice growing areas on cultivation techniques, integrated pest- and disease management, machineries, post harvest handling and storage, processing and marketing aspects through in-country and overseas training programs
14. Capacity building of rice extension services through scheduled training on production, evaluation of new techniques, soil and water management, integrated pest management, mechanization, post harvest handling and storage, quality, market information, and credit schemes through training modules such as FFS and other approaches

#### **Quality Improvement**

15. Train the farmers, traders and processors on improved practices of harvesting and post harvest and storage processes in order to improve the quality of milled rice grains and by-products
16. Build and enable capacity to monitor and inspect standards, procedures and hygiene of rice milling facilities and grading practices of milled rice by millers, wholesalers, traders and retailers by placing adequate numbers of supervisors

**Coalition for African Rice Development (CARD)** is a consultative group of development partners and research institutions. It is spearheaded by JICA, NEPAD, AGRA, AfricaRice, AfDB, FAO, IFAD, IRRI, JIRCAS and World Bank

**Goal & approach :** *double rice production* in Sub-Saharan Africa (14 to 28 million tons) in 10 years through addressing the issues of

- (i) the whole rice value chain approach,
- (ii) the salient rice-growing agro-ecological zones,
- (iii) capacity building and
- (iv) South-south cooperation

#### **Objectives:**

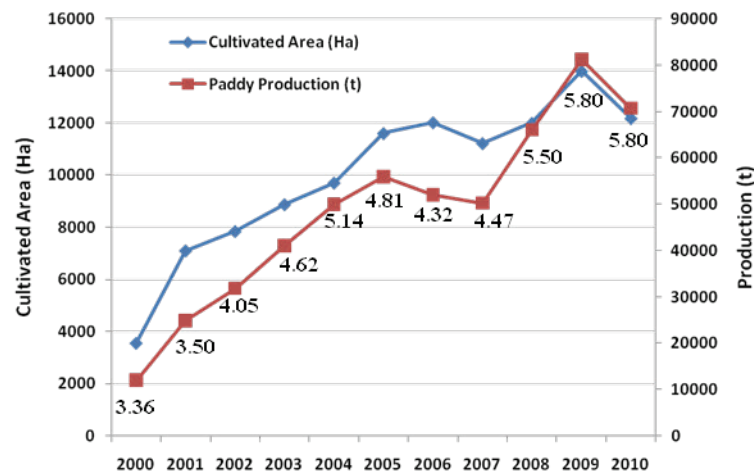
- rationalize and increase investment
- develop capacities of governments to secure government funding/donor investment,
- provide enabling environment for rice-related investments and
- coordinate interventions through NRDS

The 23 African countries are currently members of CARD are clustered in two groups;

**Group 1:** Cameroon, Ghana, Guinea Conakry, Kenya, Madagascar, Mali, Mozambique, Senegal, Sierra Leone, Tanzania and Uganda

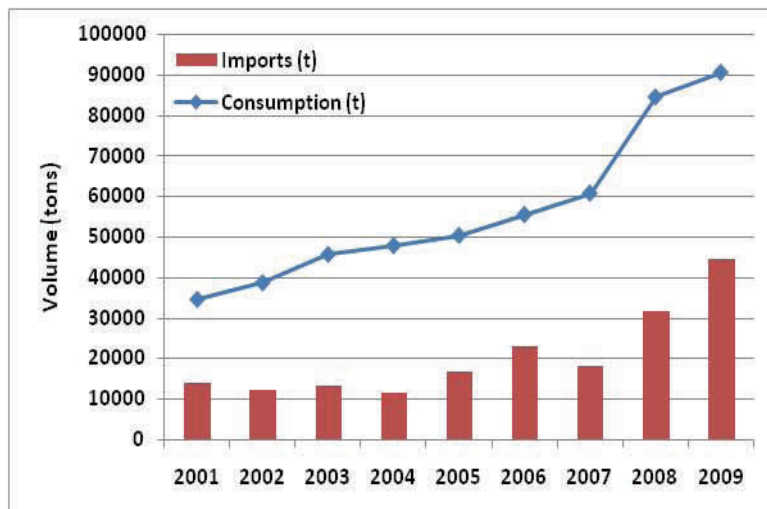
**Group 2:** Benin, Burkina Faso, Central African Republic, Ivory Coast, DRC, Ethiopia, Gambia, Liberia, **Rwanda**, Togo and Zambia

