Competitive African Rice Initiative (CARI)
Empowering small-scale rice farmers in Sub-Saharan Africa
Rice is one of the most important staple foods in Africa. In recent years, demand for rice has been growing faster than anywhere else in the world and far outstripping the sub-region’s population growth. This trend is predicted to continue for the next years due to population increase, urbanization and changes in consumption patterns.

In West Africa, local production covers only 60% of current demand and yield growth does not match population growth; in some cases the supply gap even increases. Average yields in Sub-Saharan Africa are the lowest in the world. There is insufficient knowledge of modern farming techniques, limited access to high-quality seeds, poor soil fertility and inadequate crop protection practices. In addition, 90% of all locally cultivated rice is produced on small fields with an acreage of less than one hectare. The competitiveness of this locally produced rice is often low due to poor production, processing and marketing infrastructure and weak market organization; necessary infrastructure for efficient storage, transport and processing is also often inappropriate. Given that production costs are relatively high and prices for the lesser quality products are low, smallholder farmers have been left with low-income margins while consumer preferences are biased towards imported rice varieties. As a result, most of the rural population in rice producing areas remain poor or live below the poverty line, while Africa imports more rice than any other region globally.

African governments have realized the importance of the rice subsector to safeguard food security, to save foreign currency and to foster rural economic growth and value addition within the country. Several governments are promoting import substitution policies for rice and have earmarked rice for rapid expansion and modernization in their national strategies for food security, self-sufficiency and rural development. The program Competitive African Rice Initiative (CARI) was commissioned to significantly improve the livelihoods of smallholder rice farmers by increasing the competitiveness of domestic rice supply and to meet increasing regional demand. CARI’s technical and financial assistance is based on a value chain approach. The principal aim is to improve coordination, to create better linkages among rice value chain actors, and as a result, increase the expected economic returns for all stakeholders. By doing so, the program strongly contributes to the Sustainable Development Goals.

To document the results and impacts of the program and to share best practices is the purpose and intention of this booklet.

The CARI team would like to thank all of their partners and colleagues for the tremendous contributions made, the support provided and encouragement given to make the first phase of CARI successful. We are looking forward to maintain linkages and to create new partnerships with the objective to be able to share and scale the positive experience.
Overview Value Chain Programs

**Success Factors**

**Scalability**
Regional outreach and adaptability resulting in „economies of scale“

**Learning**
Institutionalized exchange among the projects plus adoption of best practices between projects and countries

**Governance**
Board structure involving African and International private and public partners = institutionalization of the idea of public private partnerships (PPP)

**Impact**
Joint M&E to report aggregated achievements

**Impacts at a glance**

- **2 mio.** newly trained farmers
- **450,000** (~23%) trained women
- **>200 mio. €** from private partners
- **>30 mio. €** from national public partners
- **> 56 mio. €** from official development assistance (oda)
- **> 56 mio. €**
- **>760,000** job opportunities created
- **up to 287%** income increase

**Proven Approaches for Upscaling**

**Farmer Business School (FBS)**
Agripreneurship for farmers

**Matching Fund**
An integrated development partnership model

**Master Training Program**
Creating a pool of experts for sector development

**Good Agricultural Practices (GAP)**
Demand orientation
Objectives

Improved Productivity
Improved productivity and quality of paddy rice based on sustainable and competitive rice production systems

Established Value Chain Linkages
Increased efficiency of local rice sourcing, processing and marketing through structured value chain linkages, improved technology and process management

Improved Access to Financial Services
Improved access to financial services for all value chain actors

Improved Policy Framework for the Rice Sector
Improved enabling environment at national and regional level including policy framework and strengthening of rice sector initiatives
The Matching Fund Mechanism is the best way of implementing projects between donors and grantees. The grantees invest money, which at the end of the day they would like to see it unlocks profits. With an assistance of matching funds from the donor, business between off-takers and smallholder producers grows quickly.
**Achievements**

- **750,348**
  Beneficiaries have increased their income and improved their food security (including indirect beneficiaries)

- **178,663**
  Smallholder farmers have received trainings in good agricultural practices (GAP)

- **137,281**
  Smallholder farmers have received trainings in Farmer Business School (FBS)

**Yield increase overall**

- **Irrigated:** up to 136%
- **Rainfed:** up to 185%

- **484,000 Mt/ha**
  Total additional paddy traded through structured markets

- **30%**
  Dry Season

- **70%**
  Wet Season
Land preparation
Farmers prepare their plots before starting rice cultivation, as it holds the benefits of controlling weeds, recycling plant nutrients, and transplanting seedlings in soft soils.

