

**Coalition for African Rice Development
(CARD)
Final Review Assessment**

Final Report

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Japan International Cooperation Agency (JICA)

Pricewaterhouse Coopers Aarata LLC

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List of Abbreviations

ACF	Agricultural Consultative Forum
AFD	Agence Française de Développement (French Development Agency)
AfDB	African Development Bank
AfricaRice	Africa Rice Center
AgRed	Agriculture and Rural Development Donor Group
AGRA	Alliance for a Green Revolution in Africa
APPSA	Agricultural Productivity Program for Southern Africa
ARI	Agricultural Research Institute
ASDP	Agricultural Sector Development Programme
AU	African Union
BADEA	Banque Arabe pour le Développement Economique en Afrique (Arab Bank for Economic Development in Africa)
BMGF	Bill & Melinda Gates Foundation
BOAD	Banque Ouest Africaine de Développement (West African Development Bank)
BRAC	Building Resources Across Communities
CAADP	Comprehensive Africa Agriculture Development Programme
CARD	Coalition for African Rice Development
CARI	Competitive African Rice Initiative
CGAIR	Consultative Group on International Agriculture Research
CIAT	International Center for Tropical Agriculture
CIRAD	Centre de Cooperation Internationale en Recherche Agronomique pour le Developement
EAAPP	Eastern Africa Agricultural Productivity Project
ECOWAS	Economic Community of West African States
ERPP	Expanding Rice Production Project
EU	European Union
FAO	Food and Agriculture Organization
FARA	Forum for Agricultural Research in Africa
FISP	Farmer Input Support Programme
FP	Focal Point
FPOs	Farmer Producer Organizations
FRGs	Farmer Research Groups

GIZ	Gesellschaft für Internationale Zusammenarbeit
GM	General Meeting
GRiSP	Global Rice Science Partnership
IFAD	International Fund for Agricultural Development
IRRI	International Rice Research Institute
IWMI	International Water Management Institute
JICA	Japan international Cooperation Agency
JIRCAS	Japan International Research Center for Agricultural Sciences
KOICA	Korea International Cooperation Agency
NAIP	National Agricultural Investment Plan
NEPAD	New Partnership for Africa's Development
NRDS	National Rice Development Strategy
OFID	OPEC Fund for International Development
PAO	Process Assistance Organization
PARDA	Partnership for Rice Systems Development in Africa
PHRD	Policy and Human Resources Development Fund
PPP	Public-Private Partnership
PRSP	Poverty Reduction Strategy Paper
PVL	Prairie Volta Limited
SC	Steering Committee
SIEM	Sub-sector/Intervention Elements Matrices
SSA	Sub-Saharan Africa
SSC	South-South Cooperation
TICAD	Tokyo International Conference on African Development
USAID	United States Agency for International Development
UADA	United States Department of Agriculture
UEMOA	Union Economique et Monétaire Ouest Africaine (West African Economic and Monetary Union)
WAAPP	West Africa Agricultural Productivity Programme
WARDA	West Africa Rice Development Association
WB	World Bank
WFP	World Food Programme

1. Overview of CARD

1.1 Background

Despite slowdowns in 1992, 2009, and 2016, Africa's economy has been steadily expanding since the 1990s.¹ Income increases, coupled with population growth and rapid urbanization, have caused shifts in the level and pattern of food consumption.² Amongst other staple crops, rice consumption showed a significant increase of approximately 37% during the period 1999-2007, comparatively higher than increases for lower value crops such as maize (20%), sorghum (21%) and cassava (32%).³ Whilst production is also on the rise, it has not been able to keep on par with the soaring consumption. Subsequently, this gap has been covered by imports, mainly from Asia and North America, causing substantial strain on the foreign reserves of African countries.⁴

Agriculture constitutes an important part of most African livelihoods, with approximately 70% of the population living in rural areas and 90% of these people working in the agriculture sector.⁵ Around 25% of Africa's GDP is supported by agriculture, and agricultural products constitute the majority of African exports.⁶ However, challenges related to productivity and competitiveness have been major impediments to achieving food security and increasing income. While agriculture is a potential driver for growth, insufficient attention from both governments and the donor community has been rendering it a drag.⁷

In light of this situation, the Alliance for Green Revolution in Africa (AGRA), New Partnership for Africa's Development (NEPAD), and Japan International Cooperation Agency (JICA) proposed a joint initiative for African rice sector development as a means to promote Green Revolution in Africa. Subsequently, the Coalition for African Rice Development (CARD) was established in 2008 at the 4th Tokyo International Conference for African Development (TICAD IV) as a consultative group comprising bilateral and multilateral donors as well as African and international institutions.

1.2 Objectives of CARD

The main goal of CARD is to double rice production in Africa within 10 years, from 14 million to 28 million tons, by providing African member countries with various types of support to promote

¹ Worldbank World Development Indicators, 27/4/2017 update

² CARD Secretariat, "Getting to Scale with Successful Experiences in Rice Sector Development in Africa Best Practices and Scalability Assessments", October 2014.

³ Ibid.

⁴ JICA/AGRA, "Coalition for African Rice Development (CARD)", May 2008.

⁵ Ibid.

⁶ Ibid.

⁷ Ibid.

development of the rice sector. It was envisaged that this goal would be attained through increases in both cultivated land area, mainly in rain-fed lowlands, and yield per unit of area in all of the three agro-ecologies where rice is grown in Sub-Saharan Africa. Specific targets are shown in the table below.

Table1 :Target Model

	Agro-ecology									Grand total		
	Irrigated field			Rainfed lowland			Rainfed upland					
Year	1. Cultivated land area (ha)	2. Yield per unit area (t)	3. Production (1x2) (t)	4. Cultivated land area (ha)	5. Yield per unit area (t/ha)	6. Production (3x4) (t)	7. Cultivated land area (ha)	8. Yield per unit area (t/ha)	9. Production (7x8) (t)	10. Cultivated land area (1+4+7)	11. Yield per unit area (12/10) (t/ha)	12. Production (3+6+9) (t)
2002 /06	1,480,000	3.40	4,964,000	3,120,000	1.94	6,052,800	2,760,000	1.17	3,229,200	7,340,000	1.94	14,246,000
2017	1,730,000	5.00	8,650,000	5,000,000	2.90	14,500,000	3,000,000	1.80	5,400,000	9,730,000	2.93	28,550,000

Source: JICA/AGRA, “Coalition for African Rice Development (CARD)”, May 2008

Actual harvested area and production (an average from 2002 to 2006) have been estimated based upon the data of FAOSTAT, etc. The target values of 2017 are predicated upon the assumptions that output will increase by 50% in each agro-ecology and that an area of cultivated farmlands will be expanded mainly in rainfed lowlands.

The spirit of the initiative embodies full respect for African ownership and leadership as exemplified in the Comprehensive Africa Agriculture Development Program (CAADP), as well as a determination to utilize and strengthen links with existing structures, programs, and networks such as the Africa Rice Center (AfricaRice; formerly WARDA), the Forum for Agricultural Research in Africa (FARA), and the African Rice Initiative (ARI). In pursuing the coalition’s objectives, CARD also aims to pay full respect to the policies and strategies of implementing agencies.

1.3 Functions of CARD

As a consultative group, CARD strives to achieve the above objectives through harmonization and coordination of existing initiatives and through facilitation of resources and opportunities to meet the needs of its member countries.

In light of this, CARD’s functions were determined at the 1st General Meeting of CARD in 2008 to be as follows:

- Assist African Rice-producing Partners to formulate their National Rice Development Strategies (NRDS);
- Promote harmonization of assistance programs by sharing relevant information as well as ^[1]_{SEP}undertaking proactive advocacy and necessary coordination among its members;
- Facilitate the matching of needs with resources and opportunities;
- Ensure complementarity/synergy with other existing institutional and organizational frameworks through studies and exchanges;

- Monitor progress in various tiers of rice development, e.g. rice production in general and donor assistance/coordination; and
- Disseminate information and knowledge among relevant stakeholders through web pages, newsletters, and other means.⁸

1.4 CARD approaches

CARD proposes four approaches for achieving the objectives of the initiative: 1) value chain approach, 2) approach by agro-ecology, 3) capacity development approach, and 4) South-South Cooperation approach.

1) Value chain approach

CARD aims to develop the rice value chain as a whole. In many urban markets of member countries, local rice remains uncompetitive against imported rice due to its low quality, and there is an increasing need to shift more towards market-oriented production.

2) Approach by agro-ecology

CARD proposes interventions according to the different agro-ecologies where rice is cultivated: 1) Irrigated, 2) Rain-fed upland, and 3) Rain-fed lowland. Seed varieties, farming practices, and other inputs should all be tailored to each agro-ecology.

3) Capacity development approach

CARD identifies human resource capacity development as the most critical issue to be addressed in the development of the rice sector in Africa. In many member countries, farmers generally practice multi-crop cultivation, meaning that capacity development in the rice sector can function as an entry point to agricultural and rural development.

4) South-South Cooperation approach

Given that Asian countries have had substantial experience in rice farming, CARD promotes the sharing of such knowledge through South-South Cooperation. At the second General Meeting, The Philippines, Thailand, Vietnam, Indonesia, Egypt, and Brazil expressed their commitment to sharing knowledge with CARD member countries.

⁸ CARD, "Management and Operational Guidelines of COALITION FOR AFRICAN RICE DEVELOPMENT (CARD) endorsed at the first General Meeting on 29 October, 2008", October 2008

2. Overview of final evaluation

2.1 Purpose of the evaluation

As CARD nears its final year in 2018 and prepares for its final General Meeting, this evaluation reviews the overall progress of the initiative and considers the way forward for rice sector development in Africa beyond 2019. The goals of the evaluation are defined as follows:

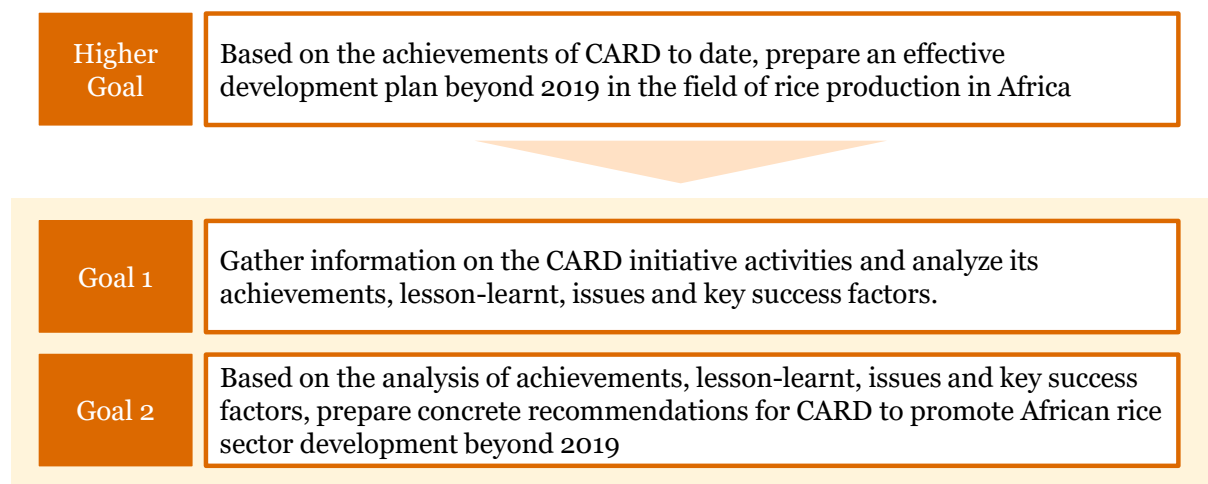


Figure1 : Goals

2.2 Evaluation scope⁹

This evaluation focuses on 1) the achievements of CARD as an international initiative; 2) the achievements of CARD within each member country; and 3) based on the findings for 1) and 2), offer recommendations for rice sector development in Africa beyond 2019. For 3) recommendations, we propose recommended courses of action for CARD after 2019 and for each member country that would enable the continued implementation of NRDS developed through CARD support.

⁹ The services of the evaluation team were performed and this document was developed in accordance with the terms and conditions of our Engagement Contract.

		Target	
		Member countries	SC members and Partner Organizations
Research Items	(1) Research on the achievements of CARD as an international initiative	—	Understand the achievements of CARD and the implementation status, and analyze the issues and KSFs
	(2) Research regarding the impact of CARD on the individual country-level	Understand the implementation status of NRDS as well as impact of CARD, and analyze the issues and KSFs	—
	(3) Preparation of recommendations for the African rice sector development beyond 2019	Prepare recommendations to African countries in order to leverage on CARD and continue to implement the NRDS beyond 2019	Prepare recommendations to CARD beyond 2019 based on research on the current situation

Figure 2 : Scope

2.3 Target countries and institutions

The 23 member countries of CARD are all targets for this evaluation but field research targeted the following countries: Ghana, Guinea, Madagascar, Mozambique, Nigeria, Tanzania, Uganda, Côte d'Ivoire, Rwanda, Zambia, and Benin. These 11 countries were selected in consultation with the CARD Secretariat, taking into consideration the following factors: status of NRDS and sub-sector strategy development, regional balance, rice production volume, and government structure for implementation. In addition to these countries, Kenya was selected as a field visit destination for the purpose of visiting the CARD Secretariat in Nairobi.

Figure 3 : Target Countries

Country		(1) Target countries of questionnaire	(2) Target countries of interview
1st Group	Ghana	●	●
	Guinea	●	●
	Madagascar	●	●
	Mozambique	●	●
	Nigeria	●	●
	Tanzania	●	●
	Uganda	●	●
	Cameroon	●	
	Kenya	●	▲
	Mali	●	
2nd Group	Senegal	●	
	Serra Leone	●	
	Côte d'Ivoire	●	●
	Rwanda	●	●
	Zambia	●	●
	Benin	●	●
	Burkina Faso	●	
	CAR	●	
	DRC	●	
	Ethiopia	●	
	Gambia	●	
	Liberia	●	
	Togo	●	
Total No. of Countries		23	11 + Kenya

Criteria for selecting countries where interviews will be conducted

- Based on past project research results, select countries where JICA rice cultivation-related cooperation was implemented.
- Select nine countries that have a local JICA office and where a CARD process assistance organization (PAO) is being run
- NRDS, status of development of sector-specific strategy, regional balance, rice production volume, and governmental implementation systems were taken into account in making the selection.

The target institutions for questionnaire-based research and field research included the respective countries' ministry of agriculture (the main focal points of the research), research institutions, and related ministries that advise and collaborate with the respective countries' governments or comparable bodies, CARD Supporting Partners, and the CARD Secretariat.

With regard to the main focal points, research institutions, and related ministries, questionnaire-based research was primarily conducted. In addition, if these institutions have local offices in the countries targeted for field research, interviews were also conducted.

As for CARD Supporting Partners, questionnaire research was administered to the CARD contact person at each organization's headquarters or regional offices and interviews were conducted at their offices located in target countries for field research.

Area	Country	Interview	City	Members of CARD Steering Committee												CARD Secretariat	CARD Supporting Partners				CARD Advisory Committee	Focal Point		Others		
				JICA	JIRCAS	AGRA	FARA	IRRI	Africa Rice	NEPAD	FAO	AfDB	IFAD	WB	IMWI		WFP	BRAC	MBGF	Ministry		Research Institute				
East	Kenya	▲	Nairobi	•		•					•	•		•	•				•	•			•	•		
East	Uganda	•	Kampala	•								•	•		•	•				•	•			•	•	
East	Tanzania	•	Dar es Salaam	•		•				•			•	•						•	•			•	•	
East	Rwanda	•	Kigali	•								•	•		•	•				•	•			•	•	
East	Ethiopia	•		•								•	•		•	•				•	•			•	•	
West	Ghana	•	Accra	•		•							•	•		•	•				•	•		•	•	
West	Guinea	•	Conakry										•	•		•	•				•	•		•	•	
West	Côte d'Ivoire	•	Abidjan	•					•				•	•		•	•					•	•		•	•
West	Gambia												•	•		•	•					•	•		•	•
West	Sierra Leone																						•	•		
West	Senegal			•									•	•		•	•							•	•	
West	Togo																							•	•	
West	Nigeria	•	Abuja	•					•				•	•		•	•							•	•	
West	Burkina Faso			•									•	•		•	•							•	•	
West	Benin	•	Cotonou	•										•	•		•	•						•	•	
West	Mali																							•	•	
West	Liberia																							•	•	
South	Zambia	•	Lusaka	•																				•	•	
South	Madagascar	•	Antananarivo																					•	•	
South	Mozambique	•	Maputo			•																		•	•	
Central	Cameroon			•																				•	•	
Central	Democratic Republic of the Central African Republic			•																				•	•	
Central	Central African Republic			•																				•	•	
Outside of Africa	Japan			•		•																				
Outside of Africa	Bangladesh																									
Outside of Africa	USA																									
Outside of Africa	Sri Lanka																									
Outside of Africa	Italy																									
Outside of Africa	Philippines																									
Outside of Africa	Thailand							•																		•
Outside of Africa	Egypt																									•

Figure 4 : Target Institutions

2.4 Evaluation schedule

The evaluation began in early June 2017. An inception report was created in late June and an interim report in late September. The research schedule called for a draft final report in early December and a final report in April 2018. Following preparation of the draft final report, a presentation was made at the CARD Steering Committee (SC) meeting in Kenya in December 2017.

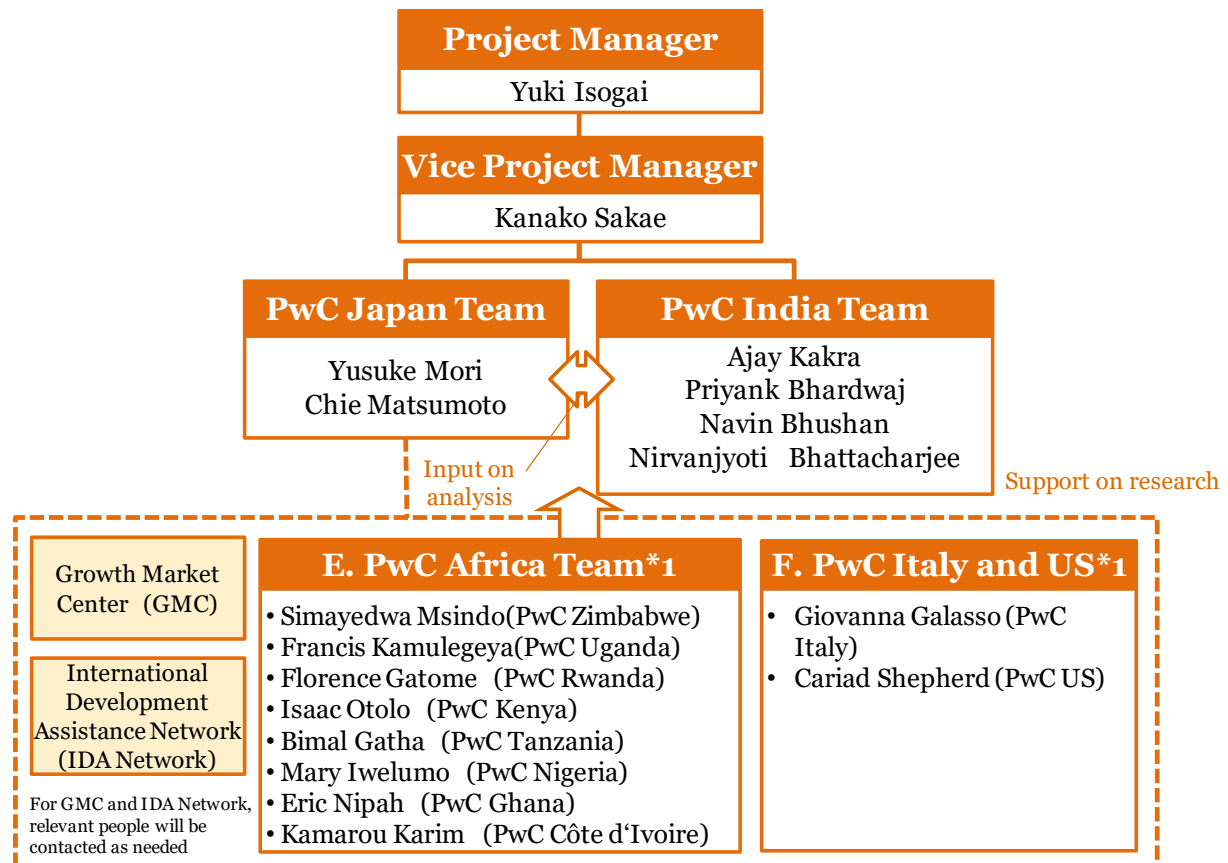
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Figure 5 : Evaluation schedule

2.5 Team structure

Ms. Isogai of PwC Japan is taking the role of Project Manager, with Ms. Sakae taking the role of Vice Project Manager. The complete team structure adopted is as shown in the following diagram.

Figure 6 : Team Structure



*1: Will ask for advice when necessary *2: PwC Appointed firm in Ethiopia

Personnel plan

	Duties	Name	Affiliation (position)	Rating	FY2017												FY2017		MM							
					4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	Local	Domestic	Total		
																	Local	Domestic	Local	Domestic	Total					
Local operations	Project Manager/ Program evaluation 1	Yuki Iso gai	PwCAarata	2																0.60		0.60				
	Vice Project Manager /Program evaluation 2	Kanako Sakae	PwCAarata	4																1.77		1.77				
	Program evaluation 3	Yusuke Mori	PwCAarata	3																0.27		0.27				
	Program evaluation 4	Chie Matsumoto	Support member	4																2.40		2.40				
	Program evaluation 5	Ajay Kakra	Support member	3																1.03		1.03				
	Program evaluation 6	Priyank Bhardwaj	Support member	3																0.83		0.83				
	Program evaluation 7	Navin Bhushan	Support member	3																0.43		0.43				
	Program evaluation 8	Nirvanjyoti Bhattacharjee	Support member	4																0.80		0.80				
					Local operations (subtotal)												8.13		8.13							
Domestic operations	Project Manager/Program	Yuki Iso gai	PwCAarata	2																3.50		3.50				
	Vice Project Manager /Program evaluation 2	Kanako Sakae	PwCAarata	4																4.55		4.55				
	Program evaluation 3	Yusuke Mori	PwCAarata	3																4.50		4.50				
	Program evaluation 4	Chie Matsumoto	Support member	4																2.55		2.55				
	Program evaluation 5	Ajay Kakra	Support member	3																1.00		1.00				
	Program evaluation 6	Priyank Bhardwaj	Support member	3																0.40		0.40				
	Program evaluation 7	Navin Bhushan	Support member	3																0.40		0.40				
	Program evaluation 8	Nirvanjyoti Bhattacharjee	Support member	4																0.40		0.40				
					Domestic operations (subtotal)												17.3		17.30							
Period for submission of reports, etc. (indicated by the symbol "△" and the report title)																				25.43		25.43				
Total																										

2.6 Method of evaluation

The evaluation process is composed of five main steps.

The first step, **1000. Research preparation**, involves establishing hypotheses for success factors and challenges, contributions made, and other aspects related to 1) research on the achievements of CARD as an international initiative, and 2) research regarding the impact of CARD at the individual country level. At the same time, each aforementioned research area is broken down into specific questions and research indicators. The information collection method (desktop research and interviews with the offices in various countries, among others) is clearly defined for each research indicator.

In step **2000. Desktop research**, existing information from related institutions is collected and incorporated into the research indicators list created in step “1000. Research preparation”. Following a data gap analysis, additional desktop research work is conducted to collect missing information, and the research indicators list is updated. After compiling information for one to two countries, the research indicators list is refined.

Step **3000. Questionnaire** is carried out in the 23 CARD target countries. The updated research indicators list from the previous step is used as the basis for determining the questions to be included in the questionnaire. Questionnaires are sent to the target institutions identified in Section 2.3: Target countries and institutions, and the results are incorporated into the research indicators list.

4000. Field research is conducted in Kenya and in the 11 countries mentioned in Section 2.3: Target countries and institutions. Information that requires further elaboration and/or confirmation is identified based on the questionnaire results, and question sheets are prepared for each stakeholder who are to be interviewed. The target institutions for interviews would be the questionnaire targets. As in the previous steps, the research results are used to revise the research indicators list.

The results from the above research are used as inputs for Step **5000. Recommendations**. In this step, information that is gathered through 1) research on the achievements of CARD as an international initiative and 2) research regarding the impact of CARD on the individual country level is used to organize and analyze the CARD initiative as well as country-level achievements and issues. This is used as the basis for recommendations regarding the activities and framework for CARD in the next phase, as well as issues to be addressed in order to implement the activities.

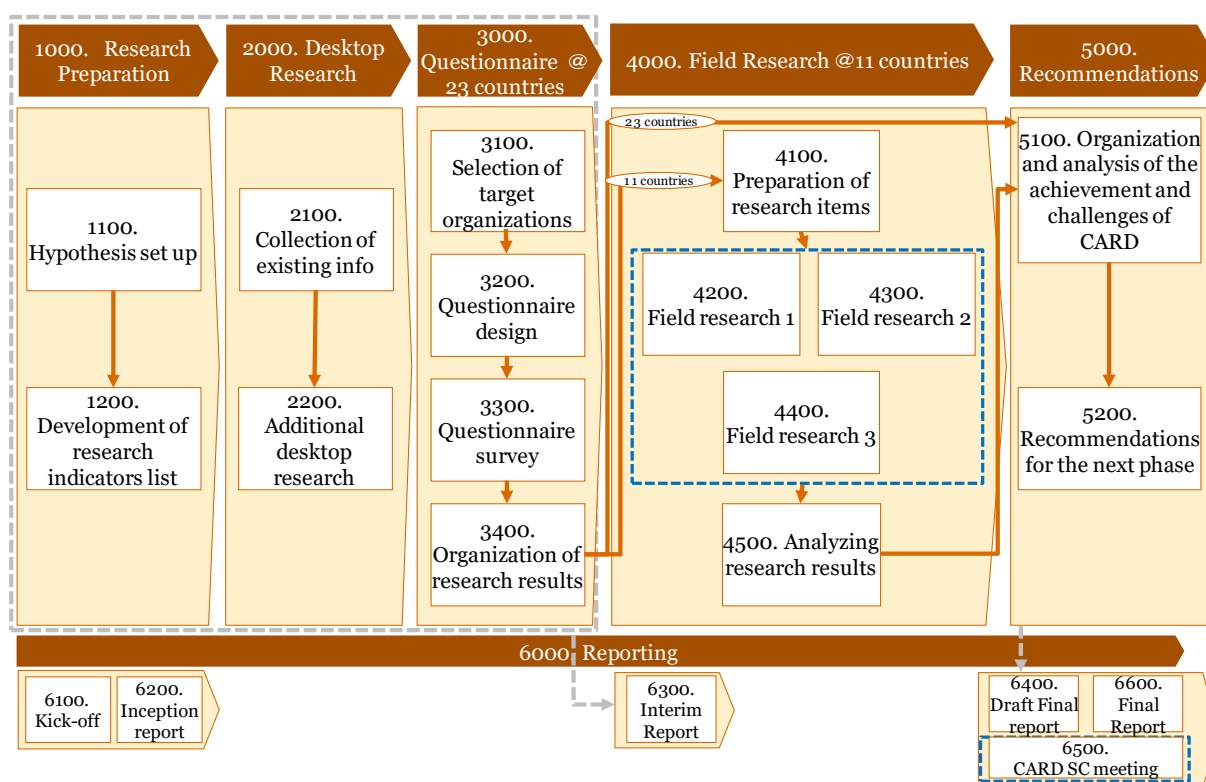


Figure 8 : Method

*Although there is no impact on the overall method, the information is organized, and the questionnaire-based research is first conducted for the 11 countries where field research has been conducted. Thereafter, these steps are applied to the 12 remaining countries.

2.7 Limitations

2.7.1. General limitations

In conducting this evaluation, it is essential to mention that at the time of establishment, CARD had not clarified the precise roles/responsibilities and activities of the CARD Secretariat as well as that of the CARD Supporting Partners.

Further, key indicators for the output, outcome, and impact of the intervention were not defined at the onset of the Initiative. Hence, results could not be measured against any preset indicator.

It is within this context that, on the country level, we assess the NRDS process as a framework and evaluate the progress (output), outcome, and impact of CARD activities within this framework. On the international initiative level, we evaluate the output, outcome, and impact of the information sharing that occurred at the initiative level.

2.7.2. Source of information¹⁰

According to the needs of the client, this evaluation depends on secondary data as its source of information. The questionnaires and interview requests were sent to all target countries and institutions identified above by e-mail, and followed up by phone calls to ensure a better response rate. These efforts yielded the following results in terms of information collection:

Table 2: Results of information collection

		Questionnaire ^{(*)1}					Interview ^{(*)2}			
		FP	SC Local/ others	SC HQ	Secretariat	SSC	FP	SC Local/ others	SC HQ	Secretariat
0	Others (Japan or Telephone) ^{(*)3}			16	2	7		2	6	10
1	Benin	2	1				2	3		
2	Burkina Faso	3	3							
3	Cameroon	3	5							
4	CAR	1	0							
5	Cote d'Ivoire	1	3				1	6	5	
6	DRC	4	1							
7	Ethiopia	1	2							
8	Gambia	1	1							
9	Ghana	3	5				2	9	1	
10	Guinea	2	2				2	6		
11	Kenya	5	2				3	2	1	1
12	Liberia	2	1							
13	Madagascar	1	9				7	7		1
14	Mali	1	1							
15	Mozambique	1	5				4	7		
16	Nigeria	3	3				2	6		
17	Rwanda	3	2				3	5		1
18	Senegal	2	5							
19	Sierra Leone	2	2							
20	Tanzania	4	3				6	9		
21	Togo	2	0							
22	Uganda	1	4				2	9		
23	Zambia	2	5				2	4	1	1
	Total	50	65	16	2	7	36	75	14	14
						140				139

*1: The number of questionnaire responses. In some cases more than one respondents filled out one file.

*2: The number of interviews: In a few interviews, multiple interviewees participated. Also in some cases the evaluation team had more than one interview with the same interviewees.

¹⁰ PricewaterhouseCoopers Aarata LLC's work was limited to the specific procedures and analysis described herein and was based only on the information made available through January 16th, 2018. Accordingly, changes in circumstances after this date could affect the findings outlined in this Report.

*3: Face-to-face meetings in Japan or conference calls.

Focal Point (FP): The respective countries' ministries of agriculture or research institutions.

SC Local: Local offices of the CARD SC members, Partner Organizations and other organizations in the rice sector.

SC HQ: Headquarters of the CARD SC members and Partner Organizations (focal points).

Secretariat: The CARD Secretariat in Kenya as well as CARD Consultants.

SSC: Organizations which supported the SSC training programs.

It must be noted that not all the stakeholders responded to our request, and the analysis of each country and the Initiative are limited by information that are available to us.

2.8 Key definitions

In consultation with the client, “Output”, “Outcome”, and “Impact” are defined as follows in this evaluation:

Output: Products that were generated due to the activities that were conducted by using the inputs allocated for the intervention.

Outcome: Short-term and medium-term effects of the interventions' expected outputs within the scope of CARD's roles and responsibilities presumed above (e.g. better coordination of projects in the rice sector).

Impact: Primary and secondary long-term effects produced by the intervention, directly or indirectly, and intended or unintended. “Quantitative impact” is impact that can be measured numerically (e.g. volume of rice production) whilst “qualitative impact” is that that cannot be measured as such (e.g. sensitization of stakeholders, formulation of NRDS in other countries).

3. Structure of CARD and input

3.1 Organizational structure

The main stakeholders of CARD are CARD Supporting Partners (SC members and Partner Organizations) and Sub-Saharan African rice-producing countries. CARD's organizational structure consists of General Meeting, Steering Committee, and Secretariat bodies.

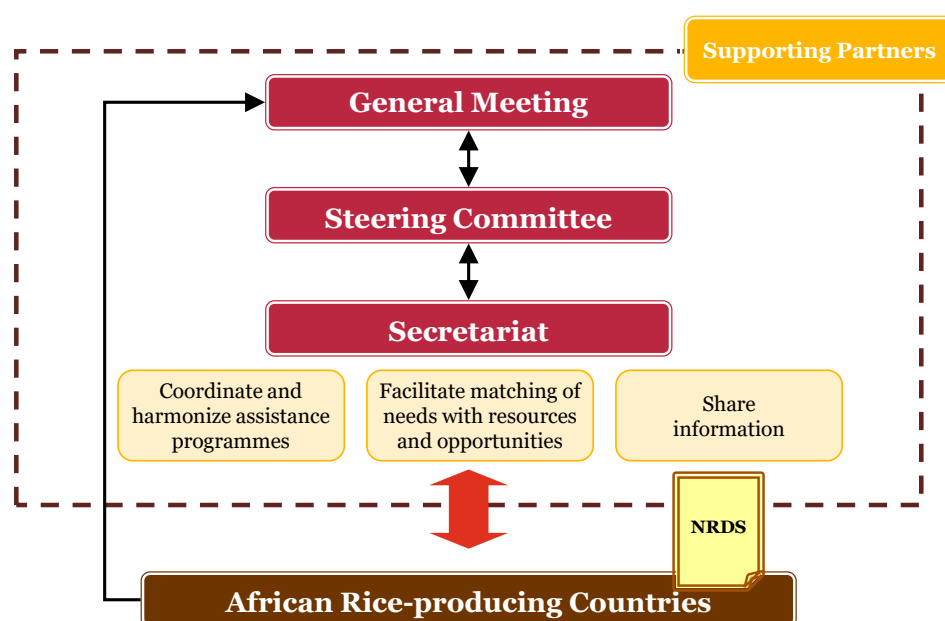


Figure 91 : Organization Structure

3.2 Stakeholders

3.2.1. General Meeting

The General Meeting is the highest decision-making body for CARD and is attended by representatives of CARD Supporting Partners (SC members and Partner Organizations) and member countries to discuss all aspects of the implementation of CARD. Interested non-member organizations/institutions are invited to the meetings as observers. In principle, General Meetings are held every two years, but until the 4th General Meetings they were held annually with the aim of establishing concrete initiative activities and ensuring momentum.

The administrative costs of General Meetings are financed from the CARD Secretariat budget (JICA finances the Secretariat) and voluntary contributions from CARD Supporting Partners. CARD Supporting Partners bear the travel and other costs of their own representatives at the meetings.

3.2.2. Steering Committee

The CARD Steering Committee (SC) was established to discuss the operation and management of CARD. CARD SC meetings are usually held once a year in order to share information about the status of CARD activities and to approve annual work plans, budgets, and membership. Meetings are attended by executive representatives of CARD SC members and Partner Organizations which are approved as observers.

3.2.3. Steering Committee members and Partner Organizations (CARD Supporting Partners)

Steering Committee members and Partner Organizations

The 11 members of the Steering Committee are JICA, AGRA, FARA, Japan International Research Center for Agricultural Sciences (JIRCAS), the International Rice Research Institution (IRRI), AfricaRice, NEPAD, the Food and Agriculture Organization (FAO), the African Development Bank (AfDB), the International Fund for Agricultural Development (IFAD), and the World Bank (WB). In addition to these members, organizations such as the International Water Management Institute (IWMI), the World Food Programme (WFP), Building Resources across Communities (BRAC), and the Bill & Melinda Gates Foundation (BMGF) participate in CARD-related meetings as Partner Organizations.

