

Improved management practices

- Guinea-Bissau participants benefitted from a series of training workshops on integrated rice management (IRM), which aim to enrich researchers' and technicians' knowledge of IRM. This will help to bridge gaps that currently exist between actual farmers' yields and attainable yields through better crop management, and to fully exploit the potential of improved varieties.
- AfricaRice's manuals on IRM, based on the participatory learning and action-research (PLAR) approach developed by the Center, were used by the facilitators. Participants were also exposed to AfricaRice's training videos and radio programs.

Harvest and postharvest technologies

- The partnership activities have aimed at enhancing the quality and marketability of locally produced rice through improved harvest and postharvest technologies.
- Agricultural equipment including power-tiller with attachments, reaper, thresher and a small-scale rice mill has been distributed as part of an emergency rice project in response to the food crisis.

Rice statistics

- Accurate and reliable rice statistics database were established in Guinea-Bissau and INPA staff were trained in nationally representative rice statistics survey methodologies

Policy advice

- The government has developed policies and implemented key development programs with emphasis on increased investments to enhance rice productivity and area.
- The government is trying to ensure sustainable recovery of the rice value chain by strengthening infrastructure, improving productivity and sustainable management of its fragile natural resources.

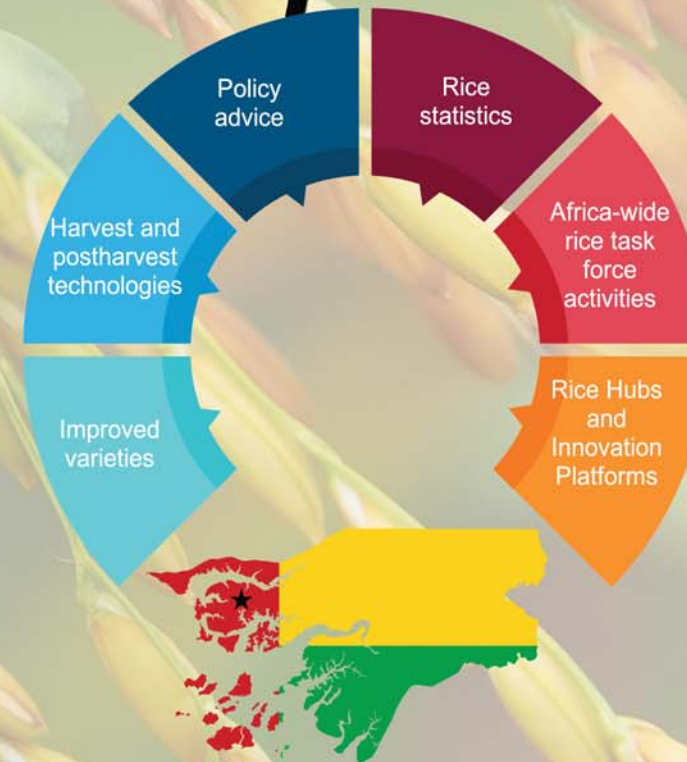
Africa-wide rice task force activities

- Guinea-Bissau has been an active member and benefited from the activities and funding of the six Africa-wide Rice Task Forces coordinated by AfricaRice – Breeding, Agronomy, Gender, Mechanization, Policy, and Processing & Value Addition.
- The Task Forces have provided a unique opportunity for Guinea-Bissau's researchers to interact and partner with their counterparts from other AfricaRice member countries.
- Funds contributed to Guinea-Bissau through the Task Forces have complemented government allocations significantly and ensured the continuation of research and the training of scientists and value chain actors.

Rice Hubs and Innovation Platforms

- With technical backstopping by AfricaRice, Guinea Bissau established four rice sector development hubs - Bassin hydrographique de la rivière Geba Bafata (Irrigated + Upland); Bassin hydrographique de la rivière Fulamoro et Gabú (Lowland + Upland); Bassin hydrographique du fleuve Cumbidjã et Tombali (Mangrove + Lowland + Upland); and Les affluents du Rio Grande de Buba et Geba : Quinara (Mangrove + Lowland + Upland).
- The rice hubs serve as field laboratories where research outputs and products are being tested, adapted and integrated – with feedback provided to researchers on technology performance.

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Guinea-Bissau - AfricaRice Partnership

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- ▶ Guinea-Bissau joined AfricaRice (ex-WARDA) in 1977.
- ▶ The Instituto Nacional de Pesquisa Agraria (INPA) is one of the most important national partners of AfricaRice.
- ▶ As a member country, Guinea-Bissau takes part in statutory meetings of the AfricaRice Council of Ministers, which is the Center's highest governing body.
- ▶ Guinea-Bissau is also a member of the AfricaRice National Experts Committee.