Improved Inputs
Farmers use improved and more adequate quantities of inputs.

Transplanting
Farmers use transplanting instead of broadcasting including planting in rows.

Water management
Introduction to dry season farming: Farmers can farm 2 seasons per year (especially in Nigeria).

23,282 full-time job equivalents created
6,876 full-time job equivalents in irrigated production systems
16,406 full-time job equivalents in rainfed production systems

143,903 Farmers engaged in 4 countries

Good Agricultural Practices
GAP adoption studies and farmer reports have shown that major improvements can be observed in the following practices:
Burkina Faso

55,851
Beneficiaries have increased their income and improved their food security (including indirect beneficiaries)

Smallholder farmers have received trainings in good agricultural practices (GAP)
13,298

3,476
Smallholder farmers have received trainings in Farmer Business School (FBS)

Income increase (in %)

Irrigated: 351%
Rainfed: 334%

4,900
Farmers engaged in value chain through contracts with off-takers

Names of MF Partners:
Faso Malo | RWB | UNERIZ | Wend Konta
Ghana

110,650
Beneficiaries have increased their income and improved their food security (including indirect beneficiaries)

Smallholder farmers have received trainings in good agricultural practices (GAP)
26,346

Smallholder farmers have received trainings in Farmer Business School (FBS)
27,552

Income increase (in %)

Baseline/Endline

Rainfed:
246%

Yield increase per ha

0 1 2 3 4 5 6 7

Beneficiaries have increased their income and improved their food security (including indirect beneficiaries)

110%

Number of MF Projects
10

Names of MF Partners:
Christian Aid | CRAN | Farmer Lane | Fysso | Okata Farms and Food Processing | SATCO | Savban | Tamanaa | Wienco | Worawora

18,894 Farmers engaged in value chain through contracts with off-takers

3,641 Full-time job equivalents created
Nigeria

417,140
Beneficiaries have increased their income and improved their food security (including indirect beneficiaries)

Smallholder farmers have received trainings in good agricultural practices (GAP)
99,320

74,100
Smallholder farmers have received trainings in Farmer Business School (FBS)

90,000
Farmers engaged in value chain through contracts with off-takers

417,140
Beneficiaries have increased their income and improved their food security (including indirect beneficiaries)

Smallholder farmers have received trainings in good agricultural practices (GAP)
99,320

74,100
Smallholder farmers have received trainings in Farmer Business School (FBS)

90,000
Farmers engaged in value chain through contracts with off-takers

Names of MF Partners:
- Ajifa
- Atafi
- Babban Gona
- Danmodi
- eHealth
- GSARDI
- Labana
- KARDA
- Klysat
- Masco
- OLAM
- Onyx
- NSRIC
- NAMDA
- PFML
- WACOT
- WOFAN

Income increase (in %)

Rainfed:
- 259%

Irrigated:
- 571%

Yield increase per ha

Baseline/Endline

185%

136%

6
5
4
3
2
1
0

5.7
5.9
2
2.5

River Niger
River Benue
Katsina
Zamfara
Kebbi
Kano
Jigawa
Adamawa
Kaduna
Nassarawa
Niger
Taraba
Benue
Kogi
Abuja
FCT
Abuja

Income increase

15,194
Full-time job equivalents created

Number of MF Projects
14

Names of MF Partners:
- Ajifa
- Atafi
- Babban Gona
- Danmodi
- eHealth
- GSARDI
- Labana
- KARDA
- Klysat
- Masco
- OLAM
- Onyx
- NSRIC
- NAMDA
- PFML
- WACOT
- WOFAN
Beneficiaries have increased their income and improved their food security (including indirect beneficiaries).