Broadly, such partners are expected to play a role in the following areas:

Development banks: provide funds to projects that implement NRDS and sub-sector strategies

Implementing agencies: implement projects that contribute to CARD goals

Research institutions: provide technical knowledge

Process Assistance Organizations

In each member country, CARD has designated one SC member's field office as a Process Assistance Organization (PAO) in order to ensure the smooth implementation of the initiative. Initially, JICA functions as the PAO for CARD in 19 member countries¹¹ and AfricaRice assumes this role in the remaining 4 countries.¹²

PAOs are tasked with the following functions:

- (1) Support timely and efficient communication between the CARD Secretariat and

¹¹Cameroon, Ghana, Guinea, Kenya, Madagascar, Mali, Mozambique, Nigeria, Senegal, Sierra Leone, Tanzania, Uganda, Benin, Burkina Faso, Democratic Republic of Congo, Ethiopia, Liberia, Rwanda, and Zambia.

¹² Cote d'Ivoire, Central African Republic, Gambia, Togo

taskforces and function as the formal communications channel for the CARD Secretariat as necessary.

- (2) Provide advice and support necessary for the timely and efficient execution of actions by taskforces.
- (3) Provide in-country logistical support to CARD missions (e.g. travel-related assistance for CARD Secretariat staff/CARD Consultants)
- (4) Provide technical support to taskforces for the development and implementation of the NRDS (if possible)

3.2.4. CARD Secretariat

The CARD Secretariat aims to ensure the smooth implementation of CARD and is located at AGRA headquarters in Nairobi, Kenya.

CARD Secretariat staff members consist of a general coordinator, a technical coordinator, supporting staff, and consultants. In the past, staff from CARD SC members were seconded to the Secretariat. However, current coordinators have been dispatched by JICA, which provides financial contributions towards the administrative costs of the Secretariat.

A broad definition of the CARD Secretariat's tasks was provided in the "Management and Operational Guidelines of CARD", but this lacked clarity. In reality, its roles and responsibilities have been determined and clarified as the initiative was implemented.

Based on the actual tasks that were carried out, we have assumed the CARD Secretariat to have two main roles and responsibilities, which are support for: 1) the NRDS process at the individual country level (strategy document formulation, gap analysis and concept note creation, lobbying for funding and project formulation); and 2) information sharing and partnership forging at the initiative level (through General Meetings, SC meetings, seminars, etc.)

3.2.5. Twenty-three member countries

At the 1st General Meeting held in October 2008, 21 countries were selected as Group 1 and Group 2 member countries based on the importance of rice and the track record of donor cooperation in the rice sector in each country. At the 3rd SC meeting held in November 2009, Ethiopia and Zambia joined the Group 2 countries, bringing the total membership of the two groups to the current figure of 23.

Group 1

Cameroon, Ghana, Guinea, Kenya, Madagascar, Mali, Mozambique, Nigeria, Senegal, Sierra Leone, Tanzania, Uganda

Group 2

Benin, Burkina Faso, Central African Republic (CAR), Côte d'Ivoire, Democratic Republic of Congo (DRC), Liberia, Rwanda, Gambia, Togo, Ethiopia, Zambia

Group 1 countries commenced the NRDS process in November 2008 and are countries where rice is relatively important in the country as well as the region. Group 2 countries began the NRDS process in December 2009,¹³ taking into consideration the lessons learnt from Group 1 countries.

3.3 Input from stakeholders

Input from stakeholders can be summarized as follows.

Table 3: Input from stakeholders

Stakeholders	Purpose	Human resources	Funding
SC members and Partner Organizations	General	- Focal point at HQ - Officers for rice projects	- Funding for rice projects
	GM and SC	- Representatives	- Traveling costs
	Secretariat	- Staff (secondment) *Currently only applicable to JICA	- Administrative costs *Currently only applicable to JICA
	Training	- Instructors	- Administrative costs
Member countries	General	- Focal point - Taskforce members - Officers for rice projects	- Funding to organize rice committees (depending on the country) - Funding for rice projects
	GM	- Representatives	
Secretariat	General	- (Coordinators) - Assistants - Consultants	- Traveling costs - Funding for websites - Funding for activities in each country (workshops, etc.)
	GM and SC		- Traveling costs - Administrative costs

¹³ Formally, CARD activities stated in May 2009 following the 3rd General Meeting.

4. Output, outcome, and impact at the country level

4.1 Overview of CARD promotion at the country level

NRDS Process

The NRDS process provides the basis for the promotion of CARD in each country. The CARD Secretariat assists the NRDS taskforce in each country in carrying out the following steps of the “NRDS Process”: 1) NRDS formulation and launch (and updating); 2) Gap analysis, prioritization, and concept note formulation; 3) Lobbying for funding; and 4) Implementation.

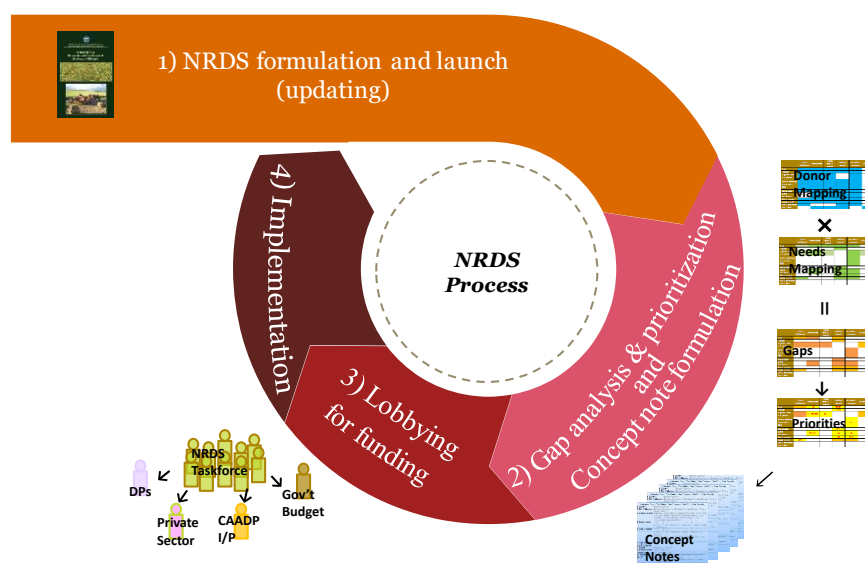


Figure 10 : NRDS Process

Source: CARD Secretariat, “General Progress of the CARD Initiative” – Presentation material from TICAD VI Side Event on CARD on August 25th, 2016

1) NRDS formulation and launch (and updating)

Each member country is responsible for the creation of the NRDS, a strategy document that details the roadmap for achieving the goals of the CARD initiative. To facilitate this process, a CARD focal point and taskforce are appointed by the government. The taskforce functions as the coordination point for different ministries, value chain actors, and other rice development stakeholders.

Discussions are undertaken in both regular taskforce meetings as well as in “Working Weeks” (intensive workshops, each of which is usually held over a week). The ideas collectively agreed upon by the taskforce during the “Working Week” for NRDS are drafted into a zero draft by either the taskforce members or the CARD Consultant. Through an internal feedback process between the CARD Secretariat and taskforce, a more refined version of the NRDS is developed.

Each country finalizes, validates, and approves the NRDS according to its own process.

CARD support is mainly provided through “working weeks” financed by CARD (the number of “working weeks” depends on the needs of each country). CARD’s main activities with regard to this stage are: provision of working tools (such as NRDS templates), discussion facilitation, sharing of experiences from other CARD member countries, technical backstopping, linking taskforces with resource persons, collecting technical input/comments from CARD SC members for the draft strategies, and assisting the actual writing of the NRDS as necessary.

In drafting the NRDS, the CARD Secretariat does not push specific ideas, always prioritizing government ownership in the process.

2) Gap analysis, prioritization, and concept note formulation

After the NRDS has been formulated, the government identifies gaps in intervention. Using the Sub-sector/Intervention Elements Matrices (SIEM), the CARD Secretariat encourages the taskforce to discuss existing and needed interventions.

In the SIEM, different sub-sectors are vertically listed, with different intervention elements (types of assistance) listed horizontally. Possible interventions can be mapped in one or more of the sub-sectors. The four CARD approaches can also be understood in terms of this matrix. The approach by Agro-Ecology primarily covers the upstream part of the value chain, while the Value Chain Approach covers the entire value chain all the way to the downstream part. The Capacity Development Approach is understood as corresponding to E. Human resource capacity of the intervention elements, which overlaps with part of the South-South Cooperation Approach covering C. Provision/support, D. Information and knowledge, and E. Human resource capacity.

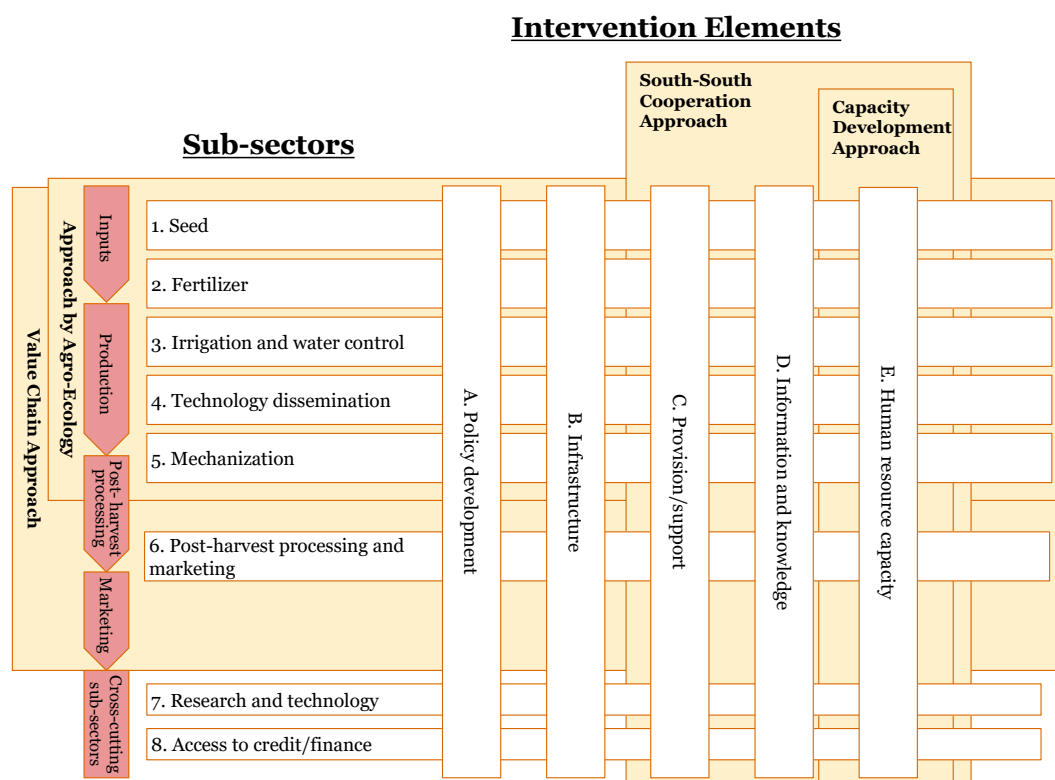


Figure 11 : Sub-sectors/Intervention Elements

When existing and needed interventions are separately mapped and the two matrices are superimposed, gaps in intervention can be identified. Priorities are then assigned for these interventions.

After prioritization, governments formulate concept notes according to the identified gaps and priorities.

The CARD Secretariat provides facilitation and technical backstopping support to the taskforce during a “Working Week”. In the past, there was one “Working Week” for gap analysis and another for concept note formulation; however, since 2012 these two “Working Weeks” have been merged into one.

3) Lobbying for funding (“fund matching”)

Funds for the concept notes are expected to be sourced from the government’s own budget or from development partners. CARD does not provide any direct funding.

Broadly, there are two ways projects are formulated:

- (1) Present the concept notes, developed by the taskforce, to donors and fine-tune them based

on the needs of each donor. Since donors usually have their own development assistance strategies, it is rare for them to accept government-developed concept notes without any revision. The fine-tuning process can involve selecting and focusing on a specific part of the concept note or grouping several concept notes together to create one project.

- (2) Search for donors in advance and ask about their interest in providing cooperation in the rice sector, then create a concept note for that specific donor based on the area on which the donor is focused and create projects (this is regardless of whether the area selected by the donor matches government-identified priority areas).

CARD Secretariat staff and CARD Consultants support taskforce members by researching the development partners, visiting development partners' offices, and planning the fund matching process jointly. Prior to carrying out these activities, the CARD Secretariat obtains permission/approval from high ranking officials from the ministry in charge of CARD, as fund mobilization and resource allocation are sensitive matters.

4) Implementation

Implementation is expected to be carried out on the government's initiative. The CARD Secretariat oversees implementation mostly through visiting/resident CARD Consultants; tracking the status of projects in the rice sector, including CARD-labeled projects; and providing assistance in response to requests from the government.

Sub-sector strategies

Whilst NRDS is an overarching strategy that covers the whole rice value chain, CARD stakeholders agreed that focused thematic support for certain sub-sectors would be beneficial for furthering the CARD initiative. In this context, CARD has commenced providing assistance for mechanization and rice seed sub-sectors.

For mechanization, CARD began support in January 2010 with the establishment of an advisory committee for formulating principles for mechanization support in Africa. Field research was conducted in Senegal, Ghana, Tanzania, and Uganda, and study sessions and opinion exchanges were facilitated. In February and November 2012, CARD hosted a workshop on mechanization in Nairobi, inviting NRDS taskforce members and CARD focal points from Senegal, Tanzania, Uganda, Rwanda, Madagascar, Cameroon, and Mali—essentially kick-starting mechanization strategy support in member countries.

With regard to rice seed, CARD launched the “Pilot Initiative for Improved Rice Seed Sector in CARD Countries” in 2013. 10 member countries¹⁴ were initially selected as pilot countries, and this was later scaled up to remaining countries.¹⁵

The process and type of support provided by CARD mirror that detailed in the “NRDS process” section above.

“CARD-labeled projects”

At the onset of the CARD initiative, the only indicator established was an impact indicator: “Production volume of rice”. However, as the implementation of NRDS progressed, there was an increasing need to clearly understand and demonstrate the contributions CARD is making towards member countries’ rice production growth. Following the 5th CARD General Meeting in February 2013, the concept of “CARD-labeled projects” was introduced and the number, budget, coverage, and number of beneficiaries of “CARD-labeled projects” became output indicators for CARD.

According to the CARD Secretariat, a “CARD-labeled project” is broadly defined as a project that refers to the issues identified in the NRDS. Narrowly, it is defined as a project, the formulation of which was influenced by the NRDS, sub-sector strategies, and/or concept notes, developed with the support of CARD.

This in itself defines one of the activities of the CARD Secretariat, which is to assist CARD member countries to increase their number of CARD-labeled projects while at the same time stocktaking CARD-labeled projects.

¹⁴ Burkina Faso, Cameroon, Côte d’Ivoire, Ghana, Guinea, Madagascar, Nigeria, Senegal, Tanzania, and Uganda


¹⁵ Benin, DRC, Ethiopia, Gambia, Kenya, Liberia, Mali, Mozambique, Rwanda, Sierra Leone, Togo, Zambia

The following sections describe the output, outcome, and impact of CARD at the country level in respective 23 countries.

4.2 Group 1: Cameroon

4.2.1. Context/background

Basic Information of the country

Republic of Cameroon			
Exchange rate (2017) ¹⁶	603.161 XAF=1USD		
Land ¹⁷	475,440 sqkm		
Population (2016) ¹⁸	24,360,803		
Climate ¹⁹	Varies with terrain from tropical along coast to semiarid and hot in north		
Languages ²⁰	English, French, 24 major African language groups		
Ethnic Groups (2014 est.) ²¹		Cameroon Highlanders, Equatorial Bantu, Kirdi, Fulani, Northwestern Bantu, Eastern Nigritic	
Per capita GDP (2017) ²²	1217.048	USD per capita	
Per capita GDP Growth rate (2017) ²³	3.7	%	
Population growth rate (2016) ²⁴	2.58	%	
Age composition of population (2016 est.) ²⁵	0-14 years: 42.6% (male 5,228,047/female 5,149,228) 15-24 years: 19.55% (male 2,393,598/female 2,368,557) 25-54 years: 30.71% (male 3,762,054/female 3,718,266) 55-64 years: 3.97% (male 471,306/female 495,462) 65 years and over: 3.18% (male 360,386/female 413,899)		
Population % between 15-54 years ²⁶	50.26	%	

¹⁶ Oanda <https://www.oanda.com/lang/ja/currency/converter/> (31st July 2017)

¹⁷ CIA (Central Intelligence Agency) "The World Factbook"

¹⁸ Ibid.

¹⁹ Ibid.

²⁰ Ibid.

²¹ Ibid.

²² IMF

²³ Ibid.

²⁴ CIA (Central Intelligence Agency) "The World Factbook"

²⁵ Ibid.

²⁶ Ibid.

Unemployment rate (both sex, age15+) (2016) ²⁷	4.6	%
FDI Inflow (2015) ²⁸	694	Million USD
Internet penetration (% of Individuals using the Internet) (2015) ²⁹	20.68	%
Mobile penetration (Mobile-cellular telephone subscriptions) (2015) ³⁰	71.85	%
Consumer Price Index growth (1960-2016) ³¹	2.06	

Information on the country's rice sector

Level of rice demand

Rice is the staple food for both rural and urban populations in Cameroon. The national demand for rice was estimated to be at 300,000 tons in 2009.³² With increasing urbanization, rice consumption will increase accordingly both in the urban areas for ease of cooking, among others, and in the rural areas due to the aging populations there.³³ Nonetheless, the annual per capita consumption of rice remains below 30 kg per inhabitant on average, due to the diversity of staple foodstuff consumed in Cameroon.³⁴

The importance of rice for the economy and food security

Agriculture is an important economic sector for Cameroon from the perspectives of employment and production, as well as a strategic crop for fighting hunger. The annual national production of rice was estimated to be approximately 100,000 tons of paddy grown on 14,000 ha of land at the time of NRDS finalization in 2009, while Cameroon has been spending large amount of money (more than 200 million dollars) per year on rice imports. Rice imports are growing despite the increase in national production.³⁵

It was estimated that the number of people who were economically dependent on rice growing activities was 180,000.³⁶ Among them, about 145,000 farmers have been involved in producing rice, which were mainly exported to neighboring countries (Nigeria, Chad and CAR), with 27,000

²⁷ ILO STAT (<http://bit.ly/2oIwFux>)

²⁸ Worldbank World Development Indicators, 27/4/2017 update

²⁹ ITU Country ICT Data (until 2015)

³⁰ Ibid.

³¹ AFDB Socio Economic Database

³² National Strategy for Rice Growing in Cameroon – (Milling) III, March 2009.

³³ The aging index (the number of persons 60 years old or over per hundred persons under age 15) in Cameroon was 13.0 in 2000 but is estimated to become 16.9 in 2025 and 45.2 in 2050. (United Nations Department of Economic and Social Affairs Population Division “World Population Ageing: 1950-2050”, 2002)

³⁴ Questionnaire for Country Focal Point (Ministry of Agriculture of Rural Development), Sep. 2017 and National Strategy for Rice Growing in Cameroon – (Milling) III, March 2009.

³⁵ Ibid.

³⁶ National Strategy for Rice Growing in Cameroon – (Milling) III, March 2009.

households and 3000 other players such as agricultural workers, business people, retailers, haulers, husking machine operators, suppliers of inputs and sellers of packaging material, among others.³⁷

Positioning of rice development and NRDS within priority policies

Due to its importance as a consumer good and also an economic sector in Cameroon, rice is increasingly being mentioned in the documents and speeches of the President and other prominent figures as a priority trade area in which the State will have to invest. The CARD focal point is also in charge of CAADP, and therefore the connection between NRDS and the CAADP document is considered strong.

Authorization status of NRDS

The NRDS was validated in 2009. Many of the finished projects and the ongoing projects put in place since 2008 for rice development are based on the NRDS and thus that document has been referred to by the stakeholders.

Existence of champions such as high-ranking ministry officials who support NRDS

Strong government commitment has been shown by creating a special unit for rice development and allocating additional budget in the sector. Indeed, due to the country's economic difficulties and agro-ecological opportunities, the highest authorities in the country have quoted that rice is the top crop to cultivate. Also the state has set up companies involved mainly in the production of rice or the exclusive control of rice producers or the management of rice-growing areas.

Government structure for NRDS implementation

The Chef de cellule des projet et program, Ministry of Agriculture and Rural Development (MINADER) is the focal point. MINADER is the lead agency for the implementation of the NRDS because it undertakes planning for government-related work and is responsible for agriculture development programs. However, the ministries in charge of research, economy, trade, small and medium-sized businesses and industries are involved in the said actions within a steering committee framework.

³⁷ Ibid.

4.2.2. Output

Status of the NRDS process

		Status	Support by CARD
A NRDS	A-1 Formulation and launch	Done	<ul style="list-style-type: none"> The NRDS was developed and approved in March 2009, which was led by the Ministry of Agriculture and Rural Development.
	A-2 Gap analysis& prioritization and concept note formulation	Done	<ul style="list-style-type: none"> Priority areas were identified and the task force members have developed concept notes.
	A-3 Lobbying for funding and project formulation	In progress	<ul style="list-style-type: none"> Some projects are drawn up with development partners, and emerged including PRODERIP, FPRIA, FAO Rice, RICE C2D and other initiatives.
	A-4 Implementation	In progress	<ul style="list-style-type: none"> There are 6 CARD-labeled projects in Cameroon. 5 projects have been implemented and 1 projects are in the negotiation phase. The Rice desk, the Rice Steering Committee, and the Technical Committees are promoting implementation.
B	Rice seed strategy	In progress	<ul style="list-style-type: none"> The seed strategy was developed in 2013. Concept notes are formulated.
C	Mechanization strategy	In progress	<ul style="list-style-type: none"> The focal point and task force have just finished drawing up the mechanization strategy, and they have developed concept notes. But the strategy was not approved yet. Projects in regard to mechanization are yet to be implemented.

Figure 12 : Status of NRDS Process in Cameroon

List of CARD-labeled projects

These CARD-labelled projects are/were implemented in Cameroon according to the CARD Secretariat.

Table 4: List of CARD-labeled projects in Cameroon

Name of the Project	Donor	Duration	Modality	Budget	Area of Intervention (Sub-Sector)	Area of Intervention (Geographic)	Outputs/Activities
Project for Mechanized Complex Dept. for Irrigated Rice Cultivation of Centre Region in CMR	Korea rural Community Corp	2011-2014	Grant		Quality Improvement		Training on the mechanization on rice cultivation is provided Equipment for mechanization is disseminated
Upland Rice Development of the Tropical Forest Zone in Cameroon (PRODERiP)	JICA	2011-2016	Technical Cooperation	320 million JPY	Technology, Dissemination, Quality Improvement	Central, East and South region	1) Upland rice varieties and cultivation techniques for extension are identified by experiments in the project farm. 2) Various layers of government officers and extension officers for promotion of upland rice cultivation are trained. 3) Upland rice cultivation is promoted mainly in the pilot areas of the 3 regions through dissemination activities by key farmers, extension officers and staff of local office of MINADER. 4) Post-harvest techniques at the farm level are improved in the advanced pilot areas.
Enhancement of Nat Agriculture Extension Sces for Nat Food Security	KAFACI/Rural Dvt Administration of Korea	2013-2016	Grant		Technology, Dissemination, Quality Improvement		Training on rice technology cultivation and extension services are provided
Project for the Upland Rice and Irrigation Rice Development	JICA	2016-2021	Technical Cooperation	950 million USD	Water Control, Access to Inputs	Central, East, South and Northern west regions	(i) The production of high quality rice seed increased in the subject area; (ii) Farmers that grow and consume dry-land rice increased in the subject area: central, southern, and eastern state.; (iii) The irrigated hydroponics technology of farmers improved in UNVDA controlled irrigation development area; (iv) Harvesting of the rice for marketing and post-harvest processing technology will improve in UNVDA's controlled irrigation development area.
Component of the Agricultural Competitiveness Project (PACA) : Study on the Suitability of Agricultural Equipment for Types of Crops and Agro-Ecological Zones	WB	Completed	Loan		Technology, Dissemination, Quality Improvement		Agricultural mechanization is adapted to different crops
Training Center on Mechanization	Korea rural Community Corp	Negotiation phase	Technical Cooperation		Quality Improvement		Improvement of productivity, improvement of post-harvest techniques

Intervention areas

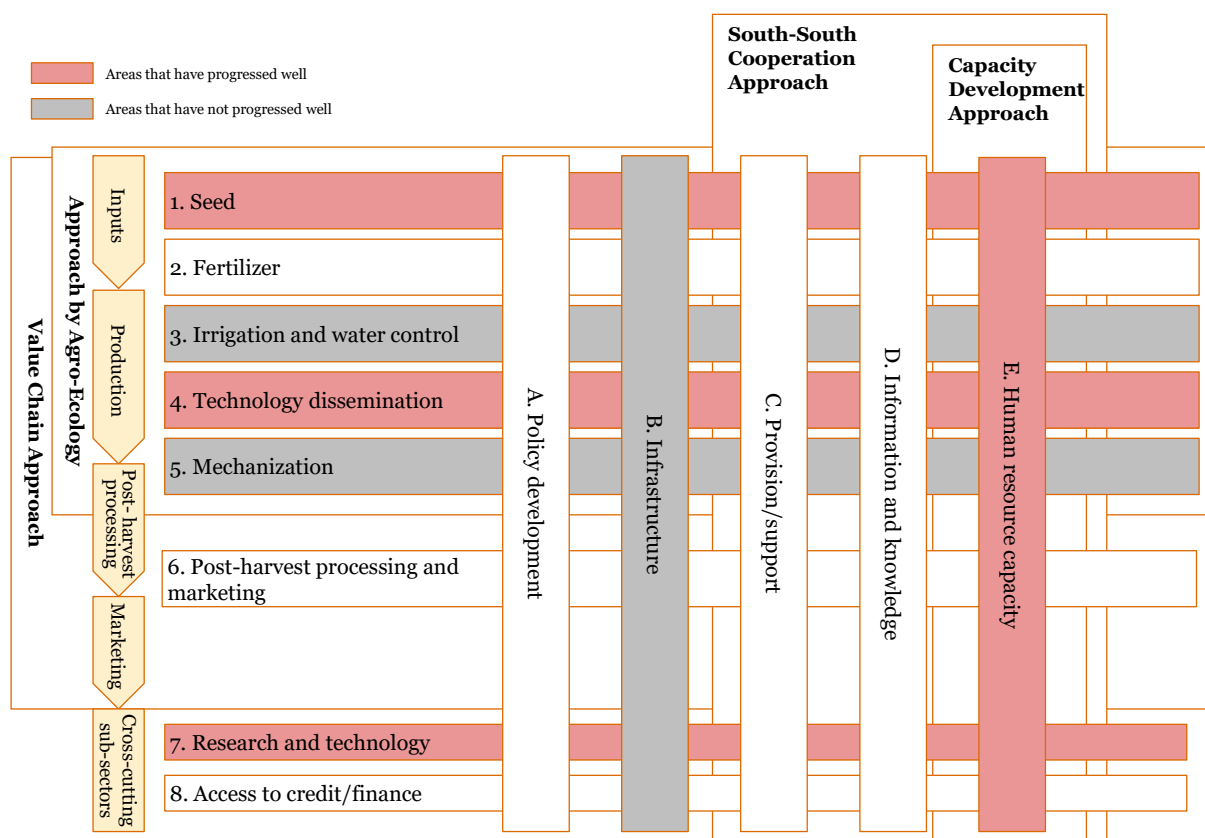


Figure 13 : Intervention Areas in Cameroon

The government officials understand that the introduction of high yielding varieties resulted in the improvement of *1. Seed* production sector. Through various projects, *E. Human resource capacity development* was also provided for operators in seed selection and growth techniques. The capacity development was not limited to seed production. *4. Dissemination of good practices* was successfully conducted for outreach workers, farmers, and rice cultivation development planners.

However, *5. Mechanization* showed little progress, because the drawing-up of the mechanization strategy was set aside in favor of seed growth. That said, the CARD focal point and task force have just finished drawing up the mechanization strategy. Specific projects regarding mechanization are yet to be implemented. Also, the development of *B. Infrastructures* for *3. Irrigation and water control* is progressing less rapidly due to the heavy investments required for its financing.

4.2.3. Outcome

Human resource development

The CARD initiative has enabled capacity building for several national policy makers in the planning of rice development, seed production, paddy production and processing. In addition, outreach projects developed under the NRDS have made it possible to transfer this acquired knowledge from the officials of the Ministry of Agriculture to farmers at the grass-roots level.

Also, CARD's General Assembly meetings were an opportunity for African country representatives to exchange knowledge and insights with each other on developing rice cultivation.

Project formulation and implementation

Contributions to increase in rice sector projects funded by the government and donors

Before the NRDS, there were fewer rice projects. Today, there are some that have emerged such as the PRODERIP, FPRIA, FAO Rice, RICE C2D and other initiatives. The CARD initiative has made the support by development partners for projects possible.

Contributions to efficient, effective, and strategic project formulation

The process of NRDS development has helped the country focal point and task force in prioritizing interventions. When public resources are given as a subsidy to state-owned companies involved in the rice sector, the said country stakeholders will ensure that the activities financed are those that are NRDS priorities and that these are accounted for in the company records.

Contribution of the CARD focal point in promoting projects

The focal point is a stable position and this has led to the development of interpersonal relationships with the focal points of other institutions. The focal point's involvement in the general planning of national agricultural development has helped to include rice cultivation development in national policy and strategy documents, provide multiple training courses for executives within the framework of the CARD initiative. The focal point plays an important role in continuing to advocate for rice development.

Contributions to correlative improvements and timing adjustments between governments and donors

Although little collaboration exists among the ongoing rice projects in the country, the establishment of a specific and independent technical secretariat for the implementation of all matters relating to rice was a contribution to the correlative improvements.

4.2.4. Impact

Quantitative impact

Table 5: Production, consumption, and self-sufficiency of rice in Cameroon

(1000MT)	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Production of rice (paddy) FAO³⁸	72	135	153	174	182	194	153	278	278	359
Production of rice (paddy) USDA³⁹	71	135	152	175	183	194	203	203	183	183
Production of rice (milled) USDA⁴⁰	45	85	96	110	115	122	128	115	115	115
Consumption of rice (milled) USDA⁴¹	345	385	446	510	640	672	628	615	635	655
Self-sufficiency of rice⁴²	13.0%	22.1%	21.5%	21.6%	18.0%	18.2%	20.4%	18.7%	18.1%	17.6%

Table 6: Production targets of rice in NRDS

(1000MT)	2008	2018
Irrigation fed ⁴³	50	165
Rain fed ⁴⁴	30	698
Flooded Valley ⁴⁵	20	105
Total	100	968

Qualitative impact

Increased sensitization of the government, donors, and other stakeholders

The Secretariat has helped raise awareness around the challenges of rice development.

4.2.5. Success factors and challenges

Success factors

■ Government

Government structure for implementation

The establishment of a streamlined and effective NRDS implementation structure which comprises the Rice Desk, the Rice Steering Committee, and the Technical Committees has contributed greatly to

³⁸ FAO STAT database "Crops" (<http://www.fao.org/faostat/en/#data/QC>) 10/1/2018 update

³⁹ Calculated based on United States Department of Agriculture (USDA) PSD online database "Grains" 8/10/2017 update

⁴⁰ USDA PSD online database "Grains" 8/10/2017 update

(<https://apps.fas.usda.gov/psdonline/app/index.html#/app/downloads?tabName=default>)

⁴¹ Ibid.

⁴² Calculated based on USDA PSD online database "Grains" 8/10/2017 update

⁴³ Supra note 32

⁴⁴ Ibid.

⁴⁵ Ibid.

successful project formulation and implementation. In fact, the above structure is the Ugandan model which has been adopted by Madagascar and Ghana with some modification.

Continuity of CARD focal point /taskforce/high-ranking officials

The national focal point is a stable position, and this has led to the development of interpersonal relationships with the focal points of other institutions.

■CARD Secretariat

Provision of personnel

The CARD Secretariat has a regular presence in the field, and with the support of its consultants, activities are being carried out well.

Challenges

■Government


Financial resources

The CARD focal point stated that the government is well aware that rice is in great demand, but paradoxically does not provide the resources needed for its development. Also, advocacy for the allocation of more resources to implement the NRDS during the preparation of the ministry's budget has sometimes been seen to be a personal interest of the focal point.

4.3 Group1: Ghana

4.3.1. Context/background

Basic Information of the country

Republic of Ghana			
Exchange rate (2017) ⁴⁶	4.17 GHS=1USD		
Land ⁴⁷	238,533 sqkm		
Population (2016) ⁴⁸	26,908,262\		
Climate ⁴⁹	Tropical; warm and comparatively dry along southeast coast; hot and humid in southwest; hot and dry in north		
Languages ⁵⁰	English, Asante, Ewe, Fante, Boron (Brong), Dagomba, Dangme, Dagarte (Dagaba), Kokomba Akyem, Ga		
Ethnic Groups (2010 est.) ⁵¹		Akan, Mole-Dagbon, Ewe, Ga-Dangme, Gurma, Guan, Grusi, Mande	
Per capita GDP (2017) ⁵²	1511.855	USD per capita	
Per capita GDP Growth rate (2017) ⁵³	5.8	%	
Population growth rate (2016) ⁵⁴	2.18	%	
Age composition of population (2016 est.) ⁵⁵	0-14 years: 38.2% (male 5,164,505/female 5,113,185) 15-24 years: 18.66% (male 2,498,185/female 2,522,353) 25-54 years: 34.05% (male 4,445,321/female 4,716,311) 55-64 years: 4.91% (male 642,984/female 678,784) 65 years and over: 4.19% (male 520,589/female 606,045)		
Population % between 15-54 years ⁵⁶	52.71	%	
Unemployment rate (both sex, age15+) (2016) ⁵⁷	5.9	%	

⁴⁶ Oanda <https://www.oanda.com/lang/ja/currency/converter/> (31st July 2017)

⁴⁷ CIA (Central Intelligence Agency) "The World Factbook"

⁴⁸ Ibid.

⁴⁹ Ibid.

⁵⁰ Ibid.

⁵¹ Ibid.

⁵² IMF

⁵³ Ibid.

⁵⁴ CIA (Central Intelligence Agency) "The World Factbook"

⁵⁵ Ibid.

⁵⁶ Ibid.