## Trends in rice production in Rwanda:



\* Productivity figures (t/Ha) are shown inside the plot area

## Gaps between demand and production (volume and quality)



6. Validate, identify the deficiency of soil micronutrients in marshlands, and establish site-specific recommendations of fertilizers in marshlands

### Irrigation/Water Management

7. Survey and identify marshlands that require rehabilitation of irrigation and water management structures, and rehabilitate the marshlands and put in place mechanisms (cost, responsibility and monitoring) of regular and periodical maintenance of irrigation structures that will enable cultivation of two rice crops a year
8. Identify potential valleys and inland swamps suitable for rice production, reclaim and develop marshlands for expanding area under rice cultivation
9. Training of irrigation WUA members, agronomists, supervisors, administrators of marshland irrigation systems on (i) water requirements of rice crop, (ii) soil and water management, (iii) soil and water conservation techniques, (iv) maintenance of irrigation structures, (v) management of revenues, (vi) management of water user associations and (vii) regulatory laws related to water usage in the marshlands
10. Build human capacity in reclamation and management of marshlands through recruitment of soil technicians, agronomists to create awareness of improved soil and water management practices and facilitate sustainability of marshland ecosystems for continued rice production

### On-farm technology dissemination (Extension)

11. Improve the efficiency and professionalism of extension and delivery systems of appropriate technologies by strengthening the capacity of services and skills of extension personnel of private sector across the entire rice value chain through public-private partnerships

**List of proposed Concept Note titles on the prioritized intervention areas**

**Seed**

1. Promote participation of private (national and international) companies, entrepreneurs and cooperatives in producing and marketing foundation and certified seeds of all released rice varieties in the country
2. Promote rice types that will meet the consumer demand/preference (by gradually displacing short- and bold with long and grain) and improve the competitiveness and performance of local rice varieties by integrating quality attributes such as aroma, cooking quality, short duration (4 months), disease resistance, cold tolerance, drought tolerance, and higher yields
3. Establish glass houses, screen houses and equipments that will enable (i) screening of varieties for pest- and disease resistance, and (ii) breeding for new and improved rice cultivars in Rwanda using local and international germplasm
4. Establish laboratories and equipments that will allow testing of the quality of basic, foundation and certified rice seeds from the seed producers