Smallholder farmers have received trainings in good agricultural practices (GAP):

- **39,700** farmers

Income increase (in US$):
- **30,043** farmers engaged in value chain through contracts with off-takers

Yield increase per ha:
- **6** to **6**

Income increase:
- **Rainfed**: from $-31 to $429
- **Semi-Irrigated**: from $113 to $368

Number of MF Projects: 8

Names of MF Partners:
- Biosustain
- G2L
- Kilombero Plantation
- Kimolo
- Super Rice
- Mamboleo Farm
- Musoma Food Company
- Raphael Group
- ZANRICE

Full-time job equivalents created:
- 2,887
Access to Finance

16 mio US $
Pre-financed inputs

93,300 Farmers have access to pre-financed inputs

12 mio US $
Capital investment

Findings of stocktaking missions in Nigeria, Burkina Faso and Ghana

- The complex nature of agricultural finance: bringing two sectors together – the world of banking and the world of agriculture.

- Bankers and farmers speak different languages: this creates misunderstanding and preconceptions maintain.

- Understanding the needs of bankers and farmers and create a real partnership.

- High interest rates and over-collateralization are facts: Risk-mitigation and confidence-building measures can lead to a gradual improvement.

- Capacity building: make farmers bankable and bankers agriable.

- Agricultural finance, micro finance and value chain finance: A cross-mix of financial service providers as partners for CARI is key.

- Collaboration with banks: Identify financial service providers who have an appetite to engage with the agricultural sector.

- Develop tailor-made products to finance agricultural activities.

- Blended finance in the rice sector: How to combine public and private funds in an efficient and sustainable way.

- Develop suitable business and financing models to foster agricultural mechanization.

- Transparency of government programs and agri-funds: Support rice farmers and processors to get access.
Established dialogue platforms for policy advocacy
Different actors of the rice value chain meet, discuss and agree on advocacy strategies and actions and carry out advocacy activities.

Registered bodies
Members are:
• representatives of associations of farmers
• associations of input dealers
• associations of service providers
• associations of millers and others.

State level

Nigeria
Rice Policy Advocacy Platform of Nigeria

17 platforms from 6 geopolitical zones
>12,000,000 members

National level

Tanzania
Rice Council of Tanzania (RCT)

4 area platforms

Regional level

Africa Rice Advocacy Platform (ARAP)

11 countries are represented
Benin
Burkina Faso
Côte d’Ivoire
Ghana
Mali
Niger
Nigeria
South Sudan
Tanzania
Togo
Uganda

Ghana
Ghana Rice Interprofessional Body (GRIB)
17 Policy briefs developed and published

Policy Priorities
Thematic issues highlighted in position papers on policy rice priorities and recommendations reflected in policy strategies.

Nigeria – 2016-2020 National Agriculture Policy Road Map
- Finance
- Extension Services
- Climate Change
- Post-harvest losses
- Pesticides

Additional Support:
- Advocacy for the Anchor Borrower Program

Burkina Faso – National Rice Development Strategy
- Access to Finance
- Mechanization
- Rice Quality and Markets

Additional Support:
- Advocacy for the procurement of local rice in government institutions
- Support for the Review of the National Rice Development Strategy

Ghana – National Rice Development Strategy
- Finance
- Standards
- ICT
- Mechanization
- Pesticides

Additional Support:
- Advocacy for the development of Paddy Grain Standards and Milled Rice Standards
- Support for the Review of the National Rice Development Strategy

Tanzania – Policy Support
- Non-tariff barriers
- Export ban
- Pesticides

Additional Support:
- Advocacy for lifting of ban of Tanzania Rice to Rwanda
- Advocacy for ban on importation of Rice
Women trained in nutrition: 42,000
Women trained in improved parboiling techniques: 30,000

Countries where projects were implemented:

Share of women in GAP and FBS trainings: 30%

“Now, I am a businesswoman. I used to make 250 Naira per week, parboiling for other millers. But now, I make an average of 1,500 Naira per week from my own parboiling business.”

Female Farmer, Nigeria

Names of MF Partners:
Christian Aid | CRAN | eHealth | WOFAN

Number of MF projects in collaboration with Walmart Foundation
Mobile APP

RiceAdvice
Advice on field-specific rice management practices: recommendations on fertiliser management, general good agricultural practices and provision of a specific cropping calendar

20,000 Farmers reached

Yield increase (in %) 66%
Income increase (in %) 40%

Service Providers trained 92
more than 60% youth

Voiceline Messaging

Farmerline (implemented only in Ghana)

98,958 Messages sent
Covering GAP, FBS, weather forecast, nutrition and post-harvest tips

Languages offered 11

>75 Service Providers trained
more than 80% youth

RiceAdvice-WeedManager
Support to African rice farmers to find the most effective and cost-efficient weed management strategies, considering specific farming conditions and available resources

686 Farmers reached
All the impact achieved by CARI would not have been possible without our lead matching fund partners, and the consortia partners in various contexts. It is therefore our pleasure to express our sincere gratitude to all people that have dedicated time and resources to the achievements and the results over the past four years.