⁵⁷ ILO STAT (<http://bit.ly/2oIwFux>)

FDI Inflow (2015) ⁵⁸	3,192	Million USD
Internet penetration (% of Individuals using the Internet) (2015) ⁵⁹	23.48	%
Mobile penetration (Mobile-cellular telephone subscriptions) (2015) ⁶⁰	129.74	%
Consumer Price Index growth (1960-2016) ⁶¹	7.92	

Information on the country's rice sector

Level of rice demand

Cassava and maize used to be two major important crops, but rice has become the second-most important food staple after maize⁶². Rice consumption keeps increasing as a result of population growth, urbanization and changes in consumer habits. Per capita consumption has increased from 17.5 kg in 1999-2001 on average to 22.6 kg in 2002-2004 on average and about 35 kg in 2015-2016.⁶³ The same trend is expected to continue, and it was estimated that the figure reaches 63.0 kg by 2018.⁶⁴ In fact, rice is becoming a regular meal for Ghanaians. Most consumers are choosy and prefer long-grain perfumed rice with good taste and good appearance, and with whole grains.⁶⁵

The importance of rice for the economy and food security

Rice has become the second most important food staple in the country. Rice is cultivated in Ghana both as a food crop and a cash crop. Since Ghana depends largely on imported rice to make up for the deficit in domestic rice supply, the government is trying to increase production in the country to match the growing demand. On the average, annual rice import is about 500,000 MT which represents about 50% of the consumption.⁶⁶ According to the CARD focal point, the import bill is currently in the range of USD 300-350 million annually which is a substantial loss of foreign currency.⁶⁷

Donors' interest in rice development

There is increasing rice demand and with rice being one of the main food security crops in Ghana, most development partners including the government attaches a great importance to rice. Development partners working in rice sector include AfDB, WB, AFD, USAID, JICA, FAO, IFAD,

⁵⁸ Worldbank World Development Indicators, 27/4/2017 update

⁵⁹ ITU Country ICT Data (until 2015)

⁶⁰ Ibid.

⁶¹ AfDB Socio Economic Database

⁶² Presentation of the inception report by the focal point at the training in JICA Tsukuba, Japan. Ghana Shared Growth and Development Agenda (GSGDA) II 2014-2017 emphasizes investment in the development of rice and maize. Furthermore, maize, rice, soybeans, sorghum and vegetables were selected as priority crops for the new campaign "Planting for Food and Jobs."

⁶³ Republic of Ghana, Ministry of Food and Agriculture, "National Rice Development Strategy", February 2009.

⁶⁴ Oxford Business Group "Rice farming in Ghana changes with policy initiatives and production trends," (accessed 23/11/2017)

⁶⁵ Presentation of the inception report by the focal point at the training in JICA Tsukuba, Japan.

⁶⁶ Calculated based on United States Department of Agriculture (USDA) PSD online database "Grains" 8/10/2017 update. (2008-2017)

⁶⁷ An average of USD 200 million between early 1990s and 2004 (Ghana National Rice Development Strategy).

and Gesellschaft für Internationale Zusammenarbeit (GIZ)⁶⁸. According to the focal point, FAO, AfDB and JICA were always participating in the meetings during working weeks for development of the first NRDS.

Positioning of rice development and NRDS within priority policies

The Ghana Shared Growth and Development Agenda (GSGDA) is the key document that donors use in international development in Ghana. For the agricultural sector, the Food and Agriculture Sector Development Policy (FASDEP) is the key policy, and the Medium Term Agriculture Sector Investment Plan (METASIP) is an action plan to implement the said policy. Agricultural projects are implemented based on these documents as well as other specific policies (NRDS, seed policy, mechanization policy). The METASIP which is the result of Ghana's participation in CAADP, is broken down by crops. The idea of CARD is incorporated into the section on rice in the METASIP and METASIP II.

Authorization status of NRDS

The first NRDS was approved in 2009 and has been signed, but it remained as a document of the crop department within the Ministry. The revised document is undergoing the approval process of the ministry, and is expected to become a ministerial document by 2018.

The government believes that the NRDS has become the main reference document for all rice-related activities. However, some of the officials from SC local offices have expressed concern about the authority of NRDS. With master documents as FASDEP and MERASIP already existing, the NRDS might not be functioning as a master document among the development partners, unless the government ensures that the NRDS should be referred to by every development partner.

Existence of champions such as high-ranking ministry officials who support NRDS

There was a change in administration in 2017, and the new government launched a new initiative called "Planting for Food and Jobs". Under this initiative, the government decided that the priorities of five commodities, namely maize, rice, soya, sorghum, and vegetables. Under this initiative, the government is trying to spend large amount of money to support rice especially in the northern part of the country.

Also the former deputy minister participated in the validation workshop with stakeholders during the NRDS revision process, which indicated the commitment of the government.

⁶⁸ Competitive African Rice Initiative (CARI)

Government structure for NRDS implementation

The CARD focal point is currently a Deputy Director of the Directorate of Crop Services, Ministry of Ministry of Food and Agriculture (MOFA) which is responsible for the development of commodity policies.

The National Rice Coordinating Committee is mentioned in the NRDS, but unfortunately it is not formed yet. That said, National Rice Task Force was established to see to the technical implementation of the strategy. The rice desk plays a role as the secretariat for committee meetings and the contact point in MOFA who communicates with government officers in different directorates.

4.3.2. Output

Status of the NRDS process

		Status	Support by CARD
A	A-1 Formulation and launch	In Progress (revised NRDS)	<ul style="list-style-type: none"> Started to develop NRDS in 2008 and the first NRDS was approved in 2009. It was a document for the crop department. They revised NRDS was created with stakeholder and is now undergoing ministerial approval process.
	A-2 Gap analysis& prioritization and concept note formulation	Not started (revised NRDS)	<ul style="list-style-type: none"> Developed 8 concept notes in the areas of seed system, mechanization, community mobilization, irrigation, post-harvest, and fertilizer based on the first NRDS. Advocated for the government to acquire more support from high-ranking officials.
	A-3 Lobbying for funding and project formulation	Not started (revised NRDS)	<ul style="list-style-type: none"> Some projects formulated after the first NRDS was approved. Once the revised document is finalized the government will start lobbying.
	A-4 Implementation	Not started (revised NRDS)	<ul style="list-style-type: none"> There are 13 CARD-labeled projects in Ghana. CARD consultant visits the government for specific tasks as needed including for advocacy.
B	Rice seed strategy	In progress	<ul style="list-style-type: none"> Developed seed roadmap. All the taskforce members gathered for road map development. Developed concept notes.
C	Mechanization strategy	Not Started	-

Figure 14 : Status of NRDS Process in Ghana

List of CARD-labeled projects

These CARD-labelled projects are/were implemented in Ghana according to the CARD Secretariat.

Table 7: List of CARD-labeled projects in Ghana

Name of the Project	Donor	Duration	Modality	Budget	Area of Intervention (Sub-Sector)	Area of Intervention (Geographic)	Outputs/Activities
NERICA Rice Development Project (NRDP)	AfDB	2005-2010	Loan	2.65 million USD	Seed	Northern, Middle & Volta	(i) Annual Income of 241,000 families is increased (ii) 54,000t of NERICA rice seeds are produced
The Study on Upper West Integrated Agricultural Development	JICA	2007-2010	Study	180 million JPY	Capacity Building, Extension	Upper West Region	(i) Agricultural productivity technology model that is eco-friendly and farmer-friendly is established. (ii) Diffusion system for technology model planar development is maintained. (iii) Human resources for technology diffusion for MoFA, provincial office extension workers, and farmer organization representatives trained.
Project for Sustainable Development of Rain-fed Lowland Rice Production in the Republic of Ghana	JICA	2009-2014	Technical Cooperation	600 million JPY	Extension	Northern and Ashanti Region	(i) Technical package of improved rain fed rice cultivation is developed. (ii) Improvement plan on agricultural business support system for rain-fed rice cultivation is found. (iii) Diffusion method for sustainable rain fed rice cultivation development is developed.
Ghana Commercial Agriculture Project	WB & USAID	2012-2019	Loan & Grant	145 million USD	Value chain	Northern Ghana (SADA Zone) & Accra plains	Promoting inclusive commercial farming along selected commodity value chains
Rice Seed Support Programme	WAAP P/WASP	2013-2017	Loan	60 million USD	Seed	Northern & Volta	Free CS is delivered to farmers
Rice Sector Support Project (RSSP)	AFD	2014-2016	Technical Cooperation	17.13 million Euros	Water management	3 Northern Regions & Volta Region	5000ha of land in the 3 Northern Regions developed
Export Development & Agricultural Investment Funds (EDAIF) Sponsored Rice Project	Government	2014-2016	Technical Cooperation	20 million Euros	All sector	3 Northern Regions & Volta Region	About 10,000 farmers empowered to improve productivity
Study on Improvement of Micro Reservoir Technologies for Enhancement of Rice Production in	JIRCA	2014-2017	Study		Water management	Northern & Ashanti Regions	Low-cost construction techniques are developed for micro reservoirs for a substantial increase in agricultural productivity

Africa							
Ghana Agricultural Sector Investment Program (GASIP)	IFAD	2015-2021	Technical Cooperation	112 million USD	All sector	Whole country	Value Chain of various crops are developed
Financing the Development of Agriculture value chain	KFW	2015-	Loan	23 million Euros	Access to Finance	Whole country	Several off takers and out growers are empowered with finance
Sustainable development of Rain-fed Lowland Rice Production Project, PHASE TWO	JICA	2016 - 2021	Technical Cooperation	500 million JPY	Extension	Northern and Ashanti Region	Technical package of improved rain-fed lowland rice developed, verification of methodology & extension procedure developed. (i) Rice diffusion plan formulation and diffusion budget calculation skill of target group (MMDAs) is improved. (ii) Trainings using diffusion guideline are implemented in target MMDAs. (iii) Monitoring and evaluation skills on rice diffusion plan towards Regional Agriculture Department (RAD) and Districts Agriculture Department (DAD) is improved. (iv) Diffusion guideline is revised.
Project for Enhancing Market-Based Agriculture by Smallholders and Private Sector Linkages in Kpong Irrigation Scheme	JICA	2015-2020	Technical Cooperation	600 million JPY	Access to Market	kpong irrigation project	Several farmers linked to market for their produce. (i) GIDA's skill development plan for irrigated area management for KIS is formulated. (ii) Management skill of Osudoku Agricultural Association is strengthened. (iii) Productivity and profitability around rice cultivation is improved. (iv) Private enterprises that advance into KIS is increased.
Promoting Sustainable Increase in Rice Production and Productivity of Small and Medium Scale Farmers Through PPP	FAO	2016-	Technical Cooperation	380 000 USD	Seed, Fertilizer, Post-harvest	North Tongu	(i) Institutional capacity and business model are built (ii) Improved rice production technology is adopted

Intervention areas

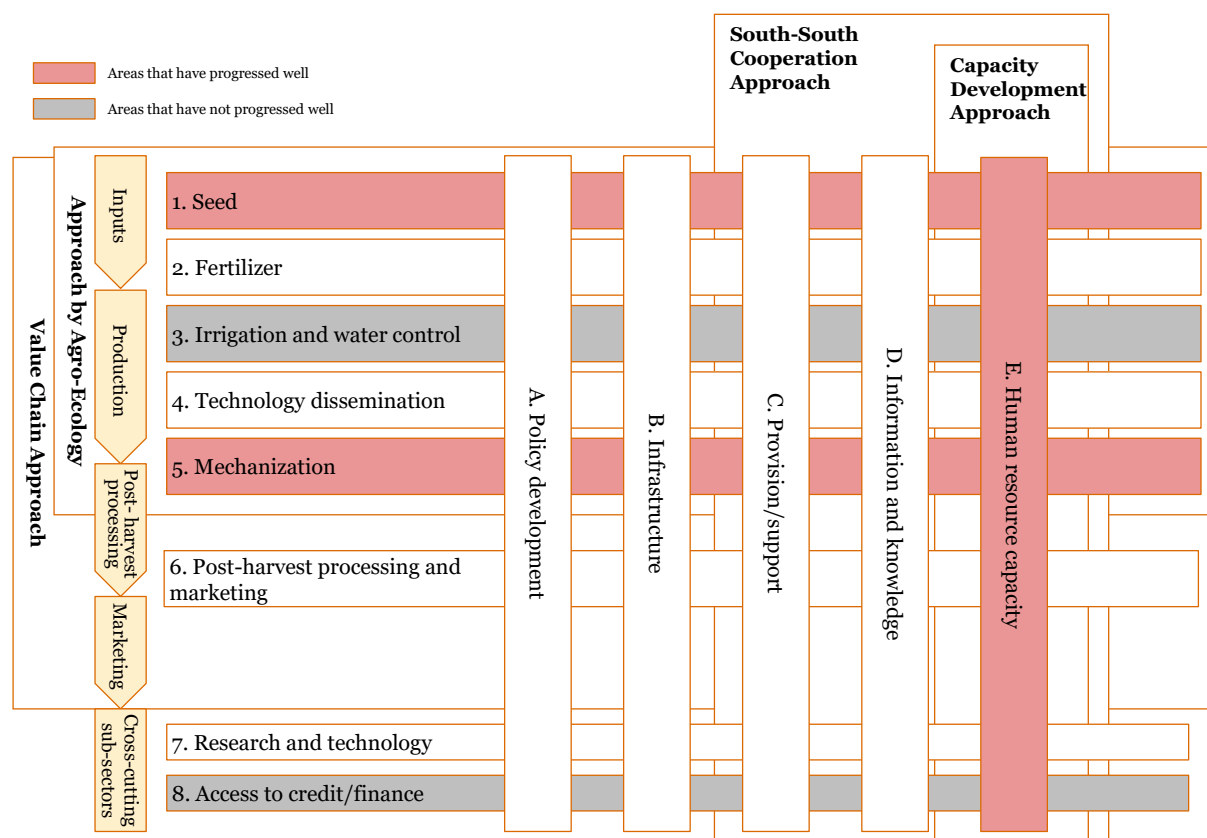


Figure 15 : Intervention Areas in Ghana

The focal points considers that one of the areas that has progressed a lot is 1. Seed system (rice seed quality improvement, use and availability). Improved seeds targeted for promotion under the strategy have been multiplied and supplied to farmers across the country. More so, standards have been developed for rice which has helped improve the quality of rice considerably.

The government sees progress to some extent in the field of 5. Mechanization. Under the initiative of MOFA, eighty nine Agricultural Mechanization Service Centers (AMSEC) were established. Such centers are operated by private companies which provides cultivating services inclining machines rent. In Ghana, maintenance of machines is a huge challenge. Spare parts are not easily available, and maintenance skills are not enough. E. Capacity building is provided by experts in management and the maintenance of machines, which also led to support on rice development.

According to the focal point, more intervention is required for 8. Access to credit for farmers. The interest rate is high, and financial institutions including micro finance still think that there are a lot of risks in agriculture. As a result, farmers have limited access to equipment and farm power which

affects the areas cultivated, and leads to losses especially during harvesting.

Moreover, 3. Irrigation development and construction of water control structures in rice valleys is difficult due to the lack of enough investment.

4.3.3. Outcome

Human resource development

Capacity strengthening through training was very helpful. Researchers and policy makers had the opportunity of attending training programs organized by CARD. The CARD Secretariat were vigilant in training the appropriate persons at the national front to develop their skills. In this regard, the CARD Secretariat may approve the nominees for travel and also make sure that the persons write a country report prior to travelling to Japan for the training program. The training programs are comprehensive and tailored to the needs of the trainees, and it went a long way to develop the skills of rice researchers and policy makers.

One of the opportunities to learn from other member countries was the pre-conference seminar in Senegal on mechanization. After the training, the government sent a private-sector participant to Senegal to learn further, and this person started his business based on what he learned from Senegal.

Project formulation and implementation

Contributions to increase in rice sector projects funded by the government and donors

In the government's current major program "Planting for Food and Jobs", a total amount involved is GHC 560 million which is equivalent of approximately USD 150 million, and the budgetary share of rice is about 40%. This may be the reflection of the increased importance of rice for the country. There have been some rice-related projects by donors that used the NRDS as the main document in regard to developing the projects. The strategies and concept notes developed were very good, but selling them to potential sponsors has not been aggressively done yet.

Contributions to efficient, effective, and strategic project formulation

Ghana had a national document in agriculture even before the NRDS was developed. But thanks to the NRDS, they now have clear ideas of how they want to move the rice sector forward in roadmaps as well as the level of progress based on NRDS. Rice is the only commodity that has a sub-sector strategy.

Contribution of the CARD focal point in promoting projects

The work of CARD focal point is very critical, because it served as the main link between countries and the CARD secretariat and also helped push the agenda of the strategy on all platforms made available. The focal point explains issues from CARD point of view to all the rice sector stakeholders. The issue is that the effort of focal point has not yet turned into financial support and formulation of projects by the government and development partners.

Contributions to correlative improvements and timing adjustments between governments and donors

Although specific examples were not mentioned, it seems that there has been increased correlation between rice projects in general.

4.3.4. Impact

Quantitative impact

Table 8: Production, consumption, and self-sufficiency of rice in Ghana

(1000MT)	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Production of rice (paddy) FAO⁶⁹	302	391	492	464	481	570	604	641	688	N/A
Production of rice (paddy) USDA⁷⁰	302	392	492	463	482	570	603	500	660	650
Production of rice (milled) USDA⁷¹	181	235	295	278	289	342	362	385	396	390
Consumption of rice (milled) USDA⁷²	486	600	790	875	950	965	965	995	1020	1060
Self-sufficiency of rice⁷³	37.2%	39.2%	37.3%	31.8%	30.4%	35.4%	37.5%	38.7%	38.8%	36.8%

Table 9: Production targets of rice in NRDS

(1000MT)	2008	2018
Irrigation fed⁷⁴	76	189
Rain fed highland⁷⁵	11	113
Rain fed lowland⁷⁶	230	1050
Total	317	1,343

⁶⁹ FAO STAT database "Crops" (<http://www.fao.org/faostat/en/#data/QC>) 10/1/2018 update

⁷⁰ Calculated based on United States Department of Agriculture (USDA) PSD online database "Grains" 8/10/2017 update

⁷¹ USDA PSD online database "Grains" 8/10/2017 update

(<https://apps.fas.usda.gov/psdonline/app/index.html#/app/downloads?tabName=default>)

⁷² Ibid.

⁷³ Calculated based on USDA PSD online database "Grains" 8/10/2017 update

⁷⁴ Supra note 63.

⁷⁵ Ibid.

⁷⁶ Ibid.

4.3.5. Success factors and challenges

Success factors

■Government

Continuity of CARD focal point /taskforce/high-ranking officials

For Ghana, the same government officials have been engaging in the CARD activities from the beginning. Further, for some of the SC local offices, a contact person for rice development projects is a former government official of MOFA or those who participated in the validation process of the first NRDS. As the taskforce members who were directly involved in the NRDS development are still working in the field of rice development in Ghana, the awareness of CRAD among stakeholders is quite high.

Ownership and support from high-level government officials

Partially due to the support by the Secretariat, the revised NRDS was able to obtain support from the government, especially from the former deputy minister. He was active in promoting the NRDS and invited media to raise awareness of other stakeholders as well.

■CARD Secretariat

Advocacy for government high-officials

The CARD Secretariat supported the government to explain about CARD activities to the high-level officials of the ministry. The advocacy of the Secretariat has contributed to the increased commitment by the government, and it also resulted in the former deputy minister participating in the validation workshop of the revised NRDS.

■SC members

JICA's support

The JICA expert was dispatched to Ghana. The expert was responsible for and contributed to project formulation (including negotiation with other development partners), the promotion of NRDS implementation, and the establishment of an information-sharing structure among different projects.

Challenges

■Government

Authority of the NRDS

An official of the SC members mentioned the difficulty of formulating projects based on the NRDS, considering that FASDEP and METASIP have been in place since even before NRDS was developed. In order to formulate projects, adding the NRDS to METASIP would be more realistic, but this

process would be challenging.

Financial resources

Financing the activities is a challenge. When there were projects related to rice, there was room for funding support via such exiting projects. Otherwise, the government sometimes cannot afford organizing workshops for stakeholders on their own, and thus information sharing has not been working well.

■ SC members and partner organizations

Inclusion in organization's development assistance strategy/policy

Officials at both government and SC local offices mentioned that rice strategy should be included into the strategies of the SC headquarters. Currently, different development partners have their own strategies. If they do not have a rice agenda in their own strategy in the first place, they cannot follow the NRDS. CARD can conduct lobbying at the HQ level to influence the development partners' project formulation at the country level.

Communication between the SC member representative and SC local office

CARD should be well included in the system of SC members in terms of information sharing. When an officer at SC local office had inquiries about rice development, he directly contacted the Secretariat, as he happened to know whom to talk to. Basically, unless he or she communicates from the side of local offices, information is not shared from the HQ.

Awareness of CARD

The Ghanaian government has difficulty in fundraising. One of the reasons is the low level of awareness among development partners. As mentioned, there are donors who are interested in rice development, but they may not be too cognizant of the NRDS.


Roles of SC members

The unclear roles of the SC members hinder them from taking leadership in promoting project implementation and donor coordination at the country level.

4.4 Group 1: Guinea

4.4.1. Context/background

Basic country information

Republic of Guinea			
Exchange rate (2017) ⁷⁷	9,154.69 GNF=1USD		
Land ⁷⁸	245,857 sqkm		
Population (2016) ⁷⁹	12,093,349		
Climate ⁸⁰	Gently hot and humid; ;monsoonal-type rainy season (June to November) with southwesterly winds; dry season (December to May) with northeasterly harmattan winds		
Languages ⁸¹	French		
Ethnic Groups (2012 est.) ⁸²		Fulani (Peul), Malinke, Soussou, Guerze, Kissi, Toma	
Per capita GDP (2017) ⁸³		534.794	USD per capita
Per capita GDP Growth rate (2017) ⁸⁴		4.3	%
Population growth rate (2016) ⁸⁵		2.62	%
Age composition of population (2016 est.) ⁸⁶		0-14 years: 41.7% (male 2,547,037/female 2,495,495) 15-24 years: 19.67% (male 1,200,618/female 1,177,633) 25-54 years: 30.52% (male 1,851,200/female 1,839,952) 55-64 years: 4.46% (male 258,455/female 281,497) 65 years and over: 3.65% (male 195,054/female 246,408)	
Population % between 15-54 years ⁸⁷		50.19	%
Unemployment rate (both sex, age15+) (2016) ⁸⁸		6.8	%
FDI Inflow (2015) ⁸⁹		85	Million USD

⁷⁷ Oanda <https://www.oanda.com/lang/ja/currency/converter/> (31st July 2017)

⁷⁸ CIA (Central Intelligence Agency) "The World Factbook"

⁷⁹ Ibid.

⁸⁰ Ibid.

⁸¹ Ibid.

⁸² Ibid.

⁸³ IMF

⁸⁴ Ibid.

⁸⁵ CIA (Central Intelligence Agency) "The World Factbook"

⁸⁶ Ibid.

⁸⁷ Ibid.

⁸⁸ ILO STAT (<http://bit.ly/2oIwFux>)

⁸⁹ Worldbank World Development Indicators, 27/4/2017 update

Internet penetration (% of Individuals using the Internet) (2015) ⁹⁰	4.70	%
Mobile penetration (Mobile-cellular telephone subscriptions) (2015) ⁹¹	87.17	%
Consumer Price Index growth (1960-2016) ⁹²	8.80	

Information on the country's rice sector

Level of rice demand

Rice is the staple food for the local population in Guinea, contributing to 35-40% of daily calories and 65% of cereal demand,⁹³ and complemented by maize and cassava. Per capita consumption rose from 70kg/year in 1989 to about 90kg/year in 1995 and 100kg/year in 2008.⁹⁴ It is reported that generally local parboiled rice and imported white rice constitute most of the rice supply and are preferred by consumers. Demand is met through a mix of local production and substantial imports from the international market.⁹⁵

The importance of rice for the economy and food security

Rice is a strategic and politically important subsector in Guinea. During the 2014/2015 crop season, rice cultivation occupied 1,690,869 hectares, representing 47% of all cultivated areas in Guinea.⁹⁶ In terms of volume, rice accounts for half of the cereal production in Guinea and is the principal agricultural activity for Guinean farmers.⁹⁷ Rice's contribution to the GDP is said to be about 6.2%, or around 320.3 billion Guinean Francs (2008).⁹⁸ While demand for other staples like maize, cassava, and groundnut can be met through domestic supply, rice has a self-sufficiency rate of about 73% (2010-2014 average) and is the cause of the high import food bill for Guinea.

Donors' interest in rice development

It seems that the agricultural sector, including the rice sub-sector has not been the focus for donors at least in recent years. This can be attributed to the Ebola virus outbreak, which caused donors to concentrate more on the health sector. However, with the declaration of end of the Ebola epidemic in 2016, a focus shift is expected. AFD (Agence Française de Développement), FAO, IFAD, USAID, and World Bank are the primary donors with an interest in agriculture and rice sub-sector.

⁹⁰ ITU Country ICT Data (until 2015)

⁹¹ Ibid.

⁹² AFDB Socio Economic Database

⁹³ Chemonics International, "Guinea Staple Food Market Fundamentals, March 2017", Marc 2017

⁹⁴ Republic of Guinea Ministry of Agriculture and Livestock, "National Strategy for the Development of Rice Growing", April 2009

⁹⁵ Chemonics International, "Guinea Staple Food Market Fundamentals, March 2017", Marc 2017

⁹⁶ Ibid.

⁹⁷ Ibid.

⁹⁸ Ibid.

Positioning of rice development and NRDS within priority policies

Rice development has long been considered the mainstay of growth in Guinea's economic and social development strategies. NRDS and the concept notes developed for the NRDS are integrated into the National Agriculture and Food Security Investment Plan (PNIASA) that was developed under the CAADP framework. The country is currently in the process of drafting the 2nd version of the PNIASA, namely the PNIASAN 2018-2025, and the NRDS will continue to be positioned here as a strategic arm for improving food security and driving economic and social development.

Authorization status of NRDS

The NRDS was developed and approved by the Ministry of Agriculture and Livestock (MAE) in 2009, and the rice seed strategy was similarly approved by the MAE in 2014. However, it seems the strategies have not been well-disseminated within and outside the Ministry, and it is doubtful that the strategies function as the point of reference for rice-related project formulation as initially envisaged.

Existence of champions such as high-ranking ministry officials who support NRDS

While the CARD focal point and the CARD Consultant commented on the support of high-level officials for the CARD focal point, apparently the Director General did not know much about CARD/NRDS while the Minister of MAE and the President's Office did not know anything about CARD/NRDS. Therefore, it is difficult to conclude that the NRDS enjoys support of high-ranking officials.

Government structure for NRDS implementation

The coordinator for an FAO-funded project at the Strategic Development Office (BSD) of MAE serves as the CARD focal point.

There is no specific structure for the implementation of the NRDS and rice seed strategy. The National Directorate of Agriculture is in charge of implementing all the strategies, including those developed under the CARD initiative. There is no specific unit handling rice in this directorate - the production division under the production department manages rice along with other crops. The BSD's role in the implementation stage is to monitor the implementation. The monitoring unit is an independent unit within BSD and does not coordinate with the focal point or taskforce specifically.

4.4.2. Output

Status of the NRDS process

		Status		Support by CARD
A	A-1 Formulation and launch	Done	<ul style="list-style-type: none"> The NRDS was developed and approved by the Ministry of Agriculture and Livestock (MAE) in 2009. Validation meeting attracted about 500 stakeholders of the rice value chain. NRDS evaluation is underway. 	<ul style="list-style-type: none"> Provided technical assistance such as provision of tools, including NRDS template and SIEM matrix, and other required information. CARD Consultant provided advice, discussion facilitation, and monitoring support both remotely and during on-site "Working Weeks". Assisted in developing communication plan, accompanied them to visit donors. Oversee implementation through visiting CARD Consultant.
	A-2 Gap analysis & prioritization and concept note formulation	Done	<ul style="list-style-type: none"> Developed 4 concept notes, which were integrated into the PNISA, developed under the framework of CAADP. 	
	A-3 Lobbying for funding and project formulation	In progress	<ul style="list-style-type: none"> The CARD focal point, along with CARD Consultant pays a visit to donors about once a year. Otherwise, concept note are shared on request-basis. Although it was indirect lobbying, in 2011, there was also a business meeting for PNISA where all the donors were present. 	
	A-4 Implementation	In progress	<ul style="list-style-type: none"> There are 7 CARD labeled projects in Guinea, which were inspired by NRDS. One was funded solely by Guinea's national budget. Implementation is limited due to the lack of funds. 	
B	Rice seed strategy	Done	<ul style="list-style-type: none"> Rice seed strategy was formulated and approved by MAE in 2014. 4 concept notes were developed. 	<ul style="list-style-type: none"> Provided technical assistance and venue for focused discussion in developing rice seed strategy and concept notes.
C	Mechanization strategy	In progress	<ul style="list-style-type: none"> Guinea is starting mechanization strategy development. The first workshop is scheduled for November 2017. 	<ul style="list-style-type: none"> Due to commence.

Figure 16 : Status of NRDS Process in Guinea

List of CARD-labeled projects

These CARD-labelled projects are/were implemented in Guinea according to the CARD Secretariat.

Table 10: List of CARD-labeled projects in Guinea

Name of Project	Donor	Duration	Modality	Budget	Area of Intervention (Sub-Sector)	Area of Intervention (Geographic)	Outputs/Activities
Tripartite Project to Improve Rice /Vegetable Production	South Africa	2007-2016	Grant	3 million EUR	Production, Post-Harvest Processing, Marketing	Boké ,Boffa and Kindia	1.Support professional organizations and the emergence of inter professional organizations in Lower Guinea 2.Develop technical guidelines for sustainable rice production while preserving the main functions of the mangrove ecosystem 3.Strengthen capacities at the downstream of the value chain through training of processing operators
Study and Planning for Sustainable Rural Development	JICA	2008-2012	Development study	370 million JPY	Capacity Development	Central and Highland Guinea	1. Master Plan and Action Plan elaborated. 2. Through the implementation of this study the organizational capacity of Ministry of Agriculture and other organizations concerned is strengthened at different levels.
Koundian Plain Development	National Development	2015-2017	Government investment	97 billion GNF	Irrigation	Mandiana	Development of 1,000 ha of irrigation schemes

Project	pment Budget (BND)		ment budget				
Partnership for Sustainable Rice Systems Development in Sub-Saharan Africa (Guinea)	Venezuela/FAO	2016-2018	Grant	420,000 USD	Production, Post-Harvest Processing, Marketing	Boké, Boffa, Siguiri, Mandiana and Beyla	Rice research: production, harvest, post-harvest, marketing
Project to Support Rice Development in Lower Guinea	AFD	2017-2021	Loan	18 million EUR	Production, Post-Harvest Processing, Marketing	Boké and Boffa	1. Rehabilitate and construct water control infrastructure in the plains 2. Improve technical routes and intensification of rice and vegetable production through demonstrations, training and implementation of CEP (valorization of the expertise of Vietnamese /CSS and local assets), production of improved seeds and organization of input demand /supply 3. Strengthen the capacities of the rice value chain players and valorize rice and vegetable production by supporting the structuring of producer organizations and the promotion of inter-producer organization trade, training in processing /storage techniques and marketing techniques 4. Reinforcement of the capacities of support and management of the actors of support, through the development of the communication in order to ensure a better visibility
West Africa Agricultural Productivity Program (WAAPP) Support Project (1st phase)	WB	2010-2015	Loan	9 million USD	Research, Productivity Improvement, Production, Post-Harvest Processing	Whole country	1. Enable conditions for regional cooperation in improved technologies generation and dissemination 2. Establish national centres of specialization 3. Fund demand-driven technology generation and adoption 4. Capacity building of institutions involved in the implementation of the project
West Africa Agricultural Productivity Program (WAAPP) Support Project- Additional Financing	WB	2017-2019	Loan	23 million USD	Research, Productivity Improvement, Production, Post-Harvest Processing	Whole country	

Intervention areas

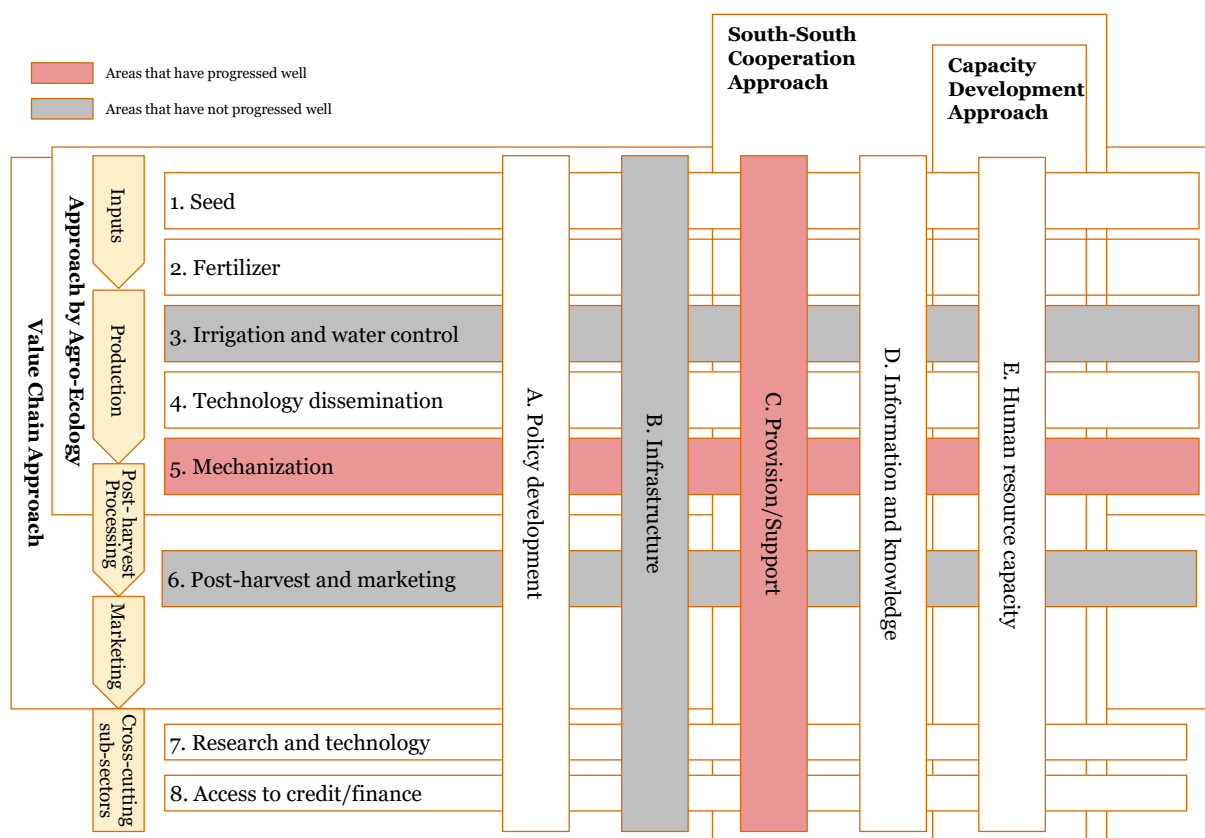


Figure 17 : Intervention Areas in Guinea

According to the CARD focal point, progress in 5. Mechanization was observed mainly in cultivation and processing like harvesting machines, parboiling, and mills. Interventions were made in terms of C. Provision/Support, such as buying and distributing equipment like parboiled equipment to producer organizations and subsidizing other equipment for end users like farmer producer organizations under the government-funded program.