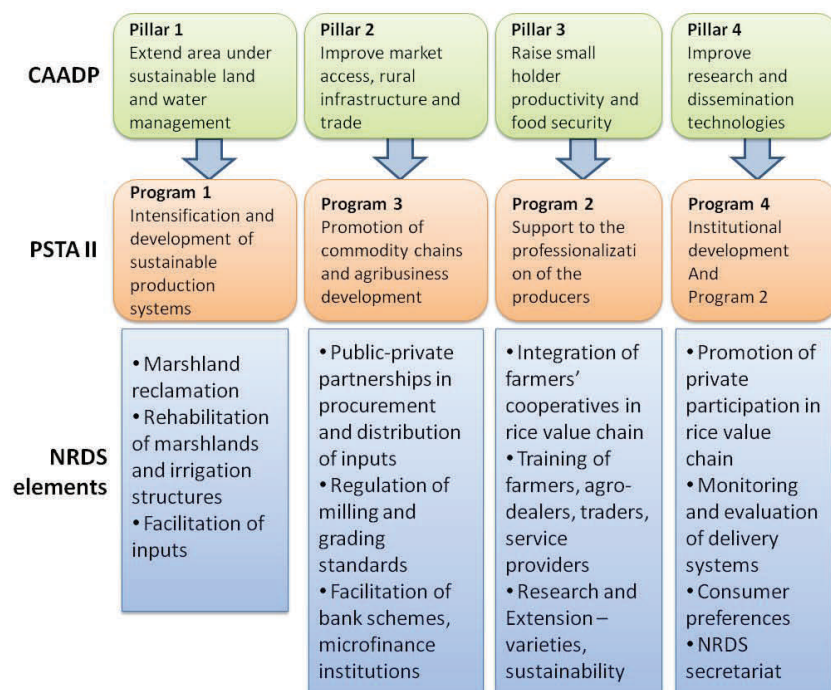
**Fertilizers**

5. Fertilizers Facilitate procurement and distribution of adequate quantities of recommended inorganic fertilizers such as NPK, Urea and others to farmers in a timely fashion, and encourage use of fertilizers in rice production systems through private sector participation

**The proposed interventions under the various sub sectors across the rice value chain:**

Sub-Sectors	Strategic elements set forth in NRDS
A. Seed	Varietal improvement, maintenance of rice cultivars, and access to adequate certified rice seed to satisfy national demand
B. Fertilizer	Public and private sector participation in procurement and distribution, Validation of site specific fertilizer applications
C. Irrigation and water management	Expansion of cultivable area through establishment of irrigation structures, marshland reclamation, marshland rehabilitation and sensitization of irrigation water user associations in marshlands
D. Extension (on-farm technology dissemination)	Public-private partnerships in service provision, dissemination of improved soil, water and crop management technologies, and promotion of farmer-to-farmer dissemination of improved practices
E. Mechanization	Service provisions in land preparation and threshing activities. Public-private partnerships in increasing access to machineries, implements and storage activities
F. Quality improvement	Minimize the losses in production and quality through improved harvest and post-harvest handling technologies, and raise the standards of milling through knowledge creation and capacity building
G. Access to Market	Facilitate mechanisms for improving the marketing and trading of harvested paddy grains in marshlands
H. Access to Finance	Accessibility to agriculture finance for purchase of agricultural inputs and machineries for rice farmers and linkages with actors along the rice value chain
I. Overall Policy Tools	Coordination of rice sector development through NRDS secretariat, and overall integration of rice value chain through effective delivery systems and increased public-private partnerships

**Alignment of key elements of NRDS with Comprehensive African Agricultural Development Program (CAADP) and Rwanda’s Program for Sustainable Transformation through Agriculture (PSTA II):**



**Coherence of NRDS with National Strategies and Policies:**

Through its Vision 2020, the government of Rwanda aspires to transform subsistence agriculture into a viable, market-oriented agriculture. The Economic Development and Poverty Reduction Strategies (EDPRS) which describe the medium term frame work (2008-2012) of Vision 2020 set marshland development for rice cultivation as an important strategy in revamping agriculture sector. EDPRS also seeks to promote value chains by assigning greater roles to markets and the private sector in policy implementation.

EDPRS is implemented through four main programs under Strategic Plan for Agriculture Transformation (PSTA II). NRDS is well aligned with these programs. The National Agricultural Policy (NAP) recognizes that rice offers a potential market in the country and in the EAC region. The government recently developed rice policies to address sector-wide issues pertaining to self sufficiency and competitiveness of locally produced rice in domestic and regional markets. These policy and regulatory frameworks favor the implementation of the strategies proposed under NRDS.

The governance and institutional frameworks in Rwanda are well established to implement the NRDS. The ministries involved in economic planning, finance, commerce, land, environmental management, infrastructure and local governance provide the horizontal linkages at the central level. MINAGRI, the champion at the central level, provides the vertical linkage through projects and programs. Government projects and RAB in association with other institutions/organizations, NGOs, and rice farmers’ cooperatives and unions provide the crucial horizontal and vertical linkages at the grass root level.