### Burkina Faso
- Rizerie Faso Malo
- Union Nationale des Etuveuses de Riz du Burkina (UNERIZ)
- Rizerie WendYam de Bobo (RWB)
- Wend Kota

### Ghana
- Christian Aid
- Christian Rural Aid Network (CRAN)
- Farmer Lane
- Fyss
- Okata Farms and Food Processing
- Savannah Agricultural & Trading Ltd (SATCO)
- SAVBAN Processing and Marketing Company Ltd
- Tam ana
- W ienko
- Worawora

### Nigeria
- Ajifa
- Atafi
- Babban Gona
- Danmodi Rice Mill
- eHealth
- Green Sahel Agricultural and Rural Development Initiative (GSARDI)
- Kebbi Agricultural and Rural Development Authority (KARDA)
- Klysat Food and Beverages Ltd.
- Labana Rice Mills Ltd
- Masco Agro Allied Industries
- OLAM
- Onyx Rice Mill
- Niger State Rice Investment Consortium (NSRIC)
- Niger State Agricultural Mechanization Development Authority (NAMDA)
- Popular Farms and Mills Ltd (PFML)
- WACOT Rice Limited
- Women Farmers Advancement Network (WOFAN)

### Tanzania
- Biosustain
- G2L Company Ltd
- Kilombero Plantation
- Kimolo Super Rice
- Mamboleo Farm
- Musoma Food Company
- Raphael Group Ltd
- Zanzibar Ministry of Agriculture and Natural Resources
Knowledge management and cooperation

Objective:
The exchange of experiences related to productivity, business models, use of production inputs, financial services and policy-making to foster the rice value chain has increased.

- Develop and expand Multi Actor Partnerships (MAP) and provide support for further indirect implementation of MF
- Organise semi-annual learning events and involve all stakeholders (regional partners, national forums)
- Use virtual exchange platforms more to exchange information
- Ongoing adaptation of the M&E systems and ensure the vision of success.

Financial services

Objective:
Access to financing opportunities has improved for main stakeholders in the rice value chain.

- Advise financial institutions on how to access the agricultural sector and on adaptation of products
- Strengthen the integrability of the stakeholders in the rice value chain (credit worthiness) and involve them in government financing programmes
- Develop innovative financing options for agriculture-based services in rural areas
- Identify the need for financing as part of the business models and fund advisory services for business development.

Inclusive business models and productivity

Objective:
The viability of the business relationships has been sustainably improved

- Foster inclusive business models as part of out-grower schemes and contract farming
- Encourage symmetrical power relationships in the business models (business support for producer associations)
- Advise participating companies following a business and technical assessment
- Improve quality of rice processing (at smallholders and in rice mills)
- Develop marketing strategies
- Hold nutrition training sessions
- Promote ICT applications.

Policy advice

Objective:
Private sector interests are reflected in all project countries’ national rice policies.

- Advice national and regional rice platforms / forums on organisation
- Support regional policy-making with respect to standards and trade
- Shape regional dialogue between platforms and stakeholders in the public and private sector.

Outlook

Over the past 3 years, CARI, together with its partners, was able to significantly improve the livelihoods of smallholder rice farmers in four countries of Sub-Saharan Africa by applying a value chain approach. Based on the excellent findings of the project evaluation in February 2017, CARI has been commissioned for another three years, starting in July 2018. For the second phase of the program, the lead executing agency in West Africa is the Economic Community of West African States (ECOWAS), in particular its Department of Agriculture as political partner. In East Africa, the program will remain in the hands of the Tanzanian Ministry of Agriculture.

The following four objectives have been agreed upon with our commissioner which determines the emphasis of our work:
AGRICULTURAL VALUE CHAINS for sustainable development

Competitive African Rice Initiative
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