On the other hand, limited progress was made in improving 6. Access to market in terms of B. Infrastructure. Insufficient road network and connectivity with producers hamper the aggregation of production and access to market. Further, the development of 3. Irrigation and water control saw limited progress, and according to the CARD focal point, this is the main reason for the lack of progress in yield improvement.

4.4.3. Outcome

Human resource development

For policy makers, a number of training sessions have been organized in Japan and third countries. The past participant (CARD focal point) noted that the takeaways were in strategy/policy/project formulation as well as in rice farming in general. Although there seem to be no formal system for knowledge transfer, the CARD focal point later shared the learnings, know-how and feedback to the technical departments and to others within BSD.

Furthermore, he also mentioned that the NRDS process has by itself been a capacity development process.

Project formulation and implementation

Contributions to increase in rice sector projects funded by the government and donors

According to the CARD focal point, the current budgetary allocation for agriculture is estimated to be about 4% of the national budget, of which only 2.5% is estimated to have been disbursed. This falls short of the commitment made at the AU 2003 Maputo Declaration on Agriculture and Food Security and has not changed since 2013, according to the CARD focal point. The government once financed a program for the rice sector, but since then it has not allocated anything for the purpose of implementing the concept notes. For the donors, the government could not provide a clear answer as to whether there has been an increase in funding or the number of projects.

Contributions to efficient, effective, and strategic project formulation

According to the CARD focal point, many of the CARD-labeled projects were inspired by the concept notes that were developed with CARD support. In this sense, the clarification of country needs and awareness of current resources through the NRDS process can be said to have positively contributed to strategic project formulation.

Contribution of the CARD focal point in promoting projects

Through the interviews, it could not be gauged that the CARD focal point played an active role in promoting rice-related projects. The CARD focal point visited donor offices with the CARD Consultant who comes to Guinea at least once a year, and while he has shared concept notes with donors if requested, there was no other specific initiative taken by him.

Contributions to correlative improvements and timing adjustments between governments and donors

There was no mention of improved donor/government coordination in the rice sub-sector in Guinea as

a result of CARD initiative framework. In fact, both the government and donors mentioned about the general lack of coordination in the agricultural sector and likewise in the rice sub-sector.

4.4.4. Impact

Quantitative impact

Table 11: Production, consumption, and self-sufficiency of rice in Guinea

(1000MT)	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Production of rice (paddy) FAO⁹⁹	1,534	1,456	1,614	1,793	1,919	2,053	1,971	1,971	1,983	N/A
Production of rice (paddy) USDA¹⁰⁰	1,533	1,456	1,500	1,670	1,920	2,053	1,971	2,000	2,174	2,100
Production of rice (milled) USDA¹⁰¹	1,012	961	990	1,102	1,267	1,355	1,301	1,351	1,435	1,386
Consumption of rice (milled) USDA¹⁰²	1,212	1,231	1,255	1,377	1,512	1,700	1,750	1,900	1,950	2,000
Self-sufficiency of rice¹⁰³	83.5%	78.1%	78.9%	80.0%	83.8%	79.7%	74.3%	71.1%	73.6%	69.3%

Table 12: Production targets of rice in NRDS

(1000MT)	2008	2018
Alluvial plain/Mangrove¹⁰⁴	445	595
Highland¹⁰⁵	595	1000
Lowland¹⁰⁶	166	80
Total	1,206	2,726

Qualitative impact

Sensitization

According to the former CARD focal point, CARD should be credited for the current positioning/image of rice in Guinea through its support for rice strategy elaboration.

⁹⁹ FAO STAT database "Crops" (<http://www.fao.org/faostat/en/#data/QC>) 10/1/2018 update

¹⁰⁰ Calculated based on United States Department of Agriculture (USDA) PSD online database "Grains" 8/10/2017 update

¹⁰¹ USDA PSD online database "Grains" 8/10/2017 update

(<https://apps.fas.usda.gov/psdonline/app/index.html#/app/downloads?tabName=default>)

¹⁰² Ibid.

¹⁰³ Calculated based on USDA PSD online database "Grains" 8/10/2017 update

¹⁰⁴ Supra note 94.

¹⁰⁵ Ibid.

¹⁰⁶ Ibid.

4.4.5. Success factors and challenges

Success factors

■Government

The importance of rice for the national economy and/or food security

Rice is by far the main staple food in Guinea and has been recognized as a strategic and politically important crop long before CARD initiative began. It is also the only staple crop whose demand cannot be met by domestic production and is a major strain on the country's food import. In this sense, Guinea could closely relate to the pain-points (problems) and objectives recognized in the CARD initiative.

Assignment of appropriate unit

In Guinea, the CARD focal point is a personnel from BSD at MAE. This office is the entry-point for all donors, and it is responsible for devising national plans and strategies for the agricultural sector. Further, it has very easy access to the Minister and is very well placed to receive CARD support.

Continuity of CARD focal point/task force

Although the CARD focal point changed 3 times in Guinea during the course of the Initiative, the current CARD focal point has assisted the former CARD focal point from the beginning and there has been no loss of institutional knowledge due to the changes.

■CARD Secretariat

Methodology

The CARD focal point pointed out the efficacy of the methodology adopted by CARD in strategy formulation. Whereas in many cases CARD Consultants are hired to write a strategy, CARD has emphasized forming a taskforce, and having the taskforce develop the strategies. This ensured the retention of ownership, at least by the taskforce members.

Challenges

■Government

Financial resources

Due to having a small fiscal basis, the MAE has limited financial resources for implementing the NRDS and rice seed strategy by themselves. According to the focal point, the Ministry is currently only given a campaign budget for the rice sector. This is further exacerbated by constraints on donor fund mobilization, as financial partners determine their investment capacity based on the country's governance. Unfortunately Guinea's performance limits the financial partners' investment appetite.

Number and capacity of government officials

Several stakeholders have mentioned that public administration, clearly marked systems and coordination, and individual staff capacity are all weak in Guinea. The MAE is understaffed and the government officials are not well trained. The technical competence of the technicians as well as project formulation capacity of BSD staff is low. Even at the national research institute, only 50% of the staff have Masters and PhDs. Further, according to several respondents, there has been no recruitment at MAE for the last 5 years and with a large cohort expected to retire in the near future, this could be an even deeper constraint for strategy implementation in the future.

It also seems that there was lack of initiative taken by the CARD focal point in promoting CARD/NRDS. The CARD focal point is also the coordinator for a Venezuela-funded and FAO-implemented project, but he has not even shared about CARD with FAO officials. Another stakeholder mentioned that although the CARD focal point/CARD Consultant visited their office for discussions on concept note, no follow-up was done after that. Furthermore, although FAO assisted the government in developing the national seed policy for the agricultural sector in 2013, the government were not shared the existing strategy/policy documents developed for the rice-seed sector that were supported by CARD, hence the said existing strategy/policy documents were not incorporated into the government's national seed policy for the agricultural sector.

Incentive for rice development promotion

Salaries are too low for civil servants, and there are no dedicated personnel who have the incentive to promote rice development, leading to a lack of accountability.

Ownership and support from high-level government officials

Ownership from high-level government officials seems to have been limited as apparently the Director General of MAE did not know much about CARD/NRDS while the Minister and the President's Office did not know anything about CARD/NRDS. A possible reason for this could be the political instability of the country and hence the high turnover of officials at the MAE. Another could be the lack of coordination between MAE and the President's Office, which is detrimental in a country where the President's Office is strong. This situation may change, however, as with the recent structural change, the MAE is now placed directly under the President's Office, and a new Minister has been assigned.

Government structure for implementation

There is no specific structure for the implementation of the NRDS and rice seed strategy. Further,

there is no linkage created between those involved in strategy planning, strategy implementation, and monitoring and evaluation, and hence the strategy is not followed-through and action is not taken.

Authority/level of CARD focal point

Although the CARD focal point is selected from a strategic unit (BSD), he is not placed high enough in the hierarchy to influence any decision or lobby for any decision/activity. He is also not holding any important portfolio in his office (he is in-charge of Venezuela funded/FAO implemented project: “Partenariat pour le Développement de Systèmes Rizicoles Durables en Afrique Sub-Saharienne”).

■CARD Secretariat

Communication

Some SC local office stakeholders mentioned about the lack or infrequency of communication with the CARD Secretariat. They would like to have more opportunities for information exchange, specifically debriefing sessions or reports from CARD to Guinea so that they can better support the Initiative.

■SC members and Partner Organizations

Awareness of CARD

There is lack of knowledge regarding CARD’s specific objectives, activities, and role among most of the SC local offices as the CARD follow-up was conducted predominantly at a high level. A stakeholder has even mentioned that perhaps he may have come across the name somewhere but because he believed that there was no implication for the stakeholders, he did not take any note of it.

Communication between the SC member representative and SC local office

A general disconnect between the HQ-level SC member participating in the SC and the SC local office was also observed, leading to lack of follow-up on the Initiative by the SC local office.

Donor presence and office functions

Some of the SC members have a limited presence in Guinea. JICA has no local office, and the AfDB office is only just being set up (the set up began 4 years ago but the Ebola crisis has disrupted the schedules/plans).

Inclusion in organization’s development assistance strategy/policy

For a few of the SC members such as JICA and AfDB, agriculture was not the priority sector until very recently.

For JICA, this decision was made considering the overall budget for Guinea, the priority level of the sector, and safety concerns in the country. The Japanese government's Country Assistance Policy has placed priority on Health, Education and Infrastructure in Guinea. Food Security (which Agriculture and Fishery fall under) was the 3rd priority area and even then, cooperation mainly focused on the fishery sector

AfDB have not had agricultural projects in Guinea since 2009 when their project on agriculture and rural roads was cancelled due to project and fund mismanagement. Since then, AfDB has shifted their strategic focus to energy, infrastructure development, transport, road construction, mining, water and sanitation, among others.

Both organizations are now changing their focus with the pro-agriculture current President of Guinea.

■Other

External factors

The Ebola virus epidemic (2013-2016) hampered the implementation of the NRDS as development partners scaled back their operations and mainly concentrated on the health sector during this period. JICA dispatched a policy advisor to MAE in 2013, but due to the Ebola crisis, the advisor had to curtail his/her assignment after a few months. They also had a research project from 2008 to 2012 for rural development but it could not be scaled up sufficiently, partly due to the Ebola outbreak.


Private-sector participation

The limited involvement of private sector is one of the reasons for the underperformance of the sector and the limited implementation of the NRDS.

4.5 Group 1: Kenya

4.5.1. Context/background

Basic Information of the country

Republic of Kenya			
Exchange rate (2017) ¹⁰⁷	101.41 KES=1USD		
Land ¹⁰⁸	580,367 sqkm		
Population (2016) ¹⁰⁹	46,790,758		
Climate ¹¹⁰	Varies from tropical along coast to arid in interior		
Languages ¹¹¹	English, Kiswahili		
Ethnic Groups (2014 est.) ¹¹²		Kikuyu, Luhya, Luo, Kalenjin, Kamba, Kisii, Meru	
Per capita GDP (2017) ¹¹³	1607.116	USD per capita	
Per capita GDP Growth rate (2017) ¹¹⁴	5.3	%	
Population growth rate (2016) ¹¹⁵	1.81	%	
Age composition of population (2016 est.) ¹¹⁶	0-14 years: 40.87% (male 9,592,017/female 9,532,032) 15-24 years: 18.83% (male 4,398,554/female 4,411,586) 25-54 years: 33.54% (male 7,938,111/female 7,755,128) 55-64 years: 3.84% (male 819,665/female 976,862) 65 years and over: 2.92% (male 590,961/female 775,842)		
Population % between 15-54 years ¹¹⁷	52.37	%	
Unemployment rate (both sex, age15+) (2016) ¹¹⁸	10.8	%	
FDI Inflow (2015) ¹¹⁹	1,437	Million USD	

¹⁰⁷ Oanda <https://www.oanda.com/lang/ja/currency/converter/> (31st July 2017)

¹⁰⁸ CIA (Central Intelligence Agency) "The World Factbook"

¹⁰⁹ Ibid.

¹¹⁰ Ibid.

¹¹¹ Ibid.

¹¹² Ibid.

¹¹³ IMF

¹¹⁴ Ibid.

¹¹⁵ CIA (Central Intelligence Agency) "The World Factbook"

¹¹⁶ Ibid.

¹¹⁷ Ibid.

¹¹⁸ ILO STAT (<http://bit.ly/2oIwFux>)

¹¹⁹ Worldbank World Development Indicators, 27/4/2017 update

Internet penetration (% of Individuals using the Internet) (2015) ¹²⁰	45.62	%
Mobile penetration (Mobile-cellular telephone subscriptions) (2015) ¹²¹	80.68	%
Consumer Price Index growth (1960-2016) ¹²²	5.20	

Information on the country's rice sector

Level of rice demand

Rice is the third most important cereal after maize and wheat.¹²³ Rice used to receive no or little attention and was referred to as orphan crop, but now a lot of attention has been given to it. Consumption has been increasing rapidly, which was mainly driven by rapid urbanization and the changing eating habits especially by the youth. The per capita consumption of rice is one of the highest for food crops, and national consumption has increased from 300,000 MT yearly in 2008 to 540,000 MT in 2013.¹²⁴

The importance of rice for the economy and food security

Rice has been identified along with maize and Irish potatoes which can address problems related to national food and nutritional security. Rice is also treated by government as both subsistence and cash crop to farmers. This has led to the increase in its production from 73,141 MT yearly in 2008 to 129,000 MT in 2013.¹²⁵ It is grown mainly by small-scale farmers in the major rice irrigation schemes in Central, Nyanza and Western regions. About 89% of the rice grown in Kenya is from irrigation schemes while the remaining 11% is rain-fed production.¹²⁶ Despite the growth, national production is still low and almost 80% of the rice requirements is fulfilled with imported rice.¹²⁷ Rice is regarded as a potential crop for wealth and employment creation that can spur industrialization.

Donors' interest in rice development

Although the government established a Task Force consisting of key stakeholders for project formulation, these stakeholders have not yet been allocated funds for NRDS implementation. Other than JICA, Kenya does not have strong development partners for development of its rice sector.

Positioning of rice development and NRDS within priority policies

¹²⁰ ITU Country ICT Data (until 2015)

¹²¹ Ibid.

¹²² AFDB Socio Economic Database

¹²³ Republic of Kenya, Ministry of Agriculture, Livestock and Fisheries, "National Rice Development Strategy 2008-2018", revised 2014

¹²⁴ Ibid.

¹²⁵ Ibid.

¹²⁶ Ibid.

¹²⁷ Ibid.

The Government prioritized rice for promotion in order to address food security and poverty reduction. The NRDS was developed in tandem with Vision 2030, the country's long-term development policy, as well as, the Agricultural Sector Development Strategy (ASDS) that was developed as the sector's response to implement Kenya Vision 2030, and the Ministry of Agriculture's Strategic Plan 2008-2012. Medium-Term Investment Plan: 2013– 2017 which is based on ASDS also identifies that rice is one of the priority commodity sub-sectors.

Authorization status of NRDS

NRDS was developed and approved by the Principal Secretary (PS) in 2008, and the revised NRDS was approved in 2013. More importantly, PS gave approval to upgrade the Rice Promotion Unit (RIPU) into Rice Promotion Program (RIPP). As not many development partners have formulated projects on rice development, the document may not be recognized as the point of reference for rice-related project at this moment.

Existence of champions such as high-ranking ministry officials who support NRDS

Initially the government was not supportive of rice development. But after CARD started, the government now sees the importance of rice. For example, it is reported that the president paid 100 million Ksh for rice¹²⁸ growers' debt so that farmers can consolidate rice production.

Government structure for NRDS implementation

The head of Rice Promotion Program, Ministry of Agriculture, Livestock and Fisheries is the focal point.

The government formed the Rice Promotion Unit (RIPU) which consists of government officials. The unit takes care of the day-to-day implementation of NRDS. In the beginning there were two officers in the team, but as the importance of rice for the government became higher, more staff members were assigned that made the team expand to five people in 2011, with experts on rice seed, mechanization, agribusiness, etc. RIPU became the Rice Promotion Program (RIPP) in early 2017 which allowed the government to allocate a budget for rice.

The National Rice Stakeholders forum and Technical Committee were established to streamline the NRDS process. The National Rice Stakeholders forum includes every stakeholder in rice sector including millers and farmers' representatives which not only have professional farmers but also other actors. Meanwhile, taskforce members who were involved in NRDS development were moved to the

¹²⁸ Business Daily "Sh100m debt Kirinyaga farmers owe NIB waived" (2017) accessed Nov 20 2017) 1

National Rice Technical Committee (NRTC). The Committee meets every 3 months and its members include farmers' organizations as well as JICA and other donors including JICA advisors who were dispatched to the ministry. The Technical Committee has a secretary at Maseno University, and the chair is from the university as well.

4.5.2. Output

Status of the NRDS process

		Status	Support by CARD
A	A-1 Formulation and launch	Done	<ul style="list-style-type: none"> Started to develop NRDS in 2008 and the first NRDS was approved in the same year by the PS. They revised NRDS and received approval in 2013 which identified different priorities from the first strategy.
	A-2 Gap analysis& prioritization and concept note formulation	Done	<ul style="list-style-type: none"> Not many activities were done about the first NRDS. Developed 17 concept notes in the areas of mechanization, irrigation, research, marketing, and even seed based on the revised NRDS.
	A-3 Lobbying for funding and project formulation	In progress	<ul style="list-style-type: none"> Several projects formulated after the first NRDS were approved. After 2013 they visited donor agencies to advertise concept notes but many of them were not transferred to projects yet.
	A-4 Implementation	In progress	<ul style="list-style-type: none"> There are 4 CARD-labeled projects in Kenya, most of them started before the revised NRDS was created. The government has a plan to conduct a evaluation study.
B	Rice seed strategy	In progress	<ul style="list-style-type: none"> Developed seed strategy. Developed 6 concept notes.
C	Mechanization strategy	Not Started	-

Figure 18 : Status of NRDS Process in Kenya

List of CARD-labeled projects

These CARD-labelled projects are/were implemented in Kenya according to the CARD Secretariat.

Table 13: List of CARD-labeled projects in Kenya

Name of the Project	Donor	Duration	Modality	Budget	Area of Intervention (Sub-Sector)	Area of Intervention (Geographic)	Outputs/Activities
Mwea Irrigation Development Project	JICA	2010-2018	ODA Loan	13,178 million JPY	Infrastructure, Irrigation	Mwea	(i) Improve irrigation facilities to provide a stable supply of water for cultivation (ii) Expand the total cultivated area from 7,860 Ha to 16,920 Ha
Rice-Based and Market-Oriented Agriculture Promotion Project (RiceMAPP)	JICA	2012-2017	Technical Cooperation	530 million JPY	Production, Extension, Infrastructure	Mwea	(i) Profitable rice-based farming system is proposed and developed. (ii) The basis of water management system is enhanced for developing profitable rice-based farming system. (iii) The basis of production and post-harvest system are enhanced for developing profitable rice-based farming system. (iv) The farming system developed is practiced by farmers in Mwea Irrigation Scheme. (v) The market-oriented approach is adopted by relevant governmental organizations.
The Project on Rice Research for Tailor-Made Breeding and Cultivation Technology Development in Kenya	JICA	2013-2018	SATREPS	336 million USD	Research, Capacity Building	Mwea	(i) Establish a basic system for rice varieties development (ii) Build capacity of rice research scientists (iii) Develop varieties that are adaptable to the biotic and abiotic stresses (drought, cold, blast) in the country
Partnership For Sustainable Rice Systems Development In Sub-Saharan Africa	FAO, Bolivarian Republic of Venezuela	2016-2017	Grant	5 million USD (9 countries)	Seed, Post-Harvest Processing, Access to Markets	Whole country	(i) Promotion of best practices (ii) Business models along rice value chain (iii) Exchange of technologies between countries (iv) Awareness creation on post-harvest handling (v) In-country evaluation of implementation of NRDS

Intervention areas

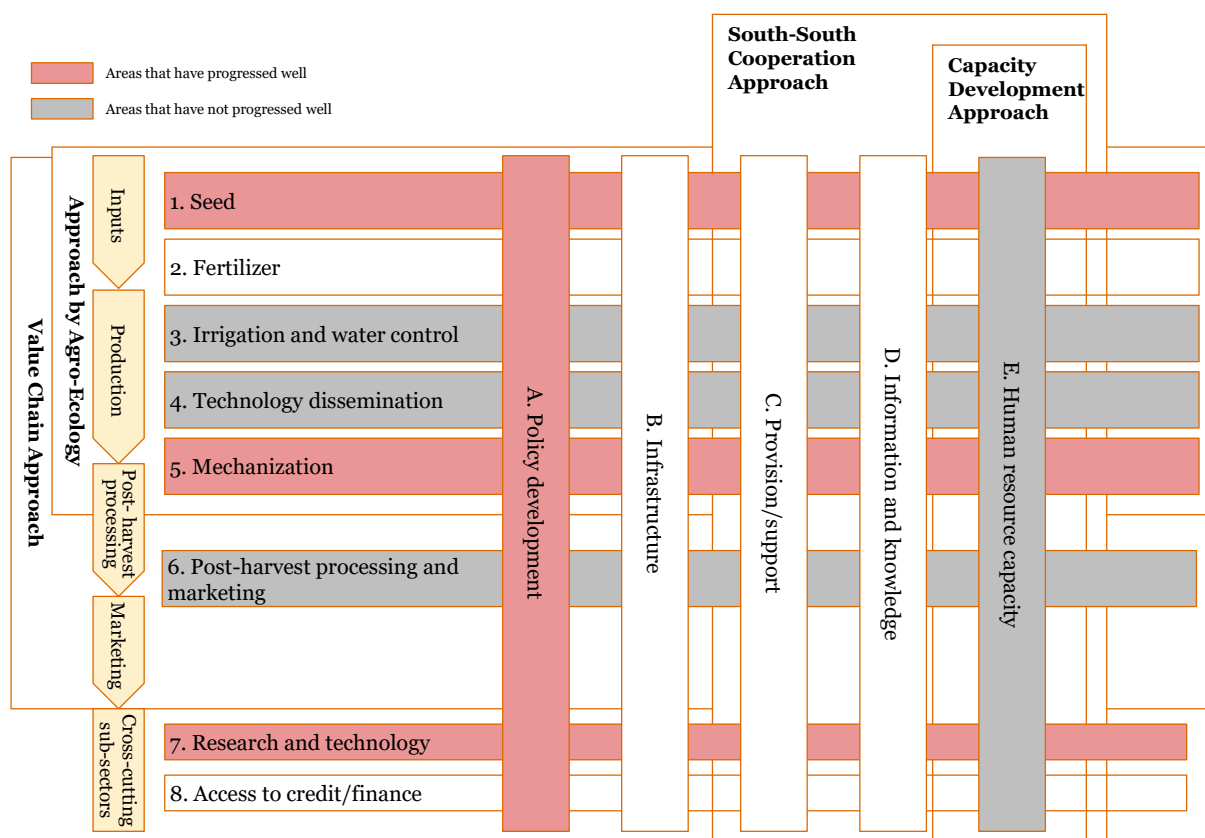


Figure 192 : Intervention Areas in Kenya

1. The rice seed system is now in place, and the CARD focal point considers that this area has shown good progress. 4. seed strategy has been developed, and the preparation for Phase II of RiceMAPP project has contributed to the progress. At the same time, 7. Research has shown good progress as well, since high-yielding varieties that have tolerance to biotic and abiotic stresses were developed. Also, 5. Mechanization of the major rice growing schemes is underway, especially in regard to the use of combine harvesters, rippers, and weeders. Such equipment have been embraced by farmers.

Meanwhile, 6. Marketing has suffered from an uncontrolled influx of cheap imports at the time when farmer produce are available. The area of value addition in both grain and by-products has been slow. The farmers' ability to gain access to certified seeds still remains unexploited. Also stakeholders are not trained adequately. Thus, the E. Capacity building of farmers and farmer institutions is necessary to raise awareness on improved rice seeds, and increase technical knowhow.

In relation to the capacity development, 4. Extension or technology dissemination is also considered to require improvement by the government. The government's decentralized structure hinders the smooth provision of extension services. Although the priority of extension and funding are low at the

county level, the central government cannot have enough influence on the counties to improve the situation of extension.

Other challenges include expansion of 3. Irrigation to increase areas under rice production. Funding is the main limitation, as the irrigation infrastructure is capital-intensive and hence requires a lot of investment.

4.5.3. Outcome

Human resource development

There were training and workshops which were organized by CARD with support from the SC members. Also, CARD has assisted the Technical Committees through exposers and interaction with CARD Consultants during the rice technical week meetings. These opportunities have contributed positively towards the achievement of the objectives. Policy makers in particular have benefited, because by learning about the experiences of other participating countries in Africa, they were able to notice the shortcomings of some areas in the strategy. For example, the mechanization offices realized that they lack capacity in testing machinery on the ground. Now they think about establishing institutions that can test machinery.

Project formulation and implementation

Contributions to increase in rice sector projects funded by the government and donors

According to government officials, there was no direct correlation between the two, although the existence of the NRDS has provided an institutional framework that allowed for financial intervention in the rice subsectors. In fact, the Ministry established the Rice Promotion Unit which later turned into the Rice Promotion Program.

Donors were able to pick different aspects of the rice subsector development based on NRDS priorities. However in terms of funding, major projects formulated so far were by JICA, such as RiceMAPP, SATREPS, NERICA Sustainable Dissemination Project and PADA projects by the government of Venezuela through the FAO.

Contributions to efficient, effective, and strategic project formulation

With CARD's guidance, the task force members came together to decide on the priority areas, and they came up with the concept note. CARD brought a new awakening in that the government and partners were able to now focus clearly on the priorities identified. Although project formulation and implementation have yet to start for many other development partners, all projects in the sector are supposed to be based on the NRDS which are expected to be a good guide.

Contribution of the CARD focal point in promoting projects

The CARD focal point has contributed to better and well-focused planning for the sector as well as the implementation of the activities. Among others, the creation of the RIPP as the focal point as well as the approval by the government on the RIPP were key contributions that were highly appraised.

Contributions to correlative improvements and timing adjustments between governments and donors

In the interviews, specific examples of collaboration among rice projects were not mentioned, supposedly because not many donors were involved in rice development projects. However, it is assumed that the Technical Committee will play a role in promoting coordination and timing adjustments.

4.5.4. Impact

Quantitative impact

Table 14: Production, consumption, and self-sufficiency of rice in Kenya

(1000MT)	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Production of rice (paddy) FAO ¹²⁹	22	42	86	111	138	125	112	116	118	N/A
Production of rice (paddy) USDA ¹³⁰	23	42	86	111	123	147	155	150	106	152
Production of rice (milled) USDA ¹³¹	15	28	57	73	91	83	74	90	70	100
Consumption of rice (milled) USDA ¹³²	314	340	390	440	465	510	535	570	590	610
Self-sufficiency of rice ¹³³	4.8%	8.2%	14.6%	16.6%	19.6%	16.3%	13.8%	15.8%	11.9%	16.4%

Table 15: Production targets of rice in NRDS

(1000MT)	2008	2018
Irrigation fed ¹³⁴	59	146
Rain fed highland ¹³⁵	6	15
Rain fed lowland ¹³⁶	9	18
Total	52	179

¹²⁹ FAO STAT database "Crops" (<http://www.fao.org/faostat/en/#data/QC>) 10/1/2018 update

¹³⁰ Calculated based on United States Department of Agriculture (USDA) PSD online database "Grains" 8/10/2017 update

¹³¹ USDA PSD online database "Grains" 8/10/2017 update

(<https://apps.fas.usda.gov/psdonline/app/index.html#/app/downloads?tabName=default>)

¹³² Ibid.

¹³³ Calculated based on USDA PSD online database "Grains" 8/10/2017 update

¹³⁴ Refer to the NRDS

¹³⁵ Refer to the NRDS

¹³⁶ Refer to the NRDS

Qualitative impact

Establishment of the RPU and RPP

The RPU was established in order to follow the CARD activities after the Kenya joined the initiative. In 2017, the RPU was remodeled into the RPP with the support of CARD. CARD was helpful in visiting the PS to influence policy as well as to explain the activities of CARD and the necessity of creating the Program. Therefore, the PS approved the establishment of the RPP. As a result of remodeling, the Program now has a budget allocation, and more staff members have been posted. Moreover, they have annual work plans which clarified that their mission is to increase production, productivity, and activities in the rice sector.

Increased commitment to rice sector development on the part of policy makers

Initially the government was not supportive of rice. The multi-sectoral approach was a novel idea that led to some quick wins and increased attention on rice by the government whereas it previously saw rice along with maize and Irish potatoes one of the three key food and nutritional security crops. After CARD started, the ministry's management has come to prioritize the challenges that the rice sector is facing.

Also, the Secretariat had a meeting with the Ministry, requested by the Kenyan Cabinet Secretary to understand the business environment and issues for private stakeholders in rice sector in Kenya.

Increased interest in becoming a member of Africa Rice

The government has realized the importance of rice in the country, which made them think about becoming a member of AfricaRice.

4.5.5. Success factors and challenges

Success factors

■Government

Ownership and support from high-level government officials

The approval by PS was the key to facilitating CARD activities in the country. Thanks to the support from PS and establishment of RPP, the government has allocated human and financial resources to implement the NRDS.

Government structure for implementation

The RPU was remodeled to conform to the program. As a result, they are able to retain their staff and also strengthen material and financial resources to make the NRDS process work.

■Secretariat

Communication

Whenever the government needs any help, the CARD Secretariat's assistance would be available. The fact that the Secretariat is located in Kenya may have facilitated frequent communication between the Secretariat and the CARD focal point.

Advocacy for government high-officials

As mentioned earlier, CARD was helpful in advocacy for the PS. The Secretariat's visits to PC led to the establishment of the RIPP, as well as the increased commitment.

Challenges

■Government

Number and capacity of government officials

Although a reasonable amount of human resources was allocated, the marketing skill of CARD focal point is limited. The focal point considers that they have difficulty in gaining the understanding of development partners and formulating more projects.

Financial resources

The budgetary allocation for RPU/RIPP has never been enough to attract development partners for funding.

■Secretariat

Provision of personnel

The CARD secretariat should have more consultants on the ground for the successful implementation of NRDS. The Kenyan government has obtained necessary assistance from the Secretariat, but when the Secretariat is occupied with supporting other countries, the government would be required to consider that availability of the Secretariat and know the right timing to request for support.

■SC members and partner organizations

Inclusion in organization's development assistance strategy/policy

Support to fund matching activities can be also provided at the regional level among SC members. CARD may be able to identify the donors who are interested in rice promotion from their development assistance strategy/policy.

■Others

Private-sector involvement

The involvement of the private sector which includes farmers and other stakeholders should be enhanced. As the example of machinery showed, if the private sector participates in the discussion, they will start working and expanding the sector independently, but as of now, the development of the rice sector still heavily relies on the intervention on the government.


Availability of reliable statistics and evaluation of progress

They need baseline data when starting the Initiative, so that they would be able to measure the impact. The RIPP is trying to collect data with the support from FAO, but more support is necessary.

4.6 Group 1: Madagascar

4.6.1. Context/background

Basic country information

Republic of Madagascar			
Exchange rate (2017) ¹³⁷	2,899.40 MGA = 1USD		
Land ¹³⁸	587,041 sq km		
Population (2016) ¹³⁹	24,430,325		
Climate ¹⁴⁰	Tropical along coast, temperate inland, arid in south		
Languages ¹⁴¹	French, Malagasy, English		
Ethnic groups (2014 est.) ¹⁴²		Malayo-Indonesian (Merina and related Betsileo), Cotiers (mixed African, Malayo-Indonesian, and Arab ancestry—Betsimisaraka, Tsimihety, Antaisaka, Sakalava), French, Indian, Creole, Comoran	
Per capita GDP (2017) ¹⁴³	404.937	USD per capita	
Per capita GDP Growth rate (2017) ¹⁴⁴	4.5	%	
Population growth rate (2016) ¹⁴⁵	2.54	%	
Age composition of population (2016 est.) ¹⁴⁶	0-14 years: 40.17% (male 4,947,260/female 4,865,379) 15-24 years: 20.44% (male 2,503,395/female 2,489,482) 25-54 years: 31.83% (male 3,889,063/female 3,887,633) 55-64 years: 4.31% (male 511,336/female 540,868) 65 years and over: 3.26% (male 360,520/female 435,389)		
Population % between 15-54 years ¹⁴⁷	52.27	%	

¹³⁷Oanda, <https://www.oanda.com/lang/ja/currency/converter/> (31st July 2017)

¹³⁸CIA (Central Intelligence Agency), "The World Factbook"

¹³⁹Ibid.

¹⁴⁰Ibid.

¹⁴¹Ibid.

¹⁴²Ibid.

¹⁴³IMF

¹⁴⁴Ibid.

¹⁴⁵CIA (Central Intelligence Agency) "The World Factbook"

¹⁴⁶Ibid.

¹⁴⁷Ibid.

Unemployment rate (both sexes; aged 15+) (2016) ¹⁴⁸	2.3	%
FDI inflow (2015) ¹⁴⁹	517	Million USD
Internet penetration (percentage of individuals using the Internet) (2015) ¹⁵⁰	4.17	%
Mobile penetration (mobile-cellular telephone subscriptions) (2015) ¹⁵¹	44.12	%
Consumer Price Index growth (1960-2016) ¹⁵²	7.83	

Information on the country's rice sector

Level of rice demand

Rice is the staple food for the majority of people in Madagascar, and it is its principal subsistence crop. The average consumption of rice was estimated to be 165 kg/capita/year in the early 1970s, decreasing to 113.6 kg/capita/year in 2005, then to 97 kg/capita/year in 2010.¹⁵³ However, considering that the recent decrease is believed to have resulted from a decline in production during the political crisis in 2009-2014, consumption is expected to increase as supply increases.¹⁵⁴ Coupled with an annual population growth of 2.8% and plans for export, rice demand is expected to be on an upward trajectory.¹⁵⁵

The importance of rice for the economy and food security

Rice is the No. 1 crop in terms of acreage and volume. In 2012, 4,737,965 tons of rice were produced, occupying 60% of cultivated land.¹⁵⁶ Furthermore, 85% of crop growers were rice growers.¹⁵⁷ Rice-growing is also the country's principal economic activity, contributing to 43% of agricultural GDP and to 12% of total GDP.¹⁵⁸ Given this contribution, rice serves as a barometer for both agricultural and economic growth. Furthermore, it functions as a price barometer for other agricultural products, including staple products.

Madagascar is still a net importer of rice, importing 274,000 tons of rice in 2015, and uses its foreign currency reserves for that purpose.¹⁵⁹ Their NRDS proposes a production increase, which will allow

¹⁴⁸ILO STAT (<http://bit.ly/2oIwFux>)

¹⁴⁹Worldbank World Development Indicators, 27/4/2017 update

¹⁵⁰ITU Country ICT Data (until 2015)

¹⁵¹Ibid.

¹⁵²AFDB Socio Economic Database

¹⁵³Ministere Aupres de la Presidence en Charge de l'Agriculture et de l'Elevage, "Strategie Nationale de Developpement Rizicole (SNDR) 2016", February 2017

¹⁵⁴Ibid.

¹⁵⁵Ibid.