“Rice is global and it is big business. Rice is life in Africa.”
 -- Dr Harold Roy-Macauley,
 AfricaRice Director General



Contributions by AfricaRice to Guinea-Bissau

- ▶ Between 2009 and 2016, Guinea-Bissau has benefited from 8 donor-funded projects, coordinated by AfricaRice.
- ▶ AfricaRice, in partnership with INPA, has contributed to boosting Guinea-Bissau's rice sector in terms of policy and technical advice, improved seed, cropping practices and processing technologies, capacity development and support to rice value chain development.

Capacity strengthening

- ▶ Strengthening the capacity of rice stakeholders throughout the value chain is a major priority of the collaboration. Between 2009 and 2016, 4 MSc scholars from Guinea-Bissau were trained (including 2 with support from UEMOA).
- ▶ At least 12 participants from Guinea-Bissau have attended group training workshops on marker-assisted selection techniques, experimental design, data collection and analysis, quality seed production, integrated rice management, and impact assessment.

IMPORTANCE OF RICE IN GUINEA-BISSAU

Rice plays a very important role in the agricultural and national economy of Guinea-Bissau and a symbol of cultural identity. It is the dominant staple food of the country, accounting for about 80% of the cereal carbohydrates in the Guinea-Bissau diet (251 g daily per capita).

Guinea-Bissau has a long history of skilled rice cultivation. It is recorded that more than 500 years ago, farmers in the country used to grow the African rice (*Oryza glaberrima*) on reclaimed mangrove swamps. In southern Guinea-Bissau, people appreciate *O. glaberrima* for its medicinal properties, tolerance to salinity, and slow digestibility.

Rice accounts for more than two-thirds of all cereal production in Guinea-Bissau. It was grown traditionally as a subsistence crop by smallholders on small family plots. Rice is cultivated in three ecosystems – rainfed uplands, lowlands (rainfed and irrigated) and mangrove.

Guinea-Bissau is an estuarine country, which is very suitable for all types of rice cultivation. The south is particularly suited for mangrove swamp rice. There is great potential for irrigated rice with an estimated potential of more than 25,000 ha of irrigable lowland in the Geba River valley.

According to USDA, Guinea-Bissau produced an estimated 170,000 t of paddy in 2016 (102,000 t milled rice equivalent) and is expected to produce 187,000 t (112,000 t of milled rice equivalent) in 2017. However, domestic rice consumption has been increasing and was 235,000 t on average over the period 2011-2016. The country has become highly dependent on rice imports, estimated at 126,667 t per year over the period 2011-2016, with an annual growth rate of 17.12%.

The government is trying to ensure sustainable recovery of the rice value chain. In line with its strategy to boost rice production, INPA has been collaborating with AfricaRice to develop improved rice technologies to increase rice productivity in the country.

Rice Statistics for Selected Indicators					
Source: https://apps.fas.usda.gov/psdonline/app/index.html#/app/advQuery (accessed 22 May 2017)					
Indicator	2015	2016	2017	Average 2001-2016	Annual growth rate, 2001-2016 (%)
Paddy production (t)	133,000	170,000	187,000	137,313	6.32
Area (ha)	85,000	120,000	130,000	83,125	5.16
Yield (t/ha)	1.57	1.42	1.44	1.63	
Consumption (t)	225,000	230,000	240,000	166,875	8.65
Import (t)	120,000	130,000	130,000	83,250	17.12

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Guinea-Bissau-AfricaRice Partnership: Achievements and Impacts

Improved varieties and seed system

- Through collaborative trials involving AfricaRice, INPA identified five rice varieties suitable for the irrigated and rainfed lowland rice systems, which are expected to be released in the country.
- AfricaRice is breeding salt-tolerant rice varieties to be grown in mangrove areas of Guinea-Bissau. Salinity problems are expected to become more widespread world-wide because of climate change.
- Through the Africa Rice Breeding Task Force, INPA and AfricaRice have identified a number of promising salinity-tolerant varieties for the mangrove swamp ecology. When they are released, these new varieties are expected to significantly improve the yields of rice and thereby the income and livelihoods of farmers and other rice value chain actors in Guinea Bissau.
- Several high-yielding rice varieties, including NERICA-L19, Sahel 317, have been introduced into Guinea Bissau through the country's participation in the International Network for Genetic Evaluation of Rice (INGER-Africa).