¹⁵⁶Rakotoson Philibert, "THE CARD/NRDS/CAADPP PROCESS IN MADAGASCAR", undated presentation material

¹⁵⁷Ibid.

¹⁵⁸Ibid.

¹⁵⁹Ministere Aupres de la Presidence en Charge de l'Agriculture et de l'Elevage, "Strategie Nationale de Developpement Rizicole (SNDR)

Madagascar to achieve self-sufficiency and to become a net exporter of rice, mainly to the rest of Africa.

Donors' interest in rice development

Japan is regarded as the leader in rice development assistance in Madagascar and has also been leading the agriculture sector donor coordination platform (GBER) since May 2015. However, other donors such as the WB, IFAD, and AfDB are also keen to be involved in this sector and have been funding rice-related projects for some time. It is also worth noting that for some of these donors, rice is a component of their project rather than being the only focus.

Positioning of rice development and NRDS within priority policies

Rice is recognized as the most important crop in Madagascar. By the time the CARD initiative began, the country already had a "Policy Letter for the Development of Rice Growing until 2010", reflecting its importance in the agriculture sector. NRDS is positioned as part of the National Plan for Investment in Agriculture, Livestock, and Fisheries (PNIAE), which was developed under the CAADP initiative. It is the only crop with a specific strategy in this government plan.

Authorization status of NRDS

Both the initial and the revised NRDS of Madagascar have been approved by the Ministry of Agriculture and Livestock (MPAE) and validated by stakeholders. The revised NRDS is currently in the process of cabinet approval. The NRDS and sub-sector strategies now function as the point of reference for both the MPAE and for donors in developing rice-related projects.

Existence of champions such as high-ranking ministry officials who support NRDS

Top management support for NRDS formulation and implementation was observed to be strong. The current Minister of Agriculture and Livestock demonstrated leadership through direct involvement in editing some parts of the revised NRDS. Similarly, although CARD is not specifically part of his Terms of Reference (TOR), the Secretary-General keenly assisted in the NRDS development process, providing guidance, focus and monitoring deadlines.

Government structure for NRDS implementation

The Rice Development Promotion Department (DPDR), a department directly attached to the Director General for Agriculture under the MPAE, is responsible for the promotion and coordination of rice development in Madagascar at both central and regional government levels. This department is

mandated with the implementation of NRDS. Eleven staff have been allocated to this department, and the director of DPDR serves as the CARD focal point.

For oversight, a platform for consultation on the management of the rice sector (PCP-Riz), which was set up in 2005 and attached to the Prime Minister's office because of its inter-ministerial composition, is expected to assume a key role in monitoring the implementation of the NRDS. This is a multi-stakeholder platform that aims to strengthen collaboration between the public and private sectors. As the platform has not been active, the revised NRDS advocates its revitalization. The DPDR provides secretariat support to the PCP-Riz.

Furthermore, at the regional level, each Regional Director (DRAE) is expected to provide leadership for implementation of the NRDS in their respective regions. There is a regional equivalent of PCP-Riz that serves as the platform for coordination and collaboration between the relevant ministries and other stakeholders at the regional level.

4.6.2. Output

Status of the NRDS process

		Status		Support by CARD
A	A-1 Formulation and launch	Done	<ul style="list-style-type: none"> The first NRDS was developed and validated by stakeholders in 2009. It was then revised and approved by the MPAE, and validated by stakeholders in December 2016. NRDS II is currently awaiting cabinet approval. 	<ul style="list-style-type: none"> Provided technical assistance through working weeks and during taskforce meetings. Such assistance included the provision of NRDS template and required information. CARD consultant provided advice, discussion facilitation, and monitoring support.
	A-2 Gap analysis & prioritization and concept note formulation	Done	<ul style="list-style-type: none"> Developed 9 concept notes and is reviewing them in the light of the approval of NRDS II. 	
	A-3 Lobbying for funding and project formulation	In progress	<ul style="list-style-type: none"> With the NRDS I, the coup d'état in 2009 meant that donors generally halted new project financing. The FP presented the revised-NRDS at GBER through the facilitation of JICA Madagascar. MPAE is using NRDS II in direct fund lobbying. 	<ul style="list-style-type: none"> Plans to accompany visits to donors, as needed
	A-4 Implementation	In progress	<ul style="list-style-type: none"> There are 13 CARD-labeled projects in Madagascar. A governance structure has been put into place for NRDS implementation. An action plan providing the clarification of roles and responsibilities has yet to be developed. 	<ul style="list-style-type: none"> Oversee implementation through resident CARD consultant.
	B Rice seed strategy	Done	<ul style="list-style-type: none"> During the political crisis of 2009-2014, rice seed strategy and concept notes were developed. It was finalized and approved by the cabinet in February 2016, after the general election and the formulation of the government. 	<ul style="list-style-type: none"> Provided technical assistance and venue for focused discussion in developing rice seed strategy and concept notes.
C	Mechanization strategy	Done	<ul style="list-style-type: none"> During the political crisis of 2009-2014, the mechanization strategy and concept notes were developed. It was finalized and approved by Cabinet in May 2015, after the General Election and the formulation of the government. 	<ul style="list-style-type: none"> Provided technical assistance and forums for focused discussion. This included sharing experiences from other countries and one ex-FP recalling its benefit in strategy elaboration.

Figure 20 : Status of NRDS Process in Madagascar

List of CARD-labeled projects

These CARD-labelled projects are/were implemented in Madagascar according to the CARD Secretariat.

Table 16: List of CARD-labeled projects in Madagascar

Name of the Project	Donor	Duration	Modality	Budget	Area of Intervention (Sub-Sector)	Area of Intervention (Geographic)	Outputs/Activities
Project for Rice Productivity Improvement in Central Highland (PAPRiz)	JICA	2009-2015	Technical cooperation	800 million Yen	Productivity Improvement, Extension	Alaotra-Mangoro, Bongolava, Analamanga, Itasy, Vakinankaratra	1. Integrated technical packages for rice productivity improvement are developed through the project. 2. Seed multiplication and distribution systems are promoted under the Project. 3. Linkage among stakeholders in the focal Regions is strengthened. 4. Technical instruction materials are created for disseminating integrated technical packages.
Support for Strengthening Organizations	IFAD	2009-2019	Loan	42 million USD	Irrigation, Extension, Access to	Regions of Anosy, Androy, haute	

and Agricultural Production (AROPA)					Credit, Organization of Producers	Matsiatra, ihorombe, Amoron'i Mania	
Project for the Rice Development Centers (Ambohibary and Ankazomiriotra centers)	AfricaRice	2013-2020	Grant		Irrigation and Water Control, Access to Inputs, Quality Improvement, Marketing	Highlands of the Vakinakaratra region in the central zone	Integrated rice cultivation
Policy and Human Resources Development (PHRD)	WB/Gvt of Japan	2014-2018	Loan	12 million USD	Seed	Regions of Itasy, Boeny, Alaotra Mangoro	Improved yield, rice production
Inventory Project of Rural Roads Serving Rice-growing basins	WB	2015-2016	Loan		Access to Inputs, Marketing	National	Integrated rice cultivation
Project for Rice Productivity Improvement and Management of Watershed and Irrigated Area (PAPRiz Phase2)	JICA	2015-2020	Technical cooperation	580 million Yen	Productivity Improvement, Extension, Environmental Protection	Alaotra-Mangoro, Bongolava, Analamanga, Itasy, Vakinakaratra, and one new region	(i) Development of a framework for national dissemination of rice farming techniques; (ii) Dissemination of rice farming techniques to the newly targeted region; (iii) Further dissemination of rice farming techniques in the Central Highlands; (iv) Dissemination of environmental protection
the Irrigation System Rehabilitation Project in Southwest Lake Alaotra (the Detailed Concept)	JICA	2016-2018	Grant	106 million Yen	Irrigation	No information	No information
Project to Support Development in the Menabe and Melaky Regions – Phase II (AD2M 2)	IFAD	2016-2022	Loan		Infrastructure, Quality Improvement, Access to Market	Melaky and Menabe Regions	Improved water management. Access to market. Improved yield and productivity
PEPBM Component (PRBM2): Irrigation Component - Agricultural Equipment Lease	AfDB	2017-2021	Loan	61.4 million USD	Access to Credit, Quality Improvement	District Morombe. Bas Mangoky	Improved water management. Dissemination of adapted mechanization equipment : rental and service
Component PROJER2: Agricultural Equipment Lease	AfDB		Loan		Access to Credit, Quality Improvement		Leasing and rental of adapted mechanization equipment
The Project for Breakthrough in Nutrient Use Efficiency for Rice by Genetic	JICA	2017-2022	SATREPS	400 million Yen	Research, Productivity Improvement, Extension	Antananarivo, Analamanga region, Vakinakaratra region,	(i) Identification of field distribution and nutrient deficiency for rice cultivation; (ii) Development of varieties with superior nutrient absorption and usage effectivity;

Improvement and Fertility Sensing Techniques in Africa						Alaoatra-Mangoro region	(iii) Development of a production system for rice with superior nutrition absorption and usage effectivity; (iv) Impact assessment of the developed technology; (v) Dissemination of the developed technology
The Project for Rehabilitation of Irrigation System in South-West of Alaotra Lake	JICA	2017-2023	Grant	3.048 billion Yen	Irrigation	Irrigation district PC23 southwest of Alaotra Lake and the upper basin	
Programme DEFIS	IFAD	2018-2027	Loan	250 million USD			

Intervention areas

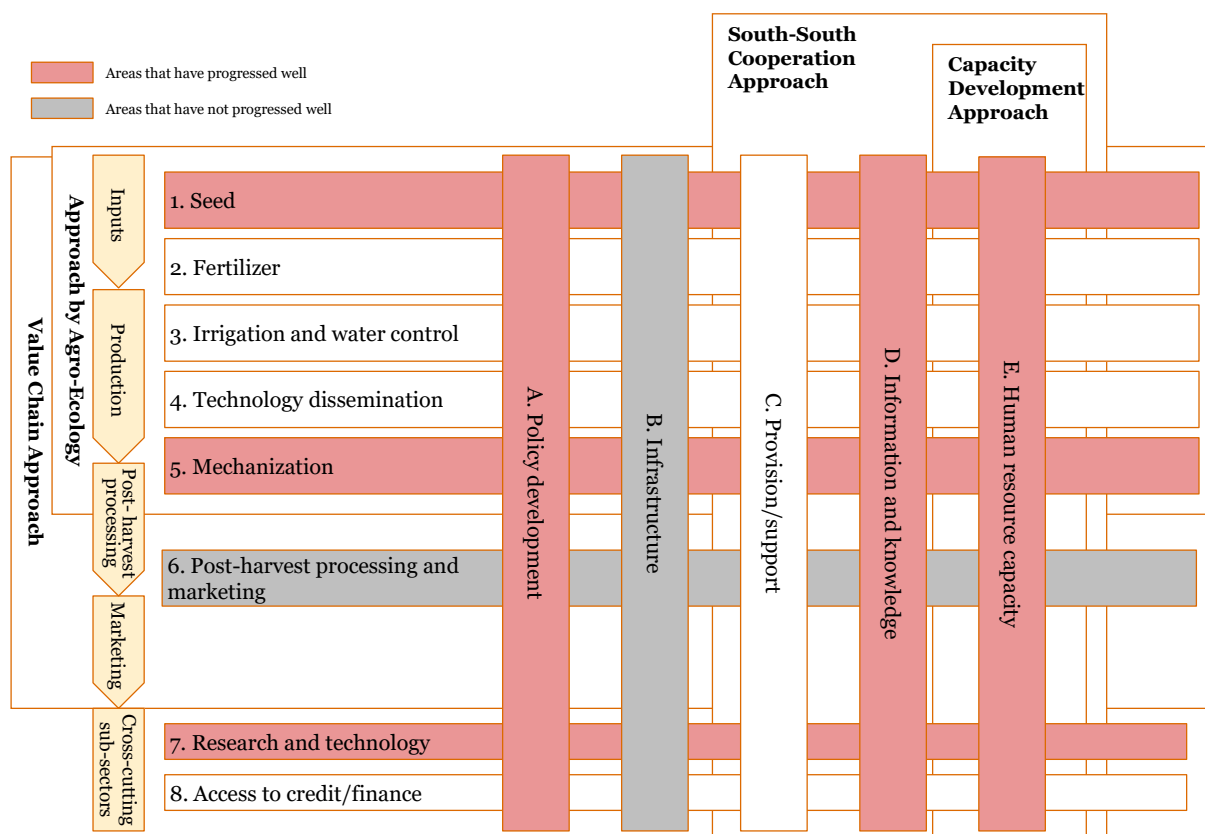


Figure 213 : Intervention Areas in Madagascar

According to the CARD focal point, the areas of 1. Seed, 5. Mechanization, and 7. Research and technology have shown progress. A. Policies development has progressed with NRDS and rice seed and mechanization strategy elaboration and articulation, and during this process there has also been D. Information and knowledge sharing. Technical assistance as well as training have been provided with donor support, which contributed to enhancements in E. Human resource capacity and technical

backstopping. Producers are increasingly using certified seeds and the government has been involved in research in seed quality improvements. Furthermore, some new donor projects have included seed and mechanization (production-level) aspects in order to implement the two sector strategies.

The area of *B. Infrastructure* remains weak for many parts of the value-chain, including a lack of rice seed storage, research laboratories, and test and control centers for mechanized equipment. Limited resources have been directed to these areas. In addition, the *6. Post-harvest and marketing* aspect has seen little progress.

4.6.3. Outcome

Human resource development

For policy makers, a number of training sessions targeting taskforce members have been organized in Japan and third countries. The technical advice and experience and information sharing at these sessions have contributed to the policy-making and policy-implementation capabilities of participants. The Secretary-General of the MPAE also visited Uganda in order to learn about the implementation structure of a commodity-focused strategy. This learning was beneficial in enhancing the implementation capabilities of policy makers within MPAE.

Furthermore, some policy makers mentioned that the NRDS and sub-sector strategy elaboration process (focused discussions at taskforce meetings and working weeks, articulation of ideas in writing) in themselves have been beneficial for the clarification of timing, budget, and priority areas and have empowered them to strategically communicate with the donors and the government.

Project formulation and implementation

Contributions to increase in rice sector projects funded by the government and donors

With the first NRDS, implementation was limited due to the political crisis of 2009-2014 as investors, including donors, halted project financing in the new, unstable environment. However, current discussions regarding prospective projects give hope for an increase in financing going forward.

Contributions to efficient, effective, and strategic project formulation

The NRDS and sub-sector strategies now function as the point of reference for both the MPAE and donors in developing rice-related projects. A couple of donor projects currently being developed sought guidance from the NRDS in order to ensure alignment with the Malagasy government's intentions, which are now clear as a result of their explicit articulation.

Contribution of the CARD focal point in promoting projects

The CARD focal point functions as the nexus of rice development promotion in Madagascar and provides a clear point of contact for both the government and donors. Equally important is that the focal point is specifically assigned to the rice sector and has dedicated staff who have clear incentives to work for the promotion of rice development.

Contributions to correlative improvements and timing adjustments between governments and donors
NRDS and sector strategy formulation have prompted discussions regarding rice sector development amongst donors, and with the establishment of the DPDR, improved correlations and timing adjustments can be expected.

4.6.4. Impact

Quantitative impact

Table 17: Production, consumption, and self-sufficiency of rice in Madagascar

(1000MT)	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Production of rice (paddy) FAO¹⁶⁰	3,914	4,540	4,738	4,300	4,551	3,611	3,978	3,722	3,816	N/A
Production of rice (paddy) USDA¹⁶¹	3,914	4,541	4,738	4,300	4,552	3,611	3,978	3,700	3,816	3,200
Production of rice (milled) USDA¹⁶²	2,505	2,906	3,032	2,752	2,913	2,311	2,546	2,382	2,442	2,048
Consumption of rice (milled) USDA¹⁶³	2,615	3,016	3,172	2,902	3,133	2,871	2,746	2,562	2,717	2,548
Self-sufficiency of rice¹⁶⁴	95.8%	96.4%	95.6%	94.8%	93.0%	80.5%	92.7%	93.0%	89.9%	80.4%

Table 18: Production targets for rice in the NRDS

(1000 MT)	2008	2018
Rain-fed¹⁶⁵	554	1,800
High season¹⁶⁶	3,532	7,150
Off-season¹⁶⁷	828	3,150
Total	4,914	12,100

¹⁶⁰ FAO STAT database "Crops" (<http://www.fao.org/faostat/en/#data/QC>) 10/1/2018 update

¹⁶¹ Calculated based on United States Department of Agriculture (USDA) PSD online database "Grains" 8/10/2017 update

¹⁶² USDA PSD online database "Grains" 8/10/2017 update

(<https://apps.fas.usda.gov/psdonline/app/index.html#/app/downloads?tabName=default>)

¹⁶³ Ibid.

¹⁶⁴ Calculated based on USDA PSD online database "Grains" 8/10/2017 update

¹⁶⁵ Supra note 153.

¹⁶⁶ Ibid.

¹⁶⁷ Ibid.

Qualitative impact

Establishment of the DPDR

The DPDR was established under the MPAE in April 2016 through a ministry reorganization that saw the Ministry of Agriculture merging with the Ministry of Livestock. The responsibility for CARD-related activities shifted from the Rural Engineering Department (overseeing irrigation, etc.) to this new department, with the director of the DPDR serving as the CARD FP. The establishment of this department clarified the principal responsibility for rice development and promotion within the country. While both the CARD Consultant and JICA experts had encouraged the department's establishment, it was ultimately the Ministry's decision which was influenced by the experience-sharing from Uganda's rice desk, and is a reflection of the Ministry's commitment to rice sector development.

Increased commitment to rice sector development on the part of policy makers

Several of the stakeholders' accounts suggested increased commitment. For example, within the NRDS II formulation process, taskforce members owned the research and drafting processes. Furthermore, the Minister of Agriculture and Livestock displayed strong leadership and commitment during the formulation period, drafting some parts of the NRDS II by himself.

Application to other rice sub-sector strategy formulation

Seeing the benefits of the NRDS and rice seed and mechanization strategy formulation, the MPAE started to develop a sub-sector strategy on extension on its own accord. The MPAE is currently seeking CARD support for this.

Application to other strategy formulation

CARD's approach to developing NRDS (e.g. working weeks for focused discussion) was applied in articulating the CAADP investment plan. This application was facilitated by the focal point for CARD and CAADP, as the focal point for both initiatives were the same person at the time.

Application in the health sector

Recognizing the benefits to rice sector development, the Ministry of Health decided to adopt the SIEM matrix approach used by CARD for 1) mapping the health sector and determining the main leverages in the sector, 2) reviewing existing interventions, 3) gap analysis, and 4) prioritizing interventions, in order to enable strategic lobbying for sector funding.

Facilitation of the establishment of an AfricaRice office in Madagascar

According to the former Permanent Secretary of MPAE and the CARD Consultant, the establishment of an AfricaRice country office in Madagascar was indirectly influenced by CARD's promotion of the rice sector in that country. In inviting the establishment of this office, the government clearly had in mind the roles AfricaRice would be able to play in the implementation of NRDS.

4.6.5. Success factors and challenges

Success factors

■Government

The importance of rice for the national economy and/or food security

Rice was already identified as the No. 1 strategic crop in Madagascar by the time the CARD initiative began. Madagascar hopes to reduce the burden on foreign exchange caused by rice imports and envisions exporting rice to other African countries.

Number and capacity of government officials

Madagascar was successful in nominating focal points with strong coordination skills as well as the ability to identify appropriate members for the taskforce and manage them. Positive feedback concerning past focal points (limited to the current one as he is still new to his role) was shared in regard to the assignment of roles and responsibilities among taskforce members, the monitoring of progress, and feedback-sharing from the CARD General Meeting with taskforce members. The taskforce members themselves worked very hard to prepare the strategies and concept notes despite the political crisis of 2009-2014, looking beyond the immediate problem of international aid suspension and preparing for the future.

Ownership and support from high-level government officials

As previously mentioned, leadership was demonstrated by the Minister and the Secretary-General. This not only facilitates work within the MPAE but is also beneficial in influencing other related ministries.

■CARD Secretariat

Provision of personnel

In Madagascar there is a resident CARD Consultant who is a local and an ex-government official. The CARD Consultant is a former governor of a region and a former Deputy Minister for Agriculture in the central government. As such, he is influential within MPAE and in the agriculture sector in general. Further, his residency in Madagascar affords the consultant the ability to provide support on a more frequent and ad-hoc/informal basis either through his own initiative or through requests from

local stakeholders.

■SC members and Partner Organizations

JICA's support

JICA Madagascar took the initiative in facilitating an opportunity for the focal point to introduce CARD/NRDS at a GBER meeting. Further, although these have not yet been realized, JICA Madagascar is speaking with other donors, seeking possible partnerships in rice projects, as well as encouraging them to conduct workshops together on topics of mutual interest, such as the rice value chain. In the absence of an organized system of SC member coordination at the country level, such support by JICA Madagascar is contributing to the promotion of CARD and facilitating coordination among donors on the ground.

Furthermore, the JICA experts' involvement has been instrumental. The Technical Advisor, who is attached to the Minister of Agriculture and Livestock is a member of the NRDS taskforce and is closely supporting the policy formulation and capacity building of policy makers. In the past, he has also used some of his own budget to finance the NRDS printing costs for distribution at stakeholder validation meetings. Further, JICA's rice project, PAPRIZ, has three JICA experts embedded in the MPAE who provide technical input in the policy formulation and implementation phases.

Challenges

■Government

Financial resources

With a small fiscal basis, the MPAE has limited financial resources for implementing the NRDS by themselves. Furthermore, there are constraints on donor fund mobilization. Some of the reasons discussed were: 1) some donors are looking for a more integrated approach or concept notes covering multiple sectors within agriculture, multiple sub-sectors of the rice value chain, and the enabling environment; 2) donors have their own strategies based on their own interests; and 3) donors are only slowly regaining their confidence in the government (donors are concerned about the governance and project management capacity of the government).

Number and capacity of government officials

The DPDR requires an increased number of personnel as well as capacity in donor coordination and project management, posing implementation challenges.

Action plan for NRDS implementation

An action plan for NRDS implementation is yet to be made; such a plan would clearly have to delineate the roles and responsibilities of each stakeholder.

■SC members and Partner Organizations

Awareness of CARD

There is lack of knowledge regarding CARD's specific objectives, activities, and role among some of the SC local offices, as the CARD follow-up was conducted predominantly at the high level.

Even among those with knowledge, there were some who commented on the lack of information and lack of knowledge in regard to where to access CARD's institutional knowledge (e.g., good practices, lessons learned).

Communication between the SC member representative and SC local office

A general disconnect between the HQ-level SC member participating in the SC and the SC local office was also observed.

■Other


Availability of reliable statistics and evaluation of progress

The last agricultural census was conducted in 2004, so the statistics used for the NRDS elaboration and articulation are regarded as unreliable, posing a challenge for implementation. However, it is equally true that the revision of NRDS sparked such discussions and has been a contributing factor in the current talks for conducting an agricultural census—a positive development, if it is realized.

4.7 Group 1: Mali

4.7.1. Context/background

Basic Information of the country

Republic of Mali			
Exchange rate (2017) ¹⁶⁸	601.999 XOF=1USD		
Land ¹⁶⁹	1,240,192 sqkm		
Population (2016) ¹⁷⁰	17,467,108		
Climate ¹⁷¹	Subtropical to arid; hot and dry (February to June); rainy, humid, and mild (June to November); cool and dry (November to February)		
Languages ¹⁷²	French, Bambara, Peul/Foulfoulbe, Dogon, Maraka/Soninke, Malinke, Sonrhai/Djerma, Minianka, Tamacheq, Senoufo, Bobo		
Ethnic Groups (2012-13 est.) ¹⁷³		Bambara, Fulani (Peul), Sarakole, Senufo, Dogon, Malinke, Bobo, Songhai, Tuareg, Malian, and from number of Economic Community of West African States	
Per capita GDP (2017) ¹⁷⁴	826.509	USD per capita	
Per capita GDP Growth rate (2017) ¹⁷⁵	5.2	%	
Population growth rate (2016) ¹⁷⁶	2.96	%	
Age composition of population (2016 est.) ¹⁷⁷	0-14 years: 47.27% (male 4,145,290/female 4,110,642) 15-24 years: 19.19% (male 1,601,474/female 1,751,161) 25-54 years: 26.82% (male 2,173,415/female 2,511,844) 55-64 years: 3.76% (male 327,923/female 329,296) 65 years and over: 2.95% (male 257,519/female 258,544)		
Population % between 15-54 years ¹⁷⁸	46.01	%	
Unemployment rate (both sex, age15+) (2016) ¹⁷⁹	8.1	%	

¹⁶⁸ Oanda <https://www.oanda.com/lang/ja/currency/converter/> (31st July 2017)

¹⁶⁹ CIA (Central Intelligence Agency) "The World Factbook"

¹⁷⁰ Ibid.

¹⁷¹ Ibid.

¹⁷² Ibid.

¹⁷³ Ibid.

¹⁷⁴ IMF

¹⁷⁵ Ibid.

¹⁷⁶ CIA (Central Intelligence Agency) "The World Factbook"

¹⁷⁷ Ibid.

¹⁷⁸ Ibid.

¹⁷⁹ ILO STAT (<http://bit.ly/2oIwFux>)

FDI Inflow (2015) ¹⁸⁰	153	Million USD
Internet penetration (% of Individuals using the Internet) (2015) ¹⁸¹	10.34	%
Mobile penetration (Mobile-cellular telephone subscriptions) (2015) ¹⁸²	139.61	%
Consumer Price Index growth (1960-2016) ¹⁸³	1.81	

Information on the country's rice sector

Level of rice demand

According to the CARD focal point, rice is one of the four most important crops in the country. Annual rice consumption increased from about 50kg per person in 2008 to more than 100 kg per person in 2016 out of the annual consumption of other cereals of more than 200 kg per person which includes millet, sorghum, maize, rice, wheat and fonio.¹⁸⁴ Rice is the foremost cereal consumed in urban areas.¹⁸⁵ Rice is also a very strategic commodity that is consumed during religious celebrations and social events such as weddings and baptisms, and hence supply shortfalls in rice is not tolerated by consumers.

The importance of rice for the economy and food security

Mali reached a paddy rice production of 2.7 million tons in 2016.¹⁸⁶ Now, Mali is the second biggest producer in West Africa after Nigeria, and 90 % of Malian rice consumption is covered by domestic production. Mali is expected to further enhance its status as a rice exporter in West Africa considering its production potential, if they can solve security issues.

The rice sector comprises about 5% of Mali's GDP.¹⁸⁷ Each year, it generates more than FCFA 200 billion.¹⁸⁸ Rice is grown in all the agricultural areas of the country, on about 1 million hectares of land out of more than 3 million hectares of land with the potential to grow rice.

Donors' interest in rice development

As rice is prioritized by the Malian government, likewise the development partners and donors have also been strongly supportive of the country's rice sector, especially in regard to financing of

¹⁸⁰ Worldbank World Development Indicators, 27/4/2017 update

¹⁸¹ ITU Country ICT Data (until 2015)

¹⁸² Ibid.

¹⁸³ AFDB Socio Economic Database

¹⁸⁴ Calculated based on USDA PSD online database "Grains" 8/10/2017 update and CIA (Central Intelligence Agency) "The World Factbook"

¹⁸⁵ République du Mali, Ministère de l'Agriculture

¹⁸⁶ FAO STAT database "Crops" (<http://www.fao.org/faostat/en/#data/QC>) 10/1/2018 update, USDA PSD online database "Grains" 8/10/2017 update

¹⁸⁷ Projet Initiative Pauvreté-Environnement IPE- Mali "Etude économique de l'environnement pour le secteur du riz au Mali," 2014

¹⁸⁸ Ibid.

irrigation scheme development, promoting certified seeds, improving soil fertility and implementing processing units. Due to the donors' support for funding the Malian rice sector, one can deduce that they are also interested in supporting the CARD initiative.

Positioning of rice development and NRDS within priority policies

Rice is referred to in the government documents and speeches of high rank government officials as a strategic foodstuff given its high consumption, the size of the revenues generated, and the importance of stakeholders in the sector. For instance, the National Framework for the Fight against Poverty (NFFP)¹⁸⁹ confers on rice the role of an engine for economic growth and, especially, for the diversification of exports through the implementation of the “land security policy”.¹⁹⁰ In 2016, CARD worked with the government to launch the revision process of NRDS as there was an urgent need to align NRDS with the revised agricultural policy in the country. On the other hand, the alignment of NRDS with CAADP Investment Plan has not been clarified yet.

Authorization status of NRDS

The government started developing their first NRDS in 2008, and the NRDS became government strategy upon the approval of the Minister of Agriculture. For the revised strategy, the government basically underwent the same approval process.

Existence of champions such as high-ranking ministry officials who support NRDS

There is a commitment on the part of the Malian government to implement these policies or strategies; there are also advocates such as senior ministry officials who support the implementation of NRDS policies and strategies. The Mali government has implemented an important mechanism for the development of rice cultivation through the establishment of five offices and several Rice Development Agencies, along with seed companies and a farmer's organization.

Government structure for NRDS implementation

The Directeur Général de l'office de Protection des Végétaux, Ministry of Agriculture is in charge of the development and implementation of NRDS.

The CARD focal point has been the same person for years. During his assignment, the focal point was promoted as a result of his contribution through the CARD Initiative. Task force members have also been achieving their goals at a technical level. In regard to the implementation mechanism, apart from technical meetings for policy development (namely, working weeks during NRDS development) and international CARD meetings, the Mali government organizes normal meetings when there are topics

¹⁸⁹ Cadre stratégique de lutte contre la pauvreté (CSLP) 2002-2006 and 2007-2011, and Cadre stratégique de croissance et de lutte contre la pauvreté (CSCR) 2012-2017

¹⁹⁰ Republic of Mali, Ministry of Agriculture, “National Strategy for the Development of Rice Growing,” 2009

to be discussed within the government. That said, technical meetings are not institutionalized.

4.7.2. Output

Status of the NRDS process

		Status	Support by CARD
A	A-1 Formulation and launch	Done	<ul style="list-style-type: none"> NRDS was developed and approved in 2009 by the Ministry of Agriculture.
	A-2 Gap analysis & prioritization and concept note formulation	Done	<ul style="list-style-type: none"> 4-5 concept notes were developed. Priorities include boosting domestic rice production; processing into quality rice, Malian label, trade structure of Malian rice; educate this generation on new technologies.
	A-3 Lobbying for funding and project formulation	In progress	<ul style="list-style-type: none"> On the basis of the NRDS, several rice development projects of the government and donors were created.
	A-4 Implementation	In progress	<ul style="list-style-type: none"> There are 18 card labeled projects. Taskforce members were already contacted to meet for the evaluation of NRDS.
B	Rice seed strategy	In progress	<ul style="list-style-type: none"> Seed strategy was developed. Created 3-4 concept notes.
C	Mechanization strategy	In progress	<ul style="list-style-type: none"> Now they are working on mechanization strategy.

Figure 22 : Status of NRDS Process in Mali

List of CARD-labeled projects

These CARD-labelled projects are/were implemented in Mali according to the CARD Secretariat.

Table 19: List of CARD-labeled projects in Mali

Name of the Project	Donor	Duration	Modality	Budget	Area of Intervention (Sub-Sector)	Area of Intervention (Geographic)	Outputs/Activities
Office Enhancement System Faguibine (OMVF)	GRM	2006-2017	Grant	5 billion FCFA	Water management/Irrigation, Extension, Rice Production, Commercialization, Quality Improvement	Lacustrine zone of the Faguibine System (cities of Diré and Tombouctou)	Sustainable rice production is promoted through the improvement of the rice value chain in irrigated area (paddy production, quality seed production, post-harvest equipment, technical support, etc.)
Plan Office Support Program in Niger (PACOP)	the Netherlands	2009-2016 (2017)	Grant, Loan	3.16 billion FCFA	Water management/Irrigation	ON/zone	Sustainable rice production is promoted through the improvement of the rice value chain in irrigated area
Support Program for	EU	2010-	Grant,	19.68	Water	ON/zone	Sustainable rice production is

the Implementation of the Plan Office Contract of Niger (PAMOC-PON)		2016 (2017)	Loan	billion FCFA	management/Irrigation		promoted through the improvement of the rice value chain in irrigated area
Support Project for Agricultural Productivity in Mali (PAPAM)	WB, IFAD, EU and GEF	2011-2018	Grant, Loan	59.1 million FCFA	Water management/Irrigation (large scale irrigation area (7,200 ha) and small scale irrigation in low land area (4,600ha)	Sikasso, Segou, Koulikoro and Mopti	Sustainable rice production is promoted through the improvement of the rice value chain in irrigated area
Office du Niger Development Support Project (PADON II)	AFD	2011-2018	Grant, Loan	9.84 million FCFA	Water management, Development of irrigation schemes (1,900 ha)	ON/zone	Sustainable rice production is promoted through the improvement of the rice value chain in irrigated area
Sustainable Improvement of the Productivity and Competitiveness of Rainfed Rice and Lowlands in the Sikasso Region (CRRR), Mali	AGRA	2014-2017	Grant	442 million FCFA	Water Management, Production	Sikasso region	Sustainable rice production and competitiveness in rainfed area and low-land are promoted
Maintenance, Infrastructure Development and Extension ON (Contract Plan)	GRM	2014-2018	Grant	35 billion FCFA	Water management/Irrigation, Tech Dissemination, Rice Production, Commercialization, Quality Improvement	Circles of Macina and Niono	Sustainable rice production is promoted through the improvement of the rice value chain in irrigated area (paddy production, quality seed production, post-harvest equipment, technical support, etc.)
Peasant Organization in a Governance of the Rice Field at National and Regional Level in West Africa	EU/VEC O/SOS Faim	2014-2018	Grant	838489 680 (of 251 959 500 for Mali)	Organization of actors among the rice value chain	Whole country	Good governance among rice value chain is promoted
Support Project for the National Strategy for Irrigation Development (PASNDI) Phase III	Spain	2014-2018	Grant, Loan	1.44 billion FCA	Water management/Irrigation	ON/zone	Sustainable rice production is promoted through the improvement of the rice value chain in irrigated area
Partnership for the Development of Sustainable Rice Systems in Sub-Saharan Africa	FAO/Venezuela	2015-2016	Grant	150 million FCFA	Organization of actors among the rice value chain	Whole country	Good governance among rice value chain is promoted
Office Rice-Segou (8th Plan Contract)	GRM	2015-2017	Grant	1.93 billion FCFA	Water management/Irrigation, Extension, Rice Production, Commercialization, Quality Improvement	Circles of Ségou and Baraouéli	Sustainable rice production is promoted through the improvement of the rice value chain in irrigated area (paddy production, quality seed production, post-harvest equipment, technical support, etc.) 34,000 ha for a production of 85,000t of paddy/year
Contract State-Plan Office Irrigated Perimeter of Baguinéda (OPIB)	GRM	2015-2017	Grant	2.11 billion FCFA	Water management/Irrigation	Baguinéda commune	Sustainable rice production is through the improvement of the rice value chain in irrigated area
Agricultural Development Project Sikasso Region (DRBudget)	GRM	2015-2018	Grant	10 billion FCFA	Water management/Irrigation	Sikasso region	Sustainable rice production is through the improvement of the rice value chain in irrigated area
Office Rice Mopti (7th Contract-State Plan-ORM)	GRM	2016-2018	Grant	1.74 billion FCFA	Water management/Irrigation, Extension, Rice Production, Commercialization,	Mopti	Sustainable rice production is promoted through the improvement of the rice value chain in low land and irrigated area (paddy production, quality seed production, post-harvest

					Quality Improvement		equipment, technical support, etc.)
Support Project at the Office du Niger (PAON)	Canada	2016-2020	Grant, Loan	8.73 billion FCFA	Water management/Irrigation	ON/zone	Sustainable rice production is promoted through the improvement of the rice value chain in irrigated area
4th 'State-ODRS Contract Plan	GRM	2017-2019	Grant	1.22 billion FCFA	Water management/Irrigation	Selingué	Sustainable rice production is promoted (in average 25,000 t of paddy/year) through the improvement of the rice value chain in irrigated area
Support Project for the Rice Sector	VECO	2017-2021	Grant	788 million FCFA	Organization of actors among the rice value chain, Production, processing	Whole country (San)	Sustainable rice production is promoted through the improvement of the rice value chain in irrigated area
Support to the Rice Inter-Branch	EU	2018-2022	Grant	657 million FCFA	Organization of actors among the rice value chain	Whole country	The technical and organizational capacities of the actors among the rice value chain is strengthened

Intervention areas

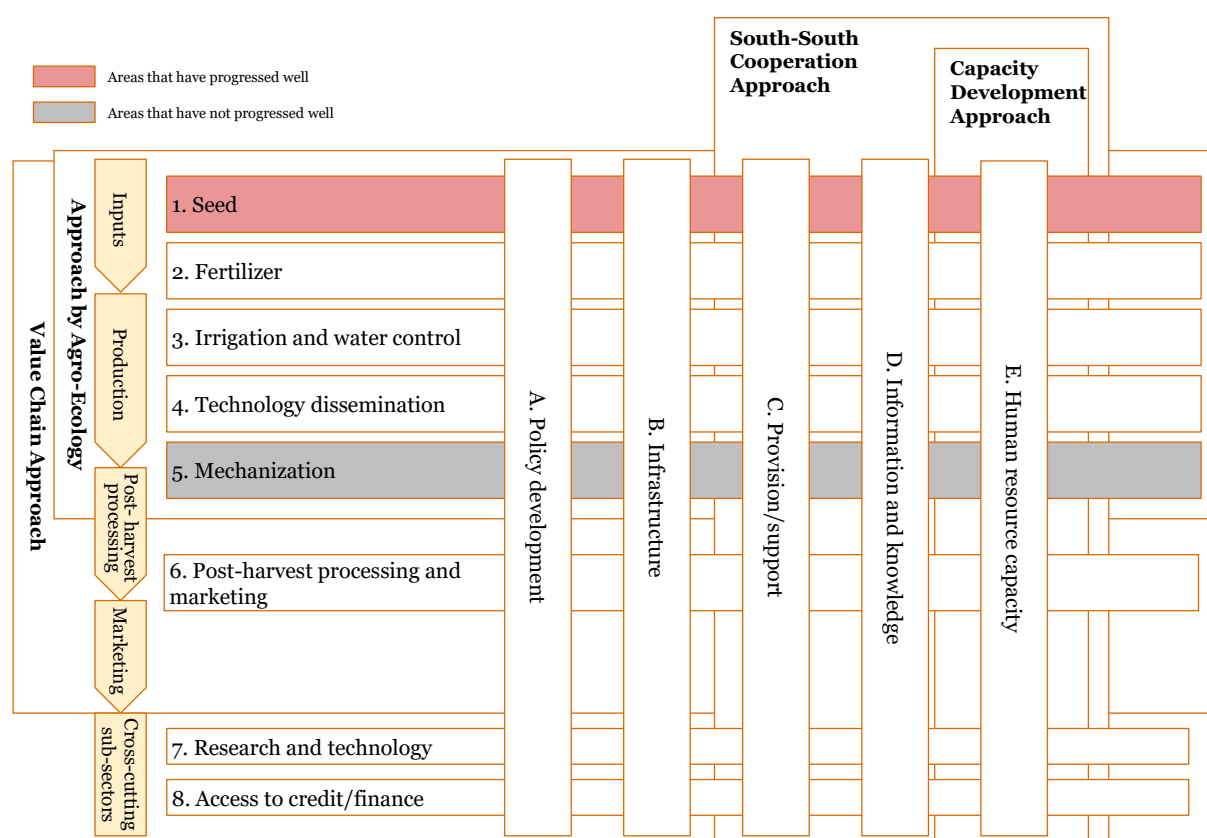


Figure 23 : Intervention Areas in Mali

In the beginning, the focus of the government was on production, and its focus gradually shifted to processing/harvesting and post-harvest loss, as indicated by the CARD focal point. Thus, according to the focal point, the production of paddy rice is the area that has progressed well, and it increased sharply to 2.7 million tons in 2016. Rice cultivation areas and rice yields have improved as well, while rice producers' income generated from the sale of surplus production has increased. Further, L

Seed production has made notable progress with the emergence of the private sector in the production and distribution of rice seeds - several seed companies have sprung up and are operating normally.

On the other hand, agricultural 5. Mechanization has not progressed well. Immense efforts have been invested in agricultural mechanization, but much remains to be done on fulfilling the need for mechanization in Mali, especially in the field of rice milling, processing and labeling of quality Malian rice, which is competitive on the international market.

4.7.3. Outcome

Human resource development

Rice stakeholders (producers, processors, senior officers, policy makers, researchers) have attended several training sessions on the development of rice production systems, thanks to the CARD initiative, the Government of Mali and other technical and financial partners. These training sessions focused on rice seed production, post-harvest rice activities, rice production and processing technologies, the management of water irrigation and the strategic axes of the Japan cooperation, among others.

Project formulation and implementation

Contributions to increase in rice sector projects funded by the government and donors

On the basis of the NRDS, several rice development projects of the government and donors were created and have contributed to the development of 100,000 ha of land, equipment for rice producers and processors (threshing machines, hullers, small rice plants, tillers and others), production and certification of rice seeds, and the restructuring of the rice sector, among others.

Contributions to efficient, effective, and strategic project formulation

There was better planning of projects and efficient allocation of limited government resource. This is due to the better targeting of promising agricultural sectors in order to manage input subsidies and agricultural equipment, and also rice processing and sales links having been taken into consideration in funding schemes earmarked for rice development.

Contribution of the CARD focal point in promoting projects

The focal point played the coordinator role for the rice sector in Mali. The rice sector's visibility in Mali depends largely on the organization, orientation, coordination, communication and archiving of documents that have been properly executed through the establishment of a focal point. On the other hand, no institutional body has been set up in Mali to coordinate and steer the rice sector.

Contributions to correlative improvements and timing adjustments between governments and donors

Increasingly, projects and programs are taking into account all aspects of rice development, intervention areas, and avoiding duplication. The same applies to funding

4.7.4. Impact

Quantitative impact

Table 20: Production, consumption, and self-sufficiency of rice in Mali

(1000MT)	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Production of rice (paddy) FAO¹⁹¹	1,624	1,614	1,296	1,741	2,076	1,978	2,167	2,331	2,781	N/A
Production of rice (paddy) USDA¹⁹²	1,623	1,951	2,308	1,738	1,923	2,212	2,168	2,451	2,769	2,669
Production of rice (milled) USDA¹⁹³	1,055	698	842	1,130	1,250	1,438	1,409	1,515	1,800	1,735
Consumption of rice (milled) USDA¹⁹⁴	900	950	1,000	1,200	1,350	1,500	1,650	1,750	1,850	1,900
Self-sufficiency of rice¹⁹⁵	117.2%	73.5%	84.2%	94.2%	92.6%	95.9%	85.4%	86.6%	97.3%	91.3%

Table 21: Production targets of rice in NRDS

(1000MT)	2008	2018
Total¹⁹⁶	1,608	3,970

Qualitative impact

Sensitization of government and stakeholders to rice development

CARD initiative has played a central role in setting up the national rice development strategy. This strategy has also inspired the stakeholders - producers, processors and traders to play their part in promoting the rice sector.

4.7.5. Success factors and challenges

Success factors

■Government

The importance of rice for the national economy and/or food security

¹⁹¹ FAO STAT database "Crops" (<http://www.fao.org/faostat/en/#data/QC>) 10/1/2018 update

¹⁹² Calculated based on United States Department of Agriculture (USDA) PSD online database "Grains" 8/10/2017 update

¹⁹³ USDA PSD online database "Grains" 8/10/2017 update

(<https://apps.fas.usda.gov/psdonline/app/index.html#/app/downloads?tabName=default>)

¹⁹⁴ Ibid.

¹⁹⁵ Calculated based on USDA PSD online database "Grains" 8/10/2017 update

¹⁹⁶ Supra note 190.

As national rice demand has been increasing in line with population growth and urbanization, a tailor-made policy is required to accommodate the latter.

Other government policies

The development of rice fields and subsidized agricultural inputs and equipment by the government have significantly contributed to the achievement of the NRDS objectives.

Challenges

■Government

Government structure for implementation

Lack of coordination and steering body and weak funding for rice research remain challenges for the rice sector.

Assignment of appropriate unit

The directorate that the current focal point belongs to is not in charge of the irrigation department. Also, it seems that there is not enough communication between the focal point, the deputy secretary and officers in charge of “cellule technique d’initiative de Riz”. CARD should be careful about the assignment of the appropriate unit to facilitate the involvement of stakeholders within the government for the development of the rice sector.

■Other

External factors

Due to the security situation including the terrorist attacks of Boko Haram since 2012, the government had had to allocate money for national security instead of NRDS implementation, and suspend administrable functions.


Private-sector involvement

Challenges include the low involvement of private sector, the low quality of rice and the organization of producers to reach the necessary production capacity. How to better organize the rice sector is also a challenge.

4.8 Group 1 Mozambique

4.8.1. Context/Background

Basic country information

Republic of Mozambique			
Exchange rate (2017) ¹⁹⁷	60.56 MZN = 1USD		
Land ¹⁹⁸	799,380 sq km		
Population (2016) ¹⁹⁹	25,930,150		
Climate ²⁰⁰	Tropical to subtropical		
Languages ²⁰¹	Emakhuwa 25.3%, Portuguese (official) 10.7%, Xichangana 10.3%, Cisená 7.5%, Elomwe 7%, Echuwabo 5.1%, other Mozambican languages 30.1%, other 0.3%, unspecified 3.7% (2007 est.)		
Ethnic groups (2014 est.) ²⁰²		African 99.66% (Makhuwa, Tsonga, Lomwe, Sena, and others), European 0.06%, Euro-African 0.2%, Indian 0.08%	
Per capita GDP (2017) ²⁰³	378.142	USD per capita	
Per capita GDP Growth rate (2017) ²⁰⁴	4.5	%	
Population growth rate (2016) ²⁰⁵	2.45	%	
Age composition of population (2016 est.) ²⁰⁶	0-14 years: 44.92% (male 5,856,623/female 5,791,519) 15-24 years: 21.51% (male 2,741,474/female 2,835,474) 25-54 years: 27.24% (male 3,301,883/female 3,762,626) 55-64 years: 3.42% (male 425,312/female 462,125) 65 years and over: 2.9% (male 345,408/female 407,706)		
Population % between 15-54 years ²⁰⁷	48.75	%	
Unemployment rate (both sexes; aged 15+) (2016) ²⁰⁸	24.1	%	

¹⁹⁷Oanda, <https://www.oanda.com/lang/ja/currency/converter/> (31st July 2017)

¹⁹⁸CIA (Central Intelligence Agency), "The World Factbook"

¹⁹⁹Ibid.

²⁰⁰Ibid.

²⁰¹Ibid.

²⁰²Ibid.

²⁰³IMF

²⁰⁴Ibid.

²⁰⁵CIA (Central Intelligence Agency) "The World Factbook"

²⁰⁶Ibid.

²⁰⁷Ibid.

²⁰⁸ILO STAT (<http://bit.ly/2oIwFux>)

FDI inflow (2015) ²⁰⁹	3,868	Million USD
Internet penetration (percentage of individuals using the Internet) (2015) ²¹⁰	9.0	%
Mobile penetration (mobile-cellular telephone subscriptions) (2015) ²¹¹	74.24	%
Consumer Price Index growth (1960-2016) ²¹²	5.19	

Information on the country's rice sector

Level of rice demand

Rice has become one of the major staple foods in Mozambique. The consumption of rice is growing at the rate of 8.6%, superseding growth rates of other cereal grains such as maize (5.5%), wheat (7.4%), and sorghum (4.7%).²¹³ It seems that rice is considered an attractive choice due to the relative ease and efficiency with which it can be cooked as well as its long shelf life.

The importance of rice for the economy and food security

Although paddy rice production increased by 2.8 times over the 10 years between 1994/1995 and 2013/2014, domestic milled rice production volume is only able to meet 28.1% of consumption, and since 2000 the country has been importing an average of 365,800 tons of rice per year.²¹⁴ Compared to other cereal grains like corn, wheat, and sorghum, rice is experiencing a significant increase in imports, causing a strain on Mozambique's trade balance and food security.

In Mozambique, smallholder farmers mainly produce rice on a subsistence-basis, usually in rain-fed environments, which is subject to high levels of uncertainty. Furthermore, due to low productivity, the income of these farmers remains chronically low. Thus, development in the rice sector is believed to contribute to poverty alleviation and economic development.

Donors' interest in rice development

JICA has been a leading supporter of rice development in Mozambique, mainly through the provision of technical support, but other donors such as the Brazilian Agency for Cooperation, Vietnam, AfDB, and WB have developed projects with rice components, reflecting their interest in rice development.

Positioning of rice development and NRDS within priority policies

²⁰⁹Worldbank World Development Indicators, 27/4/2017 update

²¹⁰ITU Country ICT Data (until 2015)

²¹¹Ibid.

²¹²AfDB Socio Economic Database

²¹³Ministerio da Agricultura e Seguranca Alimentar, "National Rice Development Program of Mozambique (NRDP)", February 2017

²¹⁴Ibid.

Rice is gaining strategic importance in the country's agricultural policies. In the Strategic Plan for Agricultural Development (PEDSA), which is a presidential initiative and a medium-term agriculture strategy document following CAADP principles, rice is recognized as one of the six priority crops alongside maize, cassava, beans, cashew nuts, and cotton. In Mozambique, the NRDS is called the National Rice Development Program (NRDP) and is positioned as one of the sub-programs of the National Agricultural Investment Plan (PNISA), which serves as the investment and operational framework for PEDSA.

Authorization status of NRDS

The Ministry of Agriculture and Food Security (MASA) approved the NRDP and rice seed strategy (named "Rice Seed Value Chain Development Strategy") in February 2017. Following approval, the focal point circulated the NRDP to stakeholders in the Consultative Group on Rice (GCA) and issued letters to the National Directors at MASA and other ministries. The focal point now intends to share the NRDP with donors at the Agriculture and Rural Development Donor Group (AgRed) in order to ensure its authority as Mozambique's overarching policy for rice development.

Existence of champions such as high-ranking ministry officials who support NRDS

Support for the NRDP by high-ranking officials has increased during the years of the CARD initiative. The NRDP could not pass the Consultative Council, which is the second level of decision-making at MASA for years after its first drafting in 2009. However, it finally won the Council's support as well as the approval at the final level of decision-making in early 2017.

Government structure for NRDS implementation

The National Director of Agriculture at MASA serves as the CARD focal point and is supported by an assistant and a rice seed focal point.

A Consultative Group on Rice (GCA) has been established under MASA (previously outside the government) to oversee the implementation of the NRDP. Its responsibilities include mobilizing funds from the government and development partners as well as streamlining feedback from different stakeholders. The GCA comprises around 70-100 representatives from the public and private sectors and donors. The NRDP taskforce functions as the secretariat for the GCA and is headed by the CARD focal point.

At the regional level, focal points for rice have been appointed, and together with the heads of provincial agricultural offices, they are expected to lead the implementation of the Initiative, working in close cooperation with the GCA at the central level.

4.8.2. Output

Status of the NRDS process

		Status	Support by CARD
A	A-1 Formulation and launch	Done	<ul style="list-style-type: none"> NRDS was first drafted in 2009 but it was not able to get MASA approval for a long time. The task force changed the structure of the NRDS to a program, namely the NRDP. MASA finally approved NRDP in February 2017.
	A-2 Gap analysis& prioritization and concept note formulation	In progress	<ul style="list-style-type: none"> 16 concept notes were developed.
	A-3 Lobbying for funding and project formulation	In progress	<ul style="list-style-type: none"> Preparation has begun for fund mobilization and project formulation (translation of NRDP into English for dissemination to donors, printing and binding NRDP for dissemination to government officials). Some concept notes have already been taken to JICA and FAO for fund mobilization.
	A-4 Implementation	Not started	<ul style="list-style-type: none"> Due to the debt crisis of the country, many donors are halting their assistance, and CARD is unable to provide fund matching support. However, the CARD consultant is maintaining contact with the donors.
B	Rice seed strategy	Done	<ul style="list-style-type: none"> Oversee implementation through visiting CARD consultant.
C	Mechanization strategy	Not Started	<ul style="list-style-type: none"> The rice seed strategy was drafted in April 2016 and approved alongside the NDRP in February 2017. Finalized 6 rice seed concept notes (another 4 are currently being finalized).

Figure24 : Status of NRDS Process in Mozambique

List of CARD-labeled projects

These CARD-labelled projects are/were implemented in Mozambique according to the CARD Secretariat.

Table 22: List of CARD-labeled projects in Mozambique

Name of the Project	Donor	Duration	Modality	Budget	Area of Intervention (Sub-Sector)	Area of Intervention (Geographic)	Outputs/Activities
Integrated Agricultural Development Project for Small Scale Farmers in Chokwe Irrigation Scheme	JICA	2007-2010	Technical cooperation	352 million Yen	Productivity Improvement, Irrigation, Extension	Gaza	(i) Determination of improved farming techniques for small farmers; (ii) Improved management of irrigation facilities; (iii) Establishment of small farmer support systems
The Project for Rice Productivity Improvement in Chokwe Irrigation Scheme	JICA	2011-2014	Technical cooperation	481 million Yen	Productivity Improvement, Irrigation, Extension	Gaza	(i) Dissemination of improved rice transplanting techniques; (ii) Improvement and verification of direct sowing techniques; (iii) Dissemination of improved direct sowing techniques to farmers; (iv) Enhancement of farming support groups; (v) Promotion of action plan implementation through better coordination among implementing agencies
Project for Improvement of Techniques for Increasing Rice Cultivation Productivity	JICA	2011 - 2015	Technical cooperation	420 million Yen	Productivity Improvement, Irrigation, Extension	Nante area, Maganja de Costa district, Zambezia province	(i) Development of improved rice production technical packages; (ii) Development of water management associations' capacity to manage and maintain irrigation facilities; (iii) Extension of technical packages for improved rice production
Project for Improvement of Rice Productivity in Zambezia Province (ProAPA)	JICA	2016 - 2021	Technical cooperation	670 million Yen	Productivity Improvement, Irrigation, Extension, Seed	Zambezia	(i) Dissemination of (a) irrigated and (b) rain-fed rice production techniques; (ii) Improved management of (a) seed systems and (b) irrigation facilities; (iii) Development of farmer organizations' capacity to carry out market-oriented activities; (iv) Acceptance of developed dissemination packages by major agriculture stakeholders

Intervention areas

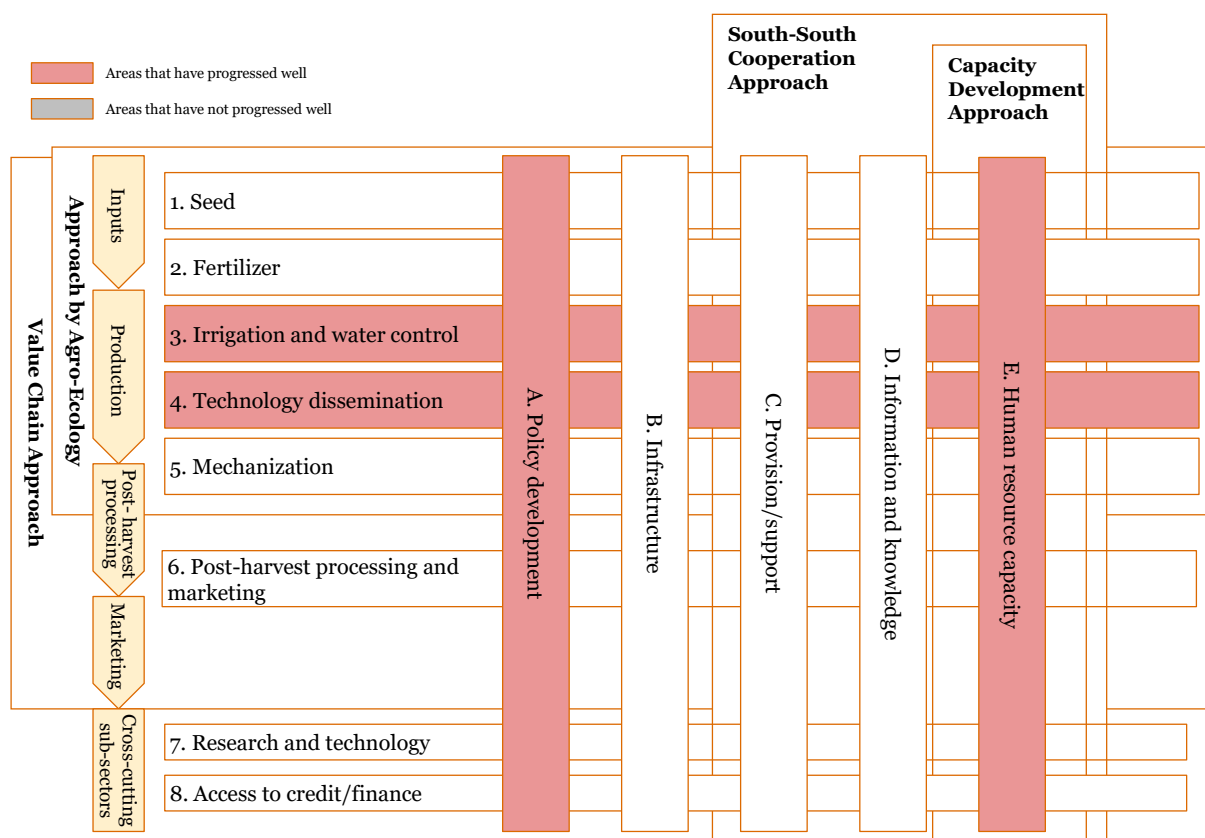


Figure 25 : Intervention Areas in Mozambique

Some interventions have been made in the area of 3. Irrigation and water control as well as in 4. Technology dissemination and productivity enhancement at the production level in terms of E. Human resource capacity development. Also, A. Policy development has progressed with the formulation and approval of the NRDP and rice seed strategy.

With the launch of the NRDP, the assistant focal point mentioned that future intervention should be prioritized in the areas of seed, irrigation and water control, mechanization, and research and technology. The focal point placed emphasis on seed as the top priority. Donors generally shared this prioritization of intervention areas.

The assistant focal point also mentioned that the government is reviewing trade policies for imported rice and as a way to provide incentives for rice producers.

4.8.3. Outcome

Human resource development

For policy makers, training targeted taskforce members has been organized in Japan and third party countries. Policy makers mentioned that the technical advice and experience and information sharing at these training sessions have contributed to their policy-making capabilities.

The assistant focal point also suggested that a strategic mindset for rice development among the policy makers was instilled through the NRDP and the rice seed strategy elaboration and articulation processes. Policy makers have become clear on where to start and what to prioritize with regard to rice development.

Project formulation and implementation

Contributions to increase in rice sector projects funded by the government and donors

Projects are yet to be formulated after the launch of the NRDP, but the above-mentioned CARD-labeled projects and comments from several stakeholders point to increased interest in the sector.

Contributions to efficient, effective, and strategic project formulation

The NRDP and the rice seed strategy now function as points of reference in MASA for developing rice projects. According to one policy maker, the NRDP has clarified the actions required for rice development in Mozambique in a more structured manner, giving MASA a basic instrument for clearly and strategically approaching donors.

Contribution of the CARD focal point to the promotion of projects

Although projects are yet to be formulated after the launch of the NRDP, the CARD focal point is expected to play a central role in the promotion of projects as he did for the development and garnering of ministerial support for the strategies. Equally important will be the six rice focal points at the regional level, as some donors would directly approach the provinces for project formulation.

Contributions to correlative improvements and timing adjustments between governments and donors

No examples were mentioned, but the GCA is designed to perform this function and if it is performed well, good correlation and timing adjustment can be expected.

4.8.4. Impact

Quantitative impact

Table 23: Production, consumption, and self-sufficiency of rice in Mozambique

(1000MT)	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Production of rice (paddy) FAO²¹⁵	88	179	258	271	203	114	156	128	115	N/A
Production of rice (paddy) USDA²¹⁶	214	178	258	271	148	351	343	351	328	360
Production of rice (milled) USDA²¹⁷	139	116	168	176	96	228	249	232	213	234
Consumption of rice (milled) USDA²¹⁸	374	461	533	531	576	768	864	782	813	834
Self-sufficiency of rice²¹⁹	37.2%	25.2%	31.5%	33.1%	16.7%	29.7%	28.8%	29.7%	26.2%	28.1%

Table 24: Production targets for rice in the NRDS

(1000 MT)	2008	2018
Total²²⁰	265	1,363

Qualitative impact

Sensitization of government and stakeholders to rice development

While CARD was not the sole reason, several stakeholders mentioned that it was an important force for change in the strategic positioning of rice within Mozambique, and rice is now recognized as one of the six priority crops under the PEDSA presidential initiative. Furthermore, the NRDP development process contributed to consensus-building among stakeholders in the rice value chain and created a common mindset for rice development in Mozambique.

4.8.5. Success factors and challenges

Success factors

■ Government

Assignment of appropriate unit

The NRDP's development responsibilities were transferred from the IIAM (a government research institute) to MASA in 2015, contributing to an increased momentum for NRDP approval. This was a

²¹⁵ FAO STAT database "Crops" (<http://www.fao.org/faostat/en/#data/QC>) 10/1/2018 update

²¹⁶ Calculated based on United States Department of Agriculture (USDA) PSD online database "Grains" 8/10/2017 update

²¹⁷ USDA PSD online database "Grains" 8/10/2017 update

(<https://apps.fas.usda.gov/psdonline/app/index.html#/app/downloads?tabName=default>)

²¹⁸ Ibid.

²¹⁹ Calculated based on USDA PSD online database "Grains" 8/10/2017 update

²²⁰ Supra note 213.

result of the adoption of a value-chain approach to rice development, which facilitated the involvement and commitment of stakeholders across the value-chain.

Authority/level of focal point

The assignment of the National Director of Agriculture as the CARD focal point in 2015/2016 was another factor which paved the way for increased support for the NRDP across the ministry. As the National Director, he is politically closer to other government ministries, and hence has more leverage to influence other higher-level ministry officials compared to the two former focal points, of whom the first was the Director of IIAM and the second was the Deputy National Director of Agriculture. Some of the respondents mentioned that his knowledge/expertise in rice development (he has worked in rice sector development as a technician throughout his career), along with his leadership skills have also been beneficial in leading to the prioritization of rice production in Mozambique.

Challenges

■ Government

Financial resources

MASA has limited financial resources for implementing the NRDP. MASA was divided into MASA and the Ministry of Land and Rural Development two years ago, and due to mismanagement and corruption, its budget has decreased significantly. This financial constraint has further been aggravated by the country's debt crisis, causing many donors to halt their development assistance.

Number and capacity of government officials

In recent years, MASA has faced a significant attrition of manpower, leading to an absolute staff deficiency as well as loss of knowledge and skills. With regard to rice development promotion in particular, the assistant focal point and rice seed focal point are standalone players with no support staff in place. This situation is coupled with the inherent problem of a lack of rice specialists in the country, even in research.

Further, several stakeholders mentioned the limited expertise within MASA for mobilization of funding from donors and the private sector.

Incentives for rice development promotion

There is lack of financial and non-financial (e.g., recognition) incentives for MASA staff for promoting the NRDP, leading to a lack of accountability.

Government structure for implementation

Although the GCA was transferred to MASA around 2015/16 with the intention of having proper budget appropriation from the government, it has yet to receive any budget.

The taskforce, which was designed to function as the GCA secretariat has not institutionalized roles and responsibilities for implementation, and some stakeholders raised concerns about their efficacy.

The importance of rice for the national economy and/or food security

According to one SC local office staff member, although agriculture is positioned as an important sector in government strategies, the government is more focused on natural resources, and its budget reflects this.

Ownership and support from high-level government officials

Several stakeholders commented that the real challenge for the CARD initiative in Mozambique was not drafting the NRDP, but obtaining government buy-in. The development of the draft NRDP was carried out as early as 2009; however, the draft did not receive approval from MASA until early 2017, as it was not taken as an initiative of the government. It seems that government ownership has been increasing with the approval of the NRDP; however, multiple stakeholders mentioned their hope for CARD to influence/interact with the highest levels of government so as to ensure strategy implementation, suggesting that ownership challenges still persist within the government.

Continuity of CARD focal point/taskforce/high-ranking officials

The other reason that NRDP could not get MASA approval for a long time was because of the personnel changes of involving senior officials, such as the Minister and Permanent Secretary. When the top management of the Ministry was changed, the approval of NRDP was not taken over by the new administration.

Further, the change of the CARD focal point, especially that of a rice expert who retired from the government, slowed the momentum of CARD activities for some time.

■CARD Secretariat

Communication

Follow-up through CARD General Meetings and CARD Consultant visits, mainly targeted technical staff and not decision makers. One former focal point and an SC local office staff member both mentioned that this hindered progress in Mozambique, where rice is still a relatively newly priority crop, and the highest level of government has not yet been adequately sensitized.

■ SC members and Partner Organizations

Awareness of CARD

There is lack of knowledge regarding CARD among some of the SC local offices, as CARD follow-up was predominantly carried out at the high level.


Communication between the SC member representative and SC local office

A general disconnect between the HQ-level SC member participating in the SC and the SC local office has been observed.

4.9 Group 1: Nigeria

4.9.1. Context/background

Basic country information

Federal Republic of Nigeria		
Exchange rate (2017) ²²¹	312.076 NGN=1USD	
Land ²²²	923,768 sqkm	
Population (2016) ²²³	186,053,386	
Climate ²²⁴	Varies; equatorial in the south, tropical in the center, arid in the north	
Languages ²²⁵	English, Hausa, Yoruba, Igbo (Ibo), Fulani, over 500 additional indigenous languages	
Ethnic Groups (2014 est.) ²²⁶		Composed of more than 250 ethnic groups; the most populous and politically influential are: Hausa and the Fulani, Yoruba, Igbo (Ibo), Ijaw, Kanuri, Ibibio, Tiv
Per capita GDP (2017) ²²⁷	2123.22	USD per capita
Per capita GDP Growth rate (2017) ²²⁸	0.8	%
Population growth rate (2016) ²²⁹	2.44	%
Age composition of population (2016 est.) ²³⁰	0-14 years: 42.79% (male 40,744,956/female 38,870,303) 15-24 years: 19.48% (male 18,514,466/female 17,729,351) 25-54 years: 30.65% (male 29,259,621/female 27,768,368) 55-64 years: 3.96% (male 3,595,293/female 3,769,986) 65 years and over: 3.12% (male 2,754,040/female 3,047,002)	
Population % between 15-54 years ²³¹	50.13	%

²²¹ Oanda <https://www.oanda.com/lang/ja/currency/converter/> (31st July 2017)

²²² CIA (Central Intelligence Agency) "The World Factbook"

²²³ Ibid.

²²⁴ Ibid.

²²⁵ Ibid.

²²⁶ Ibid.

²²⁷ IMF

²²⁸ Ibid.

²²⁹ CIA (Central Intelligence Agency) "The World Factbook"

²³⁰ Ibid.

²³¹ Ibid.

Unemployment rate (both sex, age15+) (2016) ²³²	5.4	%
FDI Inflow (2015) ²³³	3,129	Million USD
Internet penetration (% of Individuals using the Internet) (2015) ²³⁴	47.44	%
Mobile penetration (Mobile-cellular telephone subscriptions) (2015) ²³⁵	82.19	%
Consumer Price Index growth (1960-2016) ²³⁶	9.38	

Information on the country's rice sector

Level of rice demand

Rice is an important staple crop in Nigeria and has seen consistent increases in demand over the last 3 decades.²³⁷ This can be attributed to shifts in consumer preference, influenced by factors such as urbanization. In 2015, total rice demand in Nigeria was estimated to be around 7.5 million tons based on average consumption of 40kg/capita/year and a population of 186million.²³⁸ This demand is expected to grow at 5-8%/year to reach demand levels of 36 million tons in 2050.²³⁹

The importance of rice for the economy and food security

Rice occupies a strategic position in Nigeria's food and security plans and programs. Because the increase in domestic production has not been able to keep pace with the rising demands, Nigeria remains the world's 2nd largest importer of rice, importing about 1.6 million tons of rice per year in 2015.²⁴⁰ This has caused a major strain on the country's foreign currency reserve.

Further, rice farming is dominated by smallholder farmers who supply 80% of the national production.²⁴¹ Therefore, the development of the rice sector is also important for Nigeria in terms of the economic development of marginal farmers.

Donors' interest in rice development

Donors such as IFAD, GIZ-CARI, FAO, USAID, AfDB, WB, AfricaRice, JICA, and KOICA have participated in the development of the rice sector in Nigeria. It is also worthy to note that the private sector has shown keen interest, investing alongside development partners such as GIZ-CARI but also

²³² ILO STAT (<http://bit.ly/2oIwFux>)

²³³ Worldbank World Development Indicators, 27/4/2017 update

²³⁴ ITU Country ICT Data (until 2015)

²³⁵ Ibid.

²³⁶ AfDB Socio Economic Database

²³⁷ Coalition for African Rice Development, "Evaluation Report – Rice Transformation Agenda Action Plan (Nigeria's NRDS) 2011 – 2015", July/August 2017

²³⁸ Ibid.

²³⁹ Ibid.

²⁴⁰ Ibid.

²⁴¹ FMARD, "Rice Transformation Action Plan", September 2011

on their own.

Positioning of rice development and NRDS within priority policies

Under the strong leadership of the previous Minister for Agriculture, Dr. Akinwumi Adesina who is the current President of the AfDB, the Agriculture Transformation Agenda (ATA) was developed in 2011 and transformation plans were developed for all important value-chains. At this point NRDS, which was already approved the previous year, was upgraded to become the Rice Transformation Agenda Action Plan (RTA-AP) and positioned as one of the transformation plans under the ATA umbrella. The ATA formally ended in 2016 and is replaced by the Green Initiative, which was launched as the country's Agriculture Promotion Policy 2016-2020. Rice is identified as a major crop in this policy.

Rice is also included in the country's Economic Recovery and Growth Plan (ERGP) 2017-2020 as a priority in agricultural development, and Nigeria hopes to export rice by 2020.²⁴²

Authorization status of NRDS

The Federal Ministry of Agriculture and Rural Development (FMARD) approved the NRDS and concept notes in 2010. The President and Executive Council officially launched the upgraded version of the NRDS and the RTA-AP in 2011. As a result of intensive lobbying activities led by the CARD focal point, the RTA-AP functioned as the point of reference for the federal and state governments, governmental agencies, as well as donors for rice-related project formulation.

For the rice seed strategy, it was developed and approved by FMARD in 2014.

Existence of champions such as high-ranking ministry officials who support NRDS

Strong leadership was demonstrated by the then Minister of FMARD, who initiated the launch of the ATA and the RTA-AP as a critical component of the ATA. He promoted agriculture as a business instead of a development program for the first time. Although there is no "rice champion" per se, this leadership translated into support for rice, owing to the recognized importance of rice in the agriculture sector in Nigeria. The support can also be evidenced by the financial commitments that were made by the government for the implementation of the RTA-AP.

Government structure for NRDS implementation

The implementation structure of RTA-AP can be understood in the context of the broader ATA. In regard to the ATA, the Agriculture Transformation Implementation Council (ATIC) was created as the highest-decision making body, chaired by the President. At the heart of the ATIC, the Agricultural Value Chain Transformation Implementation Group (Value Chain ATIG) was created, which was

²⁴² Ministry of Budget & National Planning, "Economic Recovery and Growth Plan 2017-2020", February 2017

supported by several working groups established to address the challenges common to all value-chains such as infrastructure and financing. Inter-disciplinary policies were dealt with by inter-ministerial committee, which is a platform for all ministers to come together.

The Federal Department of Agriculture (FDA) of FMARD was the department in charge of implementing the ATA. The Growth Enhancement Support Working Group (GESWG) was instituted to facilitate the implementation and functioned as a working group to review all the programs of the ATA with the Minister on a weekly basis. The desk officers of the value-chains included in the ATA attended this meeting, including the Rice Desk officer. The Rice Desk was primarily in charge of implementing RTA-AP.

4.9.2. Output

Status of the NRDS process

		Status	Support by CARD
A	A-1 Formulation and launch	Done	<ul style="list-style-type: none"> The NRDS was developed in 2009 and approved by the FMARD in 2010. Under the strong leadership of the previous Minister of the FMARD, the ATA was developed and approved by the President and Executive Council in 2011. The RTA-AP was developed under the umbrella of the ATA, drawing from the NRDS.
	A-2 Gap analysis & prioritization and concept note formulation	Done	<ul style="list-style-type: none"> Concept notes were developed for the RTA-AP, but much was derived from the 13 that were developed with CARD support.
	A-3 Lobbying for funding and project formulation	Done	<ul style="list-style-type: none"> Presentations were made at the agricultural donor working group. Government agencies, state governments, and federal government were lobbied for funding.
	A-4 Implementation	In progress	<ul style="list-style-type: none"> There are 12 externally-funded and 8 government-funded CARD-labeled projects in Nigeria.
B	Rice seed strategy	Done	<ul style="list-style-type: none"> The rice seed strategy was developed as part of the RTA-AP and approved by the FMARD (last revised June 2014) 16 concept notes were developed.
		In progress	<ul style="list-style-type: none"> Development is underway. A taskforce has already been formed and convened. An initial information gathering exercise has begun in preparation for the "Working Week".
C	Mechanization strategy	In progress	<ul style="list-style-type: none"> Thematic training was recently provided for the CARD focal point and mechanization engineer. "Working Week" is planned for Oct/Nov 2017.

Figure 26 : Status of NRDS Process in Nigeria

List of CARD-labeled projects

These CARD-labelled projects are/were implemented in Nigeria, according to the CARD Secretariat.

Table 25: List of CARD-labeled projects in Nigeria

Name of project	Donor	Duration	Modality	Budget	Area of Intervention (Sub-sector)	Area of Intervention (Geographic)	Outputs/Activities
Third National FADAMA Development Project (FADAMA III)	WB	2008-2017	Loan	450 million USD	Water management/Irrigation, Access to market, Mechanization, Infrastructure	36 states including Federal Capital Territory	24 million ha of farm land developed; 317,000 farmers benefitted; rural farmers income raised by 63%; farmers floated micro finance bank
Rice Post-Harvest Processing and Marketing Pilot Project in Nasarawa and Niger States (RIPMAPP)	JICA	2011-2016	Technical Cooperation	739 million JPY	Post-Harvest Processing, Dissemination	Lafia in Nassarawa & Bida in Niger states	1. Quality of domestic rice is increased in target states 2. Measure to promote distribution of high quality domestic rice are identified 3. Rice grading standard for domestic rice is developed and improved 4. Capacity of small scale rice millers, parboilers, rice farmers and traders on post-harvest, marketing and business management enhanced
Rice Value Chain Development	IFAD	2012-2018	Loan, grant	IFAD loan: 74.4 million USD, IFAD grant: 0.5 million USD	Value chain	Benue, Taraba, Niger, Ogun, Ebonyi & Anambra States	1. Developing agricultural markets and increasing market access for smallholder farmers and small to medium-scale agro-processors 2. Enhancing smallholder productivity – and thus increasing the volume and quality of marketable produce – by strengthening farmers' organizations as well as supporting smallholder production.
Strengthening National Seed System in Nigeria	FAO	2013-2015	Technical Cooperation	500,000 USD	Seed	Ebonyi, Ondo, Kaduna, Sokoto, Jigawa States	1. Protocols & technical procedures & regulations for seed quality control updated and harmonized with ECOWAS standard 2. Capacity and functioning of Community Based system reviewed 3. Capacity and participation of large/medium scale private sector entrepreneurs in national seed industry increased
Study of Quality Control by Integrated Rice mills	GIZ-CARI	2014	Small grant	800,000 NGN	Access to Market	Niger & Kano State	Quality control of 3 mills strengthened
Onyx Rice Mill	GIZ-CARI	2014-2017	Matching grant fund	592,823.80 EUR	Access to Finance, Access to Market	Niger State	Mill linked with 5,000 small holder farmers and wholesalers, product branded (Savannah Premium Rice)
Ajifa Rice Mill	GIZ-CARI	2014-2017	Matching grant fund	482,556.93 EUR	Access to Finance, Access to Market	Kogi State	Outgrowers of 5,000 developed, marketing system for the mill developed & mill is linked to wholesalers
Capacity development and experience sharing for sustainable rice	Government of Rep of Korea/FAO	2014-2017	Grant	2 million USD	Post-Harvest Processing	Ebonyi State in South-East Nigeria	1. Business/Entrepreneurial capacity of producer organizations, small scale enterprises and other VC actors strengthened 2. Modern rice production technologies promoted. 3.

value chain development in Africa through SSC							Post- harvest processing technologies promoted. 4. Public-private partnership to improve the efficiency of VC and enhance market access
Establishment of a mini seed laboratory	Federal Government of Nigeria	2015	Government budgetary allocations	Not specified	Seed	Jigawa State	1 mini seed lab established by Jigawa state government facilitated by NASC
Upgrading of equipment at the Laboratory in the Head quarter and 1 satellite laboratory in Zaria	Federal Government of Nigeria	2015	Government budgetary allocations	Not specified	Infrastructure	Abuja FCT and Zaria	Equipment in 2 laboratory upgraded
National Varietal catalogue	Federal Government of Nigeria	2015/2016	Government budgetary allocations	2014/2015 9.8 million NGN	Seed		National varietal catalogue produced
Awareness creation for seed users on the potential benefits of improved rice varieties/improved seeds	Federal Government of Nigeria	2015/2016	Government budgetary allocations	55 million NGN	Seed	3 locations	Several farmer groups sensitized
Partnership for sustainable rice systems development in Sub-Saharan Africa (Nigeria)	FAO	2015-2017	Grant	500,000 USD	Value chain	Ekiti, Edo, Anambra, Enugu and Jigawa States	Increase food security, incomes and employment opportunities of small holder farmers
1. Rejuvenate breeder seeds of released varieties 2. Capacity development of National Agricultural Seed Council (NASC) staff and seed companies	USAID /Africa Rice	2015-2017	Grant	1 million USD	Seed, Capacity Development	Seed companies from across the country and selected NASC inspectors and certification officers	Capacity of 15 seed companies strengthened; breeder seed of released varieties rejuvenated; capacity of inspectors and certification officers of NASC enhanced
Upgrading of infrastructures at the new office complex of NASC (WAAPP)	WB	2016	Grant	Not specified	Infrastructure	NASC Head office complex	infrastructures at Head office upgraded
E-Certification and E-Tracking of seeds	Federal Government of Nigeria	2017	Government budgetary allocations	143 million NGN	Seed	Domiciled in NASC Head office	Breeder seeds/ Foundation/Certified monitored
Livelihood Improvement Family Enterprise in the Niger Delta (LIFE-ND)	IFAD	2018-2030 (2 phases of which 1 has been fully funded)	Loan	120 million USD (IFAD is financing 90 million USD; NDDC is financing 30 million USD)	Post-Harvest Processing	9 Niger Delta States	25,500 decent jobs for the youth engaged in profitable enterprises; 1,200 enterprises qualified as village incubation centers; at least 60% increase in productivity; at least USD5 per day return on investment from profitable enterprises, etc.

Establishment of demonstration plots to train farmers of community seed production	Federal Government of Nigeria	Continuous	Government budgetary allocations	2016 -6 million NGN 2017-15 million NGN	Seed	Whole country	community seed producers trained
provision of kits for field officers	Federal Government of Nigeria	Continuous	Government budgetary allocations	2016 & 2017 - 11.2 million NGN	Value chain	Whole country	GPS, rain boots/coats etc. provided
Human Capacity Building	Federal Government of Nigeria	Continuous	Government budgetary allocations	Not specified	Value chain	NASC Staff	5 Masters and 7 PhD students undergoing training in various universities and institutions

Intervention areas

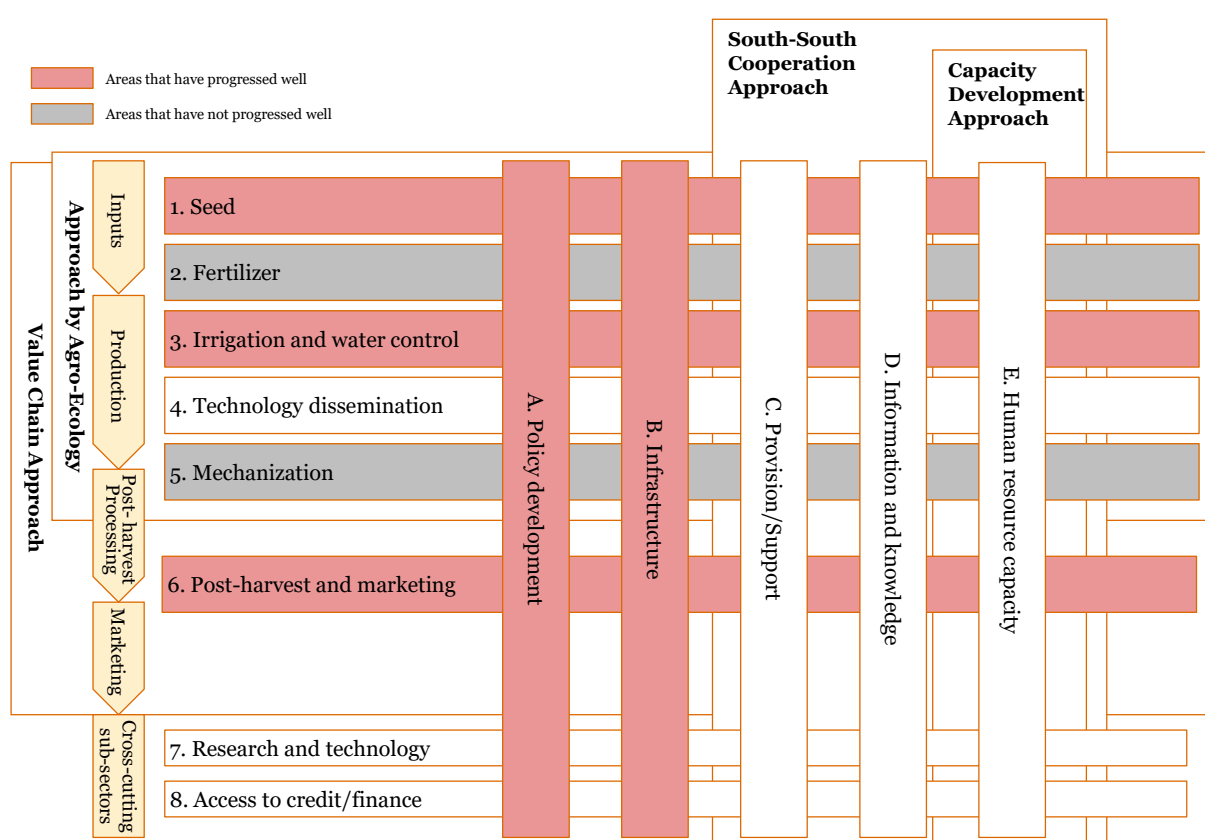


Figure 27 : Intervention Areas in Nigeria

According to the focal point, the areas of *1. Seed*, *3. Irrigation and water control*, and *6. Post-harvest processing* which were identified as the priority areas in RTA-AP have shown good progress. In the seed sub-sector, *A. policy* was developed with the support of CARD, and the availability of high quality seed has improved after being led by the private sector. Irrigation *B. infrastructure* was developed, and rice production on irrigated land has increased in the country. Post-harvest processing and milling were initially recognized as the main bottleneck, and through the interventions listed above, the quality and capacity of domestic rice mills have improved. The transformation of the

FMARD's agro-processing unit to the Agribusiness and Marketing (ABM) department was also a reflection of the urgency to tackle the issue through increased private sector participation. Further, the appointment of the 2nd CARD focal point at the ABM department to ensure their full engagement is again such a reflection.

The availability of 2. Fertilizers and agro-chemicals did not see much improvement as the foreign exchange rate worked in disfavor of prices for these predominantly imported inputs. This was similarly the case for 5. Mechanization (production level) as the non-availability of locally produced agricultural machinery meant that import-related difficulties hampered the adoption of machinery in the fields. Tractor intensity is still considered low, and other stakeholders also agreed that its intensification is needed to improve the value-chain.

4.9.3. Outcome

Human resource development

For policy makers, a number of training sessions have been organized in Japan and third countries. From Nigeria, the CARD focal point and sometimes the Permanent Secretary attended them. In addition to deepening knowledge about specific thematic areas, past participants from Nigeria have found action plan development for NRDS implementation and report presentations based on the previous year's action plans to be especially helpful. Feedback as well as exposure to other member countries' progresses gave an opportunity for reflection and inspiration on future actions. The takeaways from the trainings and CARD General Meetings were shared comprehensively with stakeholders through established platforms of communication.

The CARD focal point noted that it was based on the takeaways from one of the CARD trainings in Japan in that they developed the idea for a 10 billion Naira rice intervention fund and succeeded in securing approval from the Federal Executive Council of the government in 2010.

Project formulation and implementation

Contributions to increase in rice sector projects funded by the government and donors

The government allocated its own budget for the implementation of the RTA-AP. Although the CARD focal points and the former CARD focal point mentioned that the government budget has increased for the rice sector, there are no statistics on rice budget. Donors also supported the government initiative, but the government's observation is that very few of them accepted the concept notes even if their projects contribute to the goals articulated in the RTA-AP, and that many of the projects were on a small scale.

Contributions to efficient, effective, and strategic project formulation

The CARD focal point observed that before the CARD initiative, donor projects in the rice sector were scattered. However, with CARD support, the government is more focused with an explicit strategy in place, which has helped to streamline projects. Further, one example showcased how part of the project formulation was well integrated in strategic discussions, as it was because JICA requested the taskforce to develop concept notes for activities that they were discussing with the FMARD during the "Working Week" that supported by CARD. This contributed to effective project formulation within the framework of the strategy that the government was developing.

Contribution of the CARD focal point in promoting projects

The CARD focal points played the lead role in promoting the implementation of the RTA-AP, supported by the CARD Consultant. Almost all of the development partners and government agencies having priority in the agriculture sector and the state and federal government were approached for funding. Follow-ups were also made by the CARD focal points as they realized the low mobilization of the development partners and devised solutions, action plans, assigned responsibilities and deadlines to address the issue.

Contributions to correlative improvements and timing adjustments between governments and donors

Under the RTA-AP, GESWG was instituted to harmonize rice-related projects, and the CARD focal points commented on its success particularly in the rice seed and post-harvest areas. However, a few other stakeholders mentioned that the coordination in rice sector intervention has not been satisfactory, but that recently a permanent Project Coordinating Unit has been established within FMARD and better coordination can be expected in the future through this unit.

4.9.4. Impact

Quantitative impact

Table 26: Production, consumption, and self-sufficiency of rice in Nigeria

(1000MT)	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Production of rice (paddy) FAO²⁴³	4,179	3,546	4,473	4,613	5,433	4,823	6,003	6,256	6,071	N/A
Production of rice (paddy) USDA²⁴⁴	4,178	3,546	4,473	4,567	3,762	4,400	4,500	4,300	4,286	4,400
Production of rice (milled) USDA²⁴⁵	2,632	2,234	2,818	2,877	2,370	2,772	2,835	2,709	2,700	2,772
Consumption of rice (milled) USDA²⁴⁶	4,220	4,350	4,800	5,600	5,300	5,500	5,400	5,200	5,100	4,900
Self-sufficiency of rice²⁴⁷	62.4%	51.4%	58.7%	51.4%	44.7%	50.4%	52.5%	52.1%	52.9%	56.6%

Table 27: Production targets of rice in NRDS

(1000MT)	2008	2018
Irrigation fed ²⁴⁸	918	3470
Rain fed highland ²⁴⁹	578	2186
Rain fed lowland ²⁵⁰	1820	6814
Total	3,316	12,470

Qualitative impact

Influence on other sectors

Upon seeing the success of the rice sector, the replication of the model in other commodities is currently being considered by the government. According to the interviewees, it seems nothing concrete has been done yet, but a positive outcome in terms of the sparking of the discussions could be observed.

²⁴³ FAO STAT database "Crops" (<http://www.fao.org/faostat/en/#data/QC>) 10/1/2018 update

²⁴⁴ Calculated based on United States Department of Agriculture (USDA) PSD online database "Grains" 8/10/2017 update

²⁴⁵ USDA PSD online database "Grains" 8/10/2017 update

(<https://apps.fas.usda.gov/psdonline/app/index.html#/app/downloads?tabName=default>)

²⁴⁶ Ibid.

²⁴⁷ Calculated based on USDA PSD online database "Grains" 8/10/2017 update

²⁴⁸ Supra note 241.

²⁴⁹ Ibid.

²⁵⁰ Ibid.

4.9.5. Success factors and challenges

Success factors

■Government

The importance of rice for the national economy and/or food security

Rice is recognized as an important strategic crop and the flagship value-chain in Nigeria due to its high demand, large imports, and the country's potential for increasing domestic production. Such importance has translated into strong government commitment for the sector, which is reflected in their national policies and plans as well as their own initiative to develop the RTA-AP under the ATA and allocate its own resources for implementation.

Ownership and support from high-level government officials

As previously mentioned, the rice sector enjoys strong support from high-level officials. It was the Minister of FMARD with a strong technical background in agriculture that led the launch of the ATA and RTA-AP as a critical component of the agriculture sector. Further, the President chaired the ATIC, and hence the ATA had the visibility and political weight it needed to succeed.

Authority/level of CARD focal point

Nigeria made sure that the appointed CARD focal point has a high-enough level of authority, at least Director or Deputy-Director level, so that they have direct access to the Permanent Secretary, who is the administrator of the Ministry.

Assignment of appropriate unit

There are 2 CARD focal points in Nigeria: one is the Deputy Director of Cereals and Field Crop division (former Rice Desk officer; the current Rice Desk Officer is scheduled to become the next CARD focal point) and the other is the Deputy Director of Department of ABM (both at FMARD).

With a mandate to promote the development of the rice sector, the Rice Desk was an ideal unit for assigning CARD activities. Further, this means the CARD focal point is not a standalone player as she enjoys the support of 9 people working under her and for the same aligned goal.

The appointment of 2nd CARD focal points at the Department of ABM was also appropriate as Nigeria's main bottleneck for realizing its potential for rice development was at the processing stage. Therefore, the full engagement of ABM department was necessary, and assigning a CARD focal point here was a fitting measure.

Government structure for implementation

A strong implementation framework was institutionalized for the implementation of RTA-AP, covering decision-making as well as the technical level staff, which contributed to the success of RTA-AP.

Action plan for NRDS implementation

By the time the then Minister of Agriculture (Dr. Adesina) came on board, he was aware of NRDS and wanted to build an action plan for the strategy, which led to the development of RTA-AP in 2011. This clarified the actions, timeline and the roles and responsibilities of the stakeholders for the implementation to roll out smoothly.

Other government policies

The following government policies also contributed to the success of rice sector development in Nigeria: import duty waivers for agricultural equipment and machinery; favorable tariff regimes for rice value chain investors (import duty and levy applied for rice imports); low interest rates for rice value-chain businesses; and, subsidies for interest paid at liquidation of the loan to all borrowers in good standing.²⁵¹

■CARD Secretariat

Provision of personnel

In Nigeria, there is a resident CARD Consultant who is a local and already had established contacts with government officials in his past career. The physical presence of the CARD Consultant makes a difference as without the Consultant, many CARD focal points could be lax in their work, and only a few would respond to e-mails (the CARD Consultant commented that he received the best response when he was on the ground). CARD originally did not have a resident Consultant in Nigeria, but their decision to do so later on has contributed to the country's success. Communication is much easier to maintain, and good working relationships are easier to establish with regular face-to-face communication.

■SC members and Partner Organizations

JICA's support

JICA Nigeria facilitated for the CARD focal points to present the RTA-AP at the agriculture donor coordination meeting, which raised awareness not only of the strategy and concept notes but also of CARD among the donors. They have also provided logistical support, which includes financing of

²⁵¹ Coalition for African Rice Development, "Evaluation Report – Rice Transformation Agenda Action Plan (Nigeria's NRDS) 2011 – 2015", July/August 2017

transportation allowances for stakeholders to come to CARD-related meetings. With the absence of an organized system of support by SC members at the country level, such support by JICA Nigeria has contributed to promoting CARD and supporting the government on the ground.

Challenges

■Government

Number and capacity of government officials

According to one of the donors, there is still a scarcity of technically capable people in the government, NGOs and the private sector, and hence they require technical support.

Government structure for implementation

While in general there was a consensus regarding the strength of the institutional arrangements made for the implementation of RTA-AP, one stakeholder pointed out the inadequacy in terms of lack of structure for coordinating interventions. This can be attributed to the lack of a coordination unit at the FMARD. But as mentioned above, this has now been established and better coordination can be expected in the future.

Other government policies

Operational hurdles have been the key reasons for slowing down progress. For example, information collection should have been completed by September for the mechanization strategy but at the time of interview (close to end of September), it had not finished due to slow bureaucratic processes.

■CARD Secretariat

Communication

Frequency of reaching to stakeholders in Nigeria from the CARD Secretariat out is important in maintaining engagement but was limited according to one of the SC local offices. gggggg Apart from the “Working Weeks”, there was not much interaction with the CARD Secretariat, and if one does not seek information, information would not come.

■SC members and Partner Organizations

Awareness of CARD

There is lack of knowledge regarding CARD’s specific objectives, activities, and role among some of the SC local offices, even if they are working on the rice value-chain. Possible reasons are because the CARD follow-up was conducted predominantly at the high level and/or because information was not passed on when there was a turnover of staff.

Communication between the SC member representative and SC local office

Communication regarding CARD between HQ-level SC and local office SC was not institutionalized for many of the SC members.

Commitment

Although CARD was designed to be a coalition of donors that can bring financial resources, the government felt that there was generally inadequate commitment or response from donors to the strategy and concept notes developed with CARD support, and the main mover of the RTA-AP was the government. Commitment to the CARD framework has not been observed to be strong, as a few of the SC members continued to formulate projects even before when there were occasions for integrating it into the NRDS process.

Incentive to participate

A possible reason for the lack of commitment above may be due to the lack of incentive for the local SC office to participate. While at the HQ-level SC members are seeking for partnerships/funding and hence may be interested in CARD, projects are mainly developed by the HQ for most donors, and country-level SC members do not see much benefit in being part of a generally-perceived JICA-influenced CARD.

Inclusion in organization's development assistance strategy/policy

For some of the SC local offices such as JICA, agriculture is not a major portion of their development assistance in the country. If not, it will not incentivize the government to be proactive, as it would not think that the donor would necessarily take it up

■Other


Availability of reliable statistics and evaluation of progress

Lack of reliable data inhibits the design and implementation of appropriate interventions and the evaluation of progress.

4.10 Group 1: Senegal

4.10.1. Context/background

Basic Information of the country

Republic of Senegal			
Exchange rate (2017) ²⁵²	601.999 XOF=1USD		
Land ²⁵³	196,722 sqkm		
Population (2016) ²⁵⁴	14,320,055		
Climate ²⁵⁵	Tropical; hot, humid; rainy season (May to November) has strong southeast winds; dry season (December to April) dominated by hot, dry, harmattan wind		
Languages ²⁵⁶	French, Wolof, Pulaar, Jola, Mandinka		
Ethnic Groups (2010-11 est.) ²⁵⁷		Wolof, Pular, Serer, Mandinka, Jola, Soninke, others (Europeans and persons of Lebanese descent)	
Per capita GDP (2017) ²⁵⁸		973.091	USD per capita
Per capita GDP Growth rate (2017) ²⁵⁹		6.8	%
Population growth rate (2016) ²⁶⁰		2.42	%
Age composition of population (2016 est.) ²⁶¹		0-14 years: 41.85% (male 3,011,233/female 2,981,128) 15-24 years: 20.36% (male 1,452,415/female 1,462,989) 25-54 years: 30.93% (male 2,031,035/female 2,398,788) 55-64 years: 3.91% (male 242,429/female 317,439) 65 years and over: 2.95% (male 189,201/female 233,398)	
Population % between 15-54 years ²⁶²		51.29	%
Unemployment rate (both sex, age15+) (2016) ²⁶³		9.3	%
FDI Inflow (2015) ²⁶⁴		345	Million USD
Internet penetration (% of Individuals using the Internet) (2015) ²⁶⁵		21.69	%

²⁵² Oanda <https://www.oanda.com/lang/ja/currency/converter/> (31st July 2017)

²⁵³ CIA (Central Intelligence Agency) "The World Factbook"

²⁵⁴ Ibid.

²⁵⁵ Ibid.

²⁵⁶ Ibid.

²⁵⁷ Ibid.

²⁵⁸ IMF

²⁵⁹ Ibid.

²⁶⁰ CIA (Central Intelligence Agency) "The World Factbook"

²⁶¹ Ibid.

²⁶² Ibid.

²⁶³ ILO STAT (<http://bit.ly/2oIwFux>)

²⁶⁴ Worldbank World Development Indicators, 27/4/2017 update

²⁶⁵ ITU Country ICT Data (until 2015)

Mobile penetration (Mobile-cellular telephone subscriptions) (2015) ²⁶⁶	99.95	%
Consumer Price Index growth (1960-2016) ²⁶⁷	1.24	

Information on the country's rice sector

Level of rice demand

Rice occupies a select place in the eating habits of the Senegalese people. Population increase coupled with growing urbanization has significantly increased consumer demand for this food commodity, forcing Senegal to resort to massive rice imports. With an annual consumption of 74kg per head, Senegal is among the largest consumers of rice in West Africa. Indeed, while the visible consumption of rice in Senegal stood at 400,000 tons in 1995,²⁶⁸ it rose to more than 1.6 million tons in 2016.²⁶⁹

The importance of rice for the economy and food security

Rice has always been important in Senegal, as rice is considered a strategic commodity where the control of its production is a question of national sovereignty and public security. Rice alone accounts for 16% of the country's trade deficit.²⁷⁰ However, rice production steadily increased from about 500,000 MT (2009) to about 900,000 MT (2015).²⁷¹ Due to this increase, now Senegal can see the decrease in imports.²⁷²

When the strategy was revised in 2012, the government set the goal to be self-sufficient in rice by 2017. As of 2017, Senegal produces 1 million ton of rice.²⁷³ At this pace, Senegal will not be able to achieve the goal but it is making good progress.

Donors' interest in rice development

The active involvement of donors has been in place in Senegal. CARD was successful as an initiative in drawing the attention of donor agencies and research institutions to address the issues in regard to rice production.

Positioning of rice development and NRDS within priority policies

The CARD was a super-priority for the Senegalese government, which inspired and propelled a new

²⁶⁶ Ibid.

²⁶⁷ AFDB Socio Economic Database

²⁶⁸ Republique du Senegal, Ministere de l'Agriculture, "Programme National d'Autosuffisance en Riz, Stratégie Nationale de Développement de la Riziculture", February 2009

²⁶⁹ USDA Foreign Agricultural Service, "2017 West Africa Annual", GAIN Report, April 11, 2017, https://gain.fas.usda.gov/Recent%20GAIN%20Publications/Grain%20and%20Feed%20Annual_Dakar_Senegal_4-11-2017.pdf.

²⁷⁰ Ministry of Commerce (<http://www.ipar.sn/Les-importations-de-riz-du-Senegal-devraient-baisser-de-15-en-2015-2016.html?lang=fr>)

²⁷¹ FAO STAT database "Crops" (<http://www.fao.org/faostat/en/#data/QC>) 10/1/2018 update

²⁷² Minutes of the meeting with CARD Consultant, October 13, 2017.

²⁷³ According to the government of Senegal, 1,015,334 t.

dynamic in the rice sector in line with the agricultural policy set out in the Poverty Reduction Strategy Paper (DSRP). The pursuit of this vision was conducted through new government programs and plans. CARD started initially supporting the sector in Senegal by providing technical assistance to the National Program for Rice Self-sufficiency (PNAR), which the Senegalese government had worked on by themselves. Consequently PNAR became synonymous with NRDS. Currently PNAR2 (2013-2017) is being finalized, and it will eventually be incorporated into part of the Accelerated Program for Agriculture in Senegal (PRACAS).

Authorization status of NRDS

The first NRDS was developed in the beginning of 2009, and the NRDS was used until 2012 when it was revised. The NRDS was reviewed and later recognized and approved by the president and prime minister, while the Sector Strategies were approved by the Ministry of Agriculture and Rural Equipment.

Existence of champions such as high-ranking ministry officials who support NRDS

The development vision for rice cultivation was brought to the attention of the highest governmental level. It should be noted that the government allocates their own budget for implementation with the support of the president. Government guidance has continued for rice cultivation in Senegal, thus making it a driving force for growth.

Government structure for NRDS implementation

The CARD focal point is a coordinator of PNAR (Programme National D'Autosuffisance en Riz) who is one of the highest-ranked officials in the Ministry of Agriculture and Rural Equipment and is in charge of the development and implementation of NRDS/PNAR.

For sub-sector strategies, different officers within the Ministry are assigned as focal points - the Director of Mechanization is in charge of mechanization strategy while the Director of Agriculture is in charge of seed.

With regard to the implementation structure, they organize meetings with relevant government officials when necessary about the daily work of rice development. Apart from such meetings, there is a general meeting once a year for them to share their progress with the President.

4.10.2. Output

Status of the NRDS process

		Status	Support by CARD
A	A-1 Formulation and launch	Done	<ul style="list-style-type: none"> The first strategy was developed in the beginning of 2009 and the strategy was utilized until 2012 when it was revised.
	A-2 Gap analysis & prioritization and concept note formulation	Done	<ul style="list-style-type: none"> 4-5 concept notes (on irrigation, seed, mechanization etc.) were developed.
	A-3 Lobbying for funding and project formulation	In progress	<ul style="list-style-type: none"> Visited donors and drew the attention of donor agencies and research institutions. Concept notes were presented to partners by the President in bilateral meetings.
	A-4 Implementation	In progress	<ul style="list-style-type: none"> There are 14 CARD-labeled projects.
B	Rice seed strategy	Done	<ul style="list-style-type: none"> Seed strategy was finalized in 2013 and subsequently the government elaborated 2-3 seed concept notes.
C	Mechanization strategy	In progress	<ul style="list-style-type: none"> In 2010, mechanization policy was developed. Still working on concept notes and they are not finalized yet. Drafted but not approved yet.

Figure 28 : Status of NRDS Process in Senegal

List of CARD-labeled projects

These CARD-labelled projects are/were implemented in Senegal according to the CARD Secretariat.

Table 28: List of CARD-labeled projects in Senegal

Name of the Project	Donor	Duration	Modality	Budget	Area of Intervention (Sub-Sector)	Area of Intervention (Geographic)	Outputs/Activities
Project on Improvement of Rice Productivity for Irrigation Schemes in the Valley of Senegal(PAPRIZ)	JICA	2009-2014	Technical Cooperation	815 million JPY	Productivity Improvement	Department of Saint-Louis and Department of Podor	(i) Highly productive rice is cultivated, (ii) Improvement on irrigation facilities, (iii) Action plans to improve management on farmers are developed, (iv) Polished rice cater to consumers are developed and spread

Rice Partnership project's promotion in the Delta of Senegal River (3PRD)	FAD+ EU; BOAD; Senegalese government; private sector	2009-2015	Grant, Loan	10 million Euros	Water management/Irrigation, Dissemination, Mechanization, Quality Improvement	St. Louis	Improvement of irrigation system and organization of rice sector through: Water management, capacity building and trade in the whole country
Program to Improve Rice and Onion Production	KOICA	2014-2017	Technical Cooperation	3 million USD	Seed	Whole Country	contribute to improve access to quality and adopted seed
Project to support the promotion of family farm business in Matam	AFD, SAED	2014-2017	Grant, Loan	19 Billion CFA	Water Management, Extension of rice cultivation area, Post-Harvest Processing, Infrastructure	Podor	Contribute to improve rice production in order to achieve rice self sufficiency
Improvement project of food security and support commercialization of production in Matam	AFD, SAED	2014-2018	Grant, Loan	22.5 million Euros	Water management/Irrigation, Extension of rice cultivation area, Post-Harvest Processing, Infrastructure	department of Matam	Improve conditions of rice production and commercialization through : the rehabilitation of rice irrigated perimeter, the supply of postharvest equipment and infrastructure thanks to the connection to the market
Project on Supporting Sustainable Production of Rain Fed Rice	JICA	2014-2018	Technical Cooperation	420 million JPY	Seed, Mechanization, Capacity building	Fatick, Kaolack, Kaffrine	Promote sustainable rice production through the improvement of the rice value chain in rainfed area (quality seed production, post-harvest equipment, technical support, etc.)
Support project to irrigated agriculture and economic development of Podor (AIDEP)	AFD/ Senegalese Government	2015-2019	Grant, Loan	26.5 million USD	Water management/Irrigation, Dissemination, Commercialization, Quality Improvement	Department of Podor in the rural community of Gamadji, Dodel, Doumga Lao, Madina Ndiathbé, Méri, Bocké Dialloubé and Mbolo, Birane	Increase cultivation area (2000 HA of irrigated land and 96, km of rural road) in order to improve quality rice production in Podor
Waoundé Perimeter Project for an Amount	Arabic Bank for African Economic Development (BADEA)	2015-2019	Grant, Loan	26.5 million USD	Water management/Irrigation, Post-Harvest Processing, Infrastructure, Commercialization	Waoundé	Promote sustainable rice production through the improvement of the rice value chain unirrigated area (quality seed production, water management, post-harvest equipment, technical support, etc.)
Support for Rainfed Rice Cultivation in Senegal	FAO	2016-2017	Grant		Quality Improvement		promote rice quality in rainfed areas, Promote rainfed rice production

Partnership for the Development of Sustainable Rice Systems in Sub-Saharan Africa	FAO/Venezuela	2016-2018	Grant	310 902 USD	Quality Improvement	Zone Sud	promote rice quality in rainfed areas, Promote rainfed rice production
Project for Improvement of Irrigated rice productivity in the Senegal River Valley (PAPRIZ2)	JICA	2016-2021	Technical Cooperation	800 million JPY	Water management/Irrigation, Post-Harvest Processing, Infrastructure, Commercialization	Senegal River valley	Contribute to increase rice production in order to achieve rice self-sufficiency goals through : Water management in irrigated area, improvement of rice technical practices and rice processing , rice commercialization and improvement of access to market
Irrigation management and agricultural equipment program in Senegalese River Valley	India/S AED		Grant, Loan	31.5 billion FCFA	Extension of irrigated rice cultivation area, Mechanization, Capacity building	Dagana, Podor , Matam and Bakel	Increase rice irrigated cultivation area in order to contribute to rice self-sufficiency goals
Project of Rural Development of Wawunde Basin in the Senegalese River Valley	BADEA		Grant, Loan	13 million USD	Water management/Irrigation, Commercialization, Access to market,	Department of Kanel	Contribute to increase rice production in order to achieve rice self-sufficiency goals through : Extension of irrigated perimeters, improvement of rice technical practices , rice commercialization and improvement of access to market
Project of Rehabilitation and Extension of Perimeter of the Right Side of the Marigot of Lampsar	BADEA		Grant, Loan	12.4 million USD	Water management/Irrigation, Commercialization, Access to market,	Department of Dagana	Contribute to increase rice production in order to achieve rice self-sufficiency goals through : Extension of irrigated perimeters, improvement of rice technical practices and the acquisition of postharvest equipment and infrastructure

Intervention areas

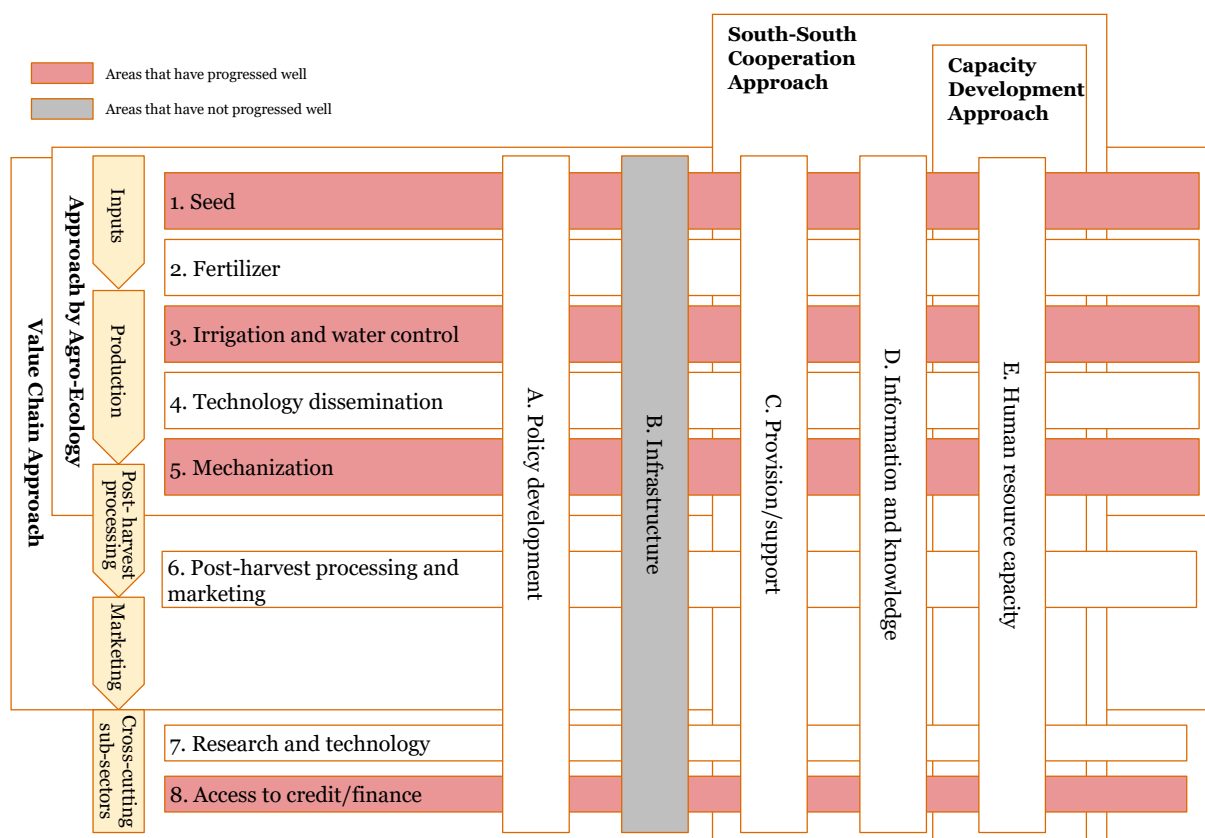


Figure 294 : Intervention Areas in Senegal

According to the CARD focal point, *1. Seeds*, *5. Mechanization*, *3. Irrigation*, *8. Farm credit* and sector management are areas that have progressed well. There have been major actions in these areas, and advocacy efforts have made it easier to mobilize resources from the state and development partners for sector development purposes.

However, despite the efforts, the needs for *B. Storage infrastructure* and logistics is far from being met. Inadequate execution is related to lack of funding, even when projects and funding requests have been drawn up. Nonetheless, development partners like the World Bank and Spain have shown interest in investing.

4.10.3. Outcome

Human resource development

Through the implementation of CARD activities, an improvement in the rice sector was noted thanks to experience exchanges among countries and capacity building opportunities.

In regard to seeds, a video conference was held where Senegal was linked with Cote d'Ivoire and Burkina Faso to understand different seed varieties. In regard to mechanization, there was an opportunity for the government officials to travel to Brazil where CARD together with AfricaRice supported capacity building on mechanization. As part of the South-South cooperation scheme, technicians of African countries were sent to Asian countries such as the Philippines.

There have been positive results from such opportunities since the introduction of new technologies or innovations in certain areas as well as the accumulation of experience in rice sector development among the 23 target African countries.

Project formulation and implementation

Contributions to increase in rice sector projects funded by the government and donors

Since the establishment of the National Program for Rice Self-sufficiency (PNAR), the Government has allocated an annual budget for the development of rice cultivation. The different programs available within the framework of the PNAR/ NRDS are also notable. It is also worth noting that there was a large portfolio of projects that started after the launch of the CARD initiative by the donors.

Contributions to efficient, effective, and strategic project formulation

Aiming at better coordination, stakeholders shared their knowledge, successes and failures and made joint and individual efforts to achieve the set goals under the PNAR/ NRDS.

Contribution of the CARD focal point in promoting projects

The focal point worked to diversify and increase the number of projects to achieve PNAR/ NRDS' objectives. Also, the focal point has contributed to the better follow-up and communication flow with the stakeholders.

Contributions to correlative improvements and timing adjustments between governments and donors

Although no specific cases were mentioned, the PNAR/ NRDS is recognized as a body that ensures the consistency of policies and projects affecting rice.

4.10.4. Impact

Quantitative impact

Table 29: Production, consumption, and self-sufficiency of rice in Senegal

(1000MT)	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Production of rice (paddy) FAO²⁷⁴	408	502	604	406	470	436	559	906	885	N/A
Production of rice (paddy) USDA²⁷⁵	407	507	600	406	631	426	559	600	951	1,000
Production of rice (milled) USDA²⁷⁶	277	266	411	276	320	296	380	616	647	680
Consumption of rice (milled) USDA²⁷⁷	1,020	1,000	1,131	1,300	1,309	1,391	1,505	1,650	1,680	1,730
Self-sufficiency of rice²⁷⁸	27.2%	26.6%	36.3%	21.2%	24.4%	21.3%	25.2%	37.3%	38.5%	39.3%

Table 30: Production targets of rice in NRDS

(1000MT)	2008	2018
Irrigation fed²⁷⁹	375	N/A
Other²⁸⁰	160	N/A
Total	968	1,601

4.10.5. Success factors and challenges

Success factors

■ Government

The importance of rice for the national economy and/or food security

Rice is always considered important in Senegal, and the government has been continuously willing to accelerate rice development, which has led to the high commitment to PNAR/ NRDS implementation.

Ownership and support from high-level government officials

The commitment by the President of the Republic for a successful PNAR/ NRDS is very strong and well-known to all Senegalese. In addition to the budget allocation of the government for implementation, concept notes were even presented to partners by the President himself in bilateral meetings as well as when the President traveled to other countries and met other governments and development partners. Subsidies to rice farmers were also made possible as a result of support by the

²⁷⁴ FAO STAT database "Crops" (<http://www.fao.org/faostat/en/#data/QC>) 10/1/2018 update

²⁷⁵ Calculated based on United States Department of Agriculture (USDA) PSD online database "Grains" 8/10/2017 update

²⁷⁶ USDA PSD online database "Grains" 8/10/2017 update

(<https://apps.fas.usda.gov/psdonline/app/index.html#/app/downloads?tabName=default>)

²⁷⁷ Ibid.

²⁷⁸ Calculated based on USDA PSD online database "Grains" 8/10/2017 update

²⁷⁹ Supra note 268

²⁸⁰ Refer to the NRDS

President.

Other government policies

Currently, the public sector is providing a lot of support including subsidies on tractors and seeds, among others. The subsidies have boosted rice development.

■ SC Members and Partner Organizations

Donors' interest

Active involvement of donors is a success factor in Senegal. As mentioned earlier, the large portfolio of projects is in place, which started after the launch of the CARD initiative and led to the development in the sector under the framework of PNAR/ NRDS.

Challenges

■ Government

Number and capacity of government officials

The lack of staff in the PNAR coordination unit leads to overloading the PNAR Coordinator, although in general the contribution of the CARD focal point is recognized.

■ Others


Private-sector involvement

In Senegal, the government officials do not have a clear understanding of how private sector players are involved in implementation, and this is one of the challenges. NGOs are involved as well, and they have worked with rice producers to help them improve production and solve their problems. The involvement of private sector is an urgent issue for the country, as the rice sector is dependent on government support. Therefore, once the government changes its priority, rice sector will not grow in a sustainable manner. It is because of this reason, among others that the government has been trying to promote private sector involvement in Senegal's rice sector.

4.11 Group 1: Sierra Leone

4.11.1. Context/background

Basic Information of the country

Republic of Sierra Leone			
Exchange rate (2017) ²⁸¹	7,450.06 SLL=1USD		
Land ²⁸²	71,740 sqkm		
Population (2016) ²⁸³	6,018,888		
Climate ²⁸⁴	Tropical; hot, humid; summer rainy season (May to December); winter dry season (December to April)		
Languages ²⁸⁵	English, Mende (principal vernacular in the south), Temne (principal vernacular in the north), Krio (English-based Creole, spoken by the descendants of freed Jamaican slaves who were settled in the Freetown area)		
Ethnic Groups (2008 est.) ²⁸⁶		Temne, Mende, Limba, Kono, Krio (descendants of freed Jamaican slaves who were settled in the Freetown area in the late-18th century; also known as Krio), Mandingo, Loko, other (refugees from Liberia's recent civil war, and small numbers of Europeans, Lebanese, Pakistanis, and Indians)	
Per capita GDP (2017) ²⁸⁷	623.103	USD per capita	
Per capita GDP Growth rate (2017) ²⁸⁸	5	%	
Population growth rate (2016) ²⁸⁹	2.36	%	
Age composition of population (2016 est.) ²⁹⁰	0-14 years: 41.9% (male 1,257,997/female 1,263,961) 15-24 years: 18.57% (male 542,975/female 574,669) 25-54 years: 32.04% (male 924,331/female 1,003,895) 55-64 years: 3.74% (male 104,415/female 120,953) 65 years and over: 3.75% (male 94,520/female 131,172)		
Population % between 15-54 years ²⁹¹	50.61	%	

²⁸¹ Oanda <https://www.oanda.com/lang/ja/currency/converter/> (31st July 2017)

²⁸² CIA (Central Intelligence Agency) "The World Factbook"

²⁸³ Ibid.

²⁸⁴ Ibid.

²⁸⁵ Ibid.

²⁸⁶ Ibid.

²⁸⁷ IMF

²⁸⁸ Ibid.

²⁸⁹ CIA (Central Intelligence Agency) "The World Factbook"

²⁹⁰ Ibid.

²⁹¹ Ibid.

Unemployment rate (both sex, age15+) (2016) ²⁹²	3.1	%
FDI Inflow (2015) ²⁹³	519	Million USD
Internet penetration (% of Individuals using the Internet) (2015) ²⁹⁴	2.50	%
Mobile penetration (Mobile-cellular telephone subscriptions) (2015) ²⁹⁵	89.53	%
Consumer Price Index growth (1960-2016) ²⁹⁶	10.11	

Information on the country's rice sector

Level of rice demand

Rice is a very important staple along with maize and cowpeas. There was a riot a few years ago because of the scarcity of rice, and therefore the country treats rice very seriously as a political issue. In fact, the annual per capita consumption of rice in Sierra Leone is among the highest in sub Saharan Africa, at 104 kg.²⁹⁷ The share of rice in people's diet is about 60-70% per person per year in relation to other food commodities as stated by the CARD focal point and the CARD consultant.

The importance of rice for the economy and food security

Rice being the staple food for the country has been and continues to be a priority crop for the country. Hence, efforts to enhance increase in production and productivity is given greater attention. As mentioned, rice is considered as a political crop since its scarcity may result to uprising or unrest by the populace. It is always noted that government will do its best to ensure rice availability and affordability in order to feed the nation.

As the country is not self-sufficient in rice, this deficit must be covered by imports at increasingly expensive prices in the light of the current situation of high prices for food including rice. The promotion of domestic rice production is therefore a key element in the strategies for improving food security, stimulating economic growth and increasing rural income, with the rice sector contributing to approximately 37.5% of the GDP.²⁹⁸

Donors' interest in rice development

Development partners such as the World Bank and JICA demonstrated high interest in the rice sector

²⁹² ILO STAT (<http://bit.ly/2oIwFux>)

²⁹³ Worldbank World Development Indicators, 27/4/2017 update

²⁹⁴ ITU Country ICT Data (until 2015)

²⁹⁵ Ibid.

²⁹⁶ AFDB Socio Economic Database

²⁹⁷ Sierra Leone, "National Rice Development Strategy," 2009

²⁹⁸ Ibid.

and hence allocate resources to this end.

Positioning of rice development and NRDS within priority policies

The Sierra Leone Rice Development Strategy is aligned with the country's agricultural development policy and reflects the importance of rice in the socioeconomic and political characteristics of the country.

The government had the intention of revising the NRDS in order to ensure the alignment of NRDS with the second phase of CAADP Investment Plan in 2014, but it was hampered by the Ebola outbreak.

Authorization status of NRDS

The NRDS was developed in 2009 and it went through the ministerial approval. Although the process was slow due to bureaucracy, the NRDS became the official document for rice development in Sierra Leone.

The NRDS was the pivot of all rice projects in the country since its formulation. This was used as a reference document in the formulation and implementation of rice related projects. Planning for the development of rice related projects took into account the NRDS.

Existence of champions such as high-ranking ministry officials who support NRDS

Generally, there is commitment and will by the Sierra Leone government to implement the NRDS and sector strategies, given that the country has yet to meet the country's food security needs particularly in the rice sector. This is highlighted in the government's development aspirations as it strives to increase production and productivity in order to move up the agricultural value chain.

Government structure for NRDS implementation

The current focal point is Director of Food Crop Services in Ministry of Agriculture, Forestry and Food Security (MAFFS).

The aforementioned department of the MAFFS with mandate to implement rice projects continues to facilitate and coordinate the implementation of the NRDS in collaboration with a task force comprising key stakeholders in other departments of MAFFS including the Sierra Leone Agricultural Research Institute (SLARI), the Sierra Leone Seed Certification Agency (SLeSCA) and the Seed Multiplication Project (SMP). They were appointed at the end of a national consultation on rice development in the country. The task force is charged with the responsibility of drafting the NRDS

and also serves as an advisory body for the coordination of the NRDS, linking it with the other stakeholders.

4.11.2. Output

Status of the NRDS process

		Status	Support by CARD
A NRDS	A-1 Formulation and launch	Done <ul style="list-style-type: none"> The NRDS was developed in 2009 Approved by the Ministry of Agriculture and farmers' organizations. 	<ul style="list-style-type: none"> Provided technical assistance through working weeks and during taskforce meetings. Such assistance included working out the gaps, prioritization and developing concept notes.
	A-2 Gap analysis& prioritization and concept note formulation	Not Started <ul style="list-style-type: none"> Concept notes were not developed in Sierra Leone. 	
	A-3 Lobbying for funding and project formulation	Not Started <ul style="list-style-type: none"> Although concept notes were not developed, some projects started based on the NRDS. 	<ul style="list-style-type: none"> Provided the consultant with the necessary tools to carry out this assignment with the focal point of the country and a task force member.
	A-4 Implementation	In progress <ul style="list-style-type: none"> There are 3 CARD-labeled projects. 	<ul style="list-style-type: none"> Supported government officials through follow ups.
B	Rice seed strategy	In progress <ul style="list-style-type: none"> The Rice Seed Development Strategy was developed in 2016. Concept notes were developed in 2017. 	<ul style="list-style-type: none"> Provided technical assistance by CARD consultant with the development of seed roadmap and concept notes.
C	Mechanization strategy	Not Started <ul style="list-style-type: none"> - 	-

Figure 305 : Status of NRDS Process in Sierra Leone

List of CARD-labeled projects

These CARD-labelled projects are/were implemented in Sierra Leone according to the CARD Secretariat.

Table 31: List of CARD-labeled projects in Sierra Leone

Name of the Project	Donor	Duration	Modality	Budget	Area of Intervention (Sub-Sector)	Area of Intervention (Geographic)	Outputs/Activities
Sustainable Rice Development Project	JICA	2010-2014	Technical Cooperation	460 million JPY	Extension, Capacity building	Kambia District	(i) The TP-R which can realize higher yield and profit, is revised through on-farm verification. (ii) The TP-R for small-scale farmers is extended through Farmers Based Organizations (FBOs) in Kambia district. (iii) The contents of TP-R and an extension method are extended to officials of MAFFS's district agricultural offices other than MAFFS-Kambia (MAFFS-K).
Smallholder Commercialization and Agribusiness Development Project	WB	2016-2021	Loan	40 million USD (Rice, cocoa, Oil palm)	Marketing, Post-harvest Processing	Entire country	42 FBOs selected to develop viable business plan, 50,000 farmers supported, 4 marketers and processors selected in each region
Sustainable Rice Production Project (SRPP)	JICA	2017-2022	Technical Cooperation	750 million JPY	Extension, Capacity building	Free town,	(i) The rice cultivation status of 3 prefectures at IVS is compiled. (ii) Rice cultivation and post harvesting processing technology conducted by the training program graduate farmers in 3 prefectures are improved. (iii) Farmer-friendly rice cultivation technology package (updated TP-R) is utilized in farmer training programs. (iv) The updated TR-P is recognized as recommended cultivation technology by extension officers. [(iv) is aimed for achieving high ranked goals.]

Intervention areas

Sierra Leone

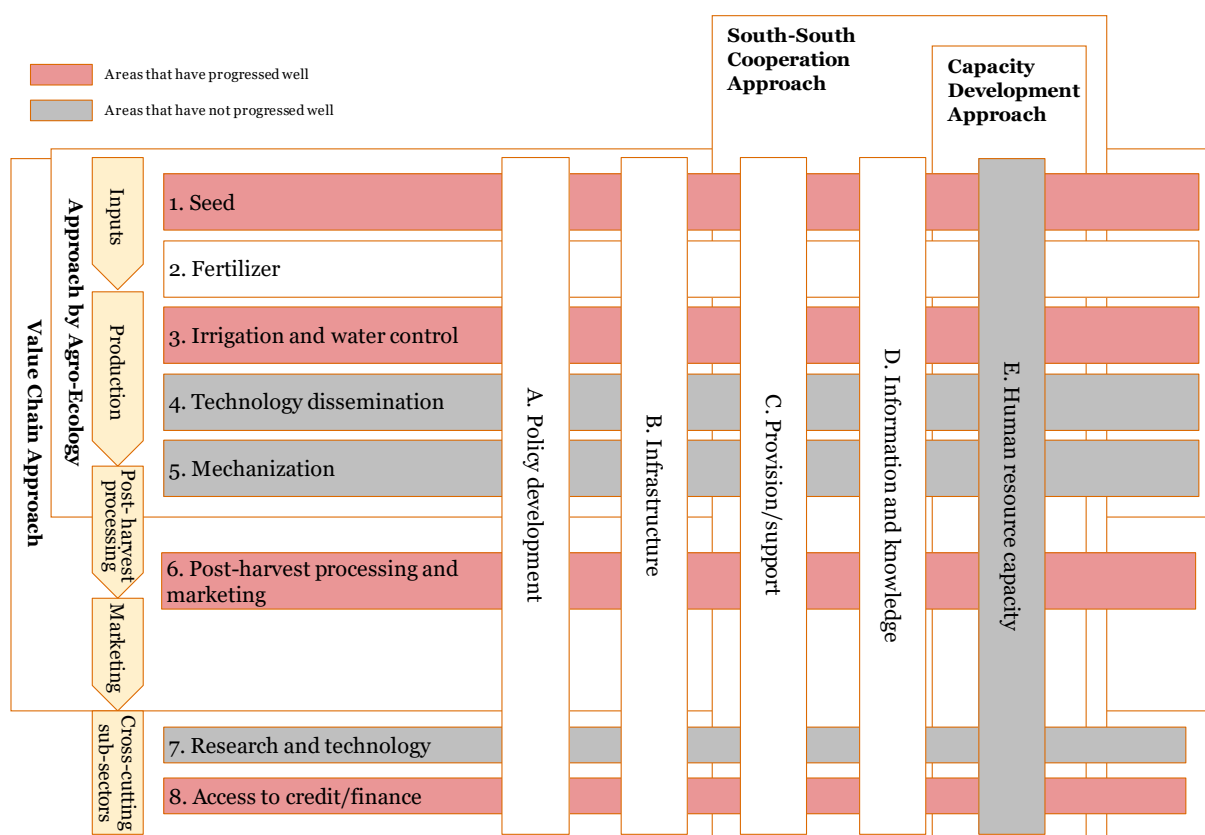


Figure 31 : Intervention Areas in Sierra Leone

According to the focal point, 1. Seed is making progress as the seed system has advanced with the 4. national seed policy that has been developed and is now awaiting enactment by the government. Furthermore, the National Seed Board and Variety Release Committee, and the Sierra Leone Seed Certification Agency (SLeSCA) were established for seed quality control and certification.

Another area that showed progress is 3. Water resource management. Inland valley swamps were developed to allow for multiple cropping of rice as well as to discourage upland rice cultivation.

Apart from the aforementioned intervention areas, several projects contributed to the development in 8. Agricultural finance through the establishment of community banks and financial institutions in order to provide credit access and rural financial services to farmers as well as promote 6. Post-harvest and marketing through the establishment of 193 Agricultural Business Centers (ABCs) nationwide which were established to promote the concept of “agriculture as a business.”

However, *5. Mechanization*, *7. Research*, *4.Extension* and *E. Human resource development* have not progressed well. The mechanization drive has witnessed a lot of challenges particularly in the area of management and maintenance by farmers, coupled with the limited availability of spare parts.

A lot of research work has been done by Sierra Leone Agricultural Research Institute (SLARI), but it has been a challenge in doing research on ensuring the adoption of technology as well as the efficient and effective utilization of the said technology by the wider farming community.

The motivation of the MAFFS Extension is quite low due to their very low salaries, and their basic needs such as mobility and accommodation are also not met, which undermines their extension efforts and morale. Therefore, there is a crucial need to intensify capacity building and training for staff, but this has been slow due to funding constraints.

4.11.3. Outcome

Human resource development

Seminars and conferences that were organized in Japan and other countries for African policy makers have helped to broaden their perspectives on effective and efficient strategies to improve the rice sector. This has helped to improve the planning, implementation, monitoring and evaluation of rice projects. Technical knowledge and skills acquired by MAFFS personnel from trainings provided by CARD and JICA at the local and international levels have been used during extension service delivery in the farming communities.

Among others, at the training in Japan, people from the Anglophone and Francophone countries in Africa exchanged best practices on rice cultivation in their respective countries.

Project formulation and implementation

Contributions to increase in rice sector projects funded by the government and donors

The formulation of the NRDS has contributed partly to the increase of donor funded projects. But as concept notes were not developed for NRDS, it could not be pushed to possible donor support for projects.

Contributions to efficient, effective, and strategic project formulation

The CARD focal point understands that the NRDS has to a large extent helped in the implementation of efficient, effective and strategic projects related to rice. Government resources for enhancing the agriculture sector of the country were mostly skewed towards achieving the goal of NRDS.

Contribution of the CARD focal point in promoting projects

The focal point served as facilitators in ensuring that the NRDS is the basis for decision-making in regard to the planning, formulation and implementation of rice-related projects, including monitoring and evaluation. Moreover, the focal point has helped in stimulating the allocation of resources for rice projects, given its importance as the country's staple food. They have also championed arrangements for CARD activities in the country.

Contributions to correlative improvements and timing adjustments between governments and donors

A very effective coordination between projects is in place through the constant exchange of information regarding strategies from formulation to implementation at the meetings at MAFFS.

4.11.4. Impact

Quantitative impact

Table 32: Production, consumption, and self-sufficiency of rice in Sierra Leone

(1000MT)	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Production of rice (paddy) FAO²⁹⁹	680	888	1,027	1,129	1,141	1,256	1,204	872	1,560	N/A
Production of rice (paddy) USDA³⁰⁰	679	887	1,029	1,078	1,141	1,256	1,156	1,100	1,271	1,200
Production of rice (milled) USDA³⁰¹	428	559	648	711	719	791	728	801	801	756
Consumption of rice (milled) USDA³⁰²	498	649	768	981	1,039	1,121	1,088	1,091	1,081	1,106
Self-sufficiency of rice³⁰³	85.9%	86.1%	84.4%	72.5%	69.2%	70.6%	66.9%	73.4%	74.1%	68.4%

Table 33: Production targets of rice in NRDS

(1000MT)	2008	2018
Highland³⁰⁴	350	638
Other³⁰⁵	324	863
Total	674	3,101

²⁹⁹ FAO STAT database "Crops" (<http://www.fao.org/faostat/en/#data/QC>) 10/1/2018 update

³⁰⁰ Calculated based on United States Department of Agriculture (USDA) PSD online database "Grains" 8/10/2017 update

³⁰¹ USDA PSD online database "Grains" 8/10/2017 update

(<https://apps.fas.usda.gov/psdonline/app/index.html#/app/downloads?tabName=default>)

³⁰² Ibid.

³⁰³ Calculated based on USDA PSD online database "Grains" 8/10/2017 update

³⁰⁴ Supra note 297.

³⁰⁵ Ibid.

4.11.5. Success factors and challenges

Success factors

■Government

The importance of rice for the national economy and/or food security

As rice is the staple food for the country, there is commitment from the government to promote the rice sector as part of its effort to achieve food self-sufficiency in the country.

■CARD Secretariat

Communication

In assigning the focal point, CARD communicated closely with the government to appoint a government official who is considered to be serious on rice development. From then on, CARD has prioritized personal communication with and personal visits to the focal point.

Challenges

■Government

Financial resources

Funding is another challenge, even for rice which is a key crop. Financial support has been inadequate, thus hindering the implementation of the NRDS. Most task force meetings or working weeks were in fact financed by CARD. Also, several task force members are not from Freetown, but from faraway regions, and they therefore need financial support to travel to Freetown for meetings.

Number and capacity of government officials

Inadequate human resource capacity required for the implementation of the NRDS was a critical challenge.


Bureaucracy

Bureaucracy is one of the key challenges. The bureaucratic process in the formulation and enactment of the seed policy document for the country has affected to some extent the promotion and smooth implementation of the NRDS.

4.12 Group 1: Tanzania

4.12.1. Context/Background

Basic country information

United Republic of Tanzania		
Exchange rate (2017) ³⁰⁶	2,183.40 TZS = 1USD	
Land ³⁰⁷	947,300 sq km	
Population (2016) ³⁰⁸	52,482,726	
Climate ³⁰⁹	Varies from tropical along coast to temperate in highlands	
Languages ³¹⁰	Kiswahili, Swahili, Kiunguja English, Arabic, many local languages	
Ethnic groups (2014 est.) ³¹¹		Mainland—African 99% (of which 95% are Bantu consisting of more than 130 tribes), other 1% (consisting of Asian, European, and Arab); Zanzibar—Arab, African, mixed Arab, and African
Per capita GDP (2017) ³¹²	1032.031	USD per capita
Per capita GDP Growth rate (2017) ³¹³	6.8	%
Population growth rate (2016) ³¹⁴	2.77	%
Age composition of population (2016 est.) ³¹⁵	0-14 years: 44.06% (male 11,678,349/female 11,444,708) 15-24 years: 19.71% (male 5,173,239/female 5,169,214) 25-54 years: 29.74% (male 7,840,941/female 7,767,797) 55-64 years: 3.5% (male 802,760/female 1,034,151) 65 years and over: 2.99% (male 668,102/female 903,465)	
Population % between 15-54 years ³¹⁶	49.45	%

³⁰⁶Oanda, <https://www.oanda.com/lang/ja/currency/converter/> (31st July 2017)

³⁰⁷CIA (Central Intelligence Agency), “The World Factbook”

³⁰⁸Ibid.

³⁰⁹Ibid.

³¹⁰Ibid.

³¹¹Ibid.

³¹²IMF

³¹³Ibid.

³¹⁴CIA (Central Intelligence Agency) “The World Factbook”

³¹⁵Ibid.

³¹⁶Ibid.

Unemployment rate (both sexes; aged 15+) (2016) ³¹⁷	2.7	%
FDI inflow (2015) ³¹⁸	1,961	Million USD
Internet penetration (percentage of individuals using the Internet) (2015) ³¹⁹	5.36	%
Mobile penetration (mobile-cellular telephone subscriptions) (2015) ³²⁰	75.86	%
Consumer Price Index growth (1960-2016) ³²¹	6.0	

Information on the country's rice sector

Level of rice demand

The rice production in Tanzania has seen a tremendous increase, which can be attributed to increasing demand. Tanzanian's staple crop used to be ugali, but eating habits are changing. Nowadays rice is an important staple food that people eat almost on a daily basis, unlike in the past when it was consumed on only a few special occasions, such as festivals. The consumption of rice is gradually increasing and per capita consumption in 2016 was 38.5 kg,³²² compared to 25.4 kg in 2007.

The importance of rice for the economy and the food security

Rice is important not only for food security but also for the economy. With large areas available for rice cultivation, Tanzania produces and exports rice to neighboring countries, with rice imports decreasing compared to 10 years ago. As a result, money which would have been used to import rice can be now be used for other commodities.

Donors' interest in rice development

The number of donors with an interest in the rice sector was limited in 2008, but since then several projects have been implemented in different areas of the value chain by various development partners, such as irrigation. International donors operating in the rice sector include the European Union (EU), the United States Agency for International development (USAID), the WB, JICA, Switzerland (Swiss Agency for Development and Cooperation), GIZ, IFAD, and FAO. CARD started around the time when Africa was suffering from a food crisis, and so the timing between this situation and the launch of CARD could have been a reason in attracting donor investments.

³¹⁷ILO STAT (<http://bit.ly/2oIwFux>)

³¹⁸Worldbank World Development Indicators, 27/4/2017 update

³¹⁹ITU Country ICT Data (until 2015)ITU Country ICT Data (until 2015)

³²⁰Ibid.

³²¹AFDB Socio Economic Database

³²²Calculated based on USDA PSD online database "Grains" 8/10/2017 update

Positioning of rice development and NRDS within priority policies

Rice is becoming increasingly important, replacing cassava and becoming positioned as the second most prioritized crop after maize in Tanzania. The Ministry of Agriculture, Livestock and Fisheries (MALF)³²³ understands that the Agricultural Sector Development Program (ASDP), which was operationalized in 2006, is an overarching program that covers all the areas of agriculture, and rice comprises one component of this program. However, there is no clear linkage between the two documents, partially because the NRDS was developed after the ASDP. The second phase of ASDP is about to be approved, but the draft document does not explicitly refer to NRDS either, while the government insists that NRDS is in line with national agricultural policies and international commitments that Tanzania has ratified (CAADP).

Authorization status of NRDS

Despite the fact that the NRDS was approved by MALF and shared with stakeholders during the General Meeting in Arusha in 2010, it is generally taken into account only indirectly via the ASDP. In Tanzania, both the government and donors have been coordinating agriculture development under a sector-wide approach. Consequently ASDP was created, respecting the ownership of the government. For this reason, the government and donors generally refer to ASDP, which is regarded as the master document.

Existence of champions such as high-ranking ministry officials who support NRDS

Generally, high-ranking officials participate in the major agricultural fora where rice is mentioned, and officiate rice related initiatives such as Agriculture First (Kilimo Kwanza) and Big Result Now. However, it seems agriculture is not as high a priority issue for the current President as infrastructure and industry sectors. The national budget allocation for agriculture is about 2%, whereas the Maputo Declaration on Agriculture and Food Security requires member countries to allocate 10% of their national budget for agriculture.

Government structure for NRDS implementation

The current CARD focal point is the Assistant Director of the Crop Promotion Department of MALF. The Department of Policy and Planning (DPP) took the leading role in streamlining NRDS, but implementation has been carried out by the Department of Crop Promotion.

Although the Rice Council of Tanzania was established to gather the voices of stakeholders in the rice subsectors, it is not operating actively. Thus there is no stakeholder coordination forum for rice in

³²³ MOA (Ministry of Agriculture) at present. MALF was divided into two ministries in Oct, 2017.

place at the moment. The government has endeavored to create one, and their initial proposal was to host meetings once or twice a year, involving representatives from the rice producing areas. However, the plan has not been implemented because of financial constraints.

For the agricultural sector as a whole, a sector consultative group was organized under the ASDP to discuss thematic areas of the program, including rice. The members comprise relevant ministries, development partners, private sector players, and research institutions. In addition, development partners meet monthly at an agriculture sector working group meeting.

4.12.2. Output

Status of the NRDS process

		Status	Support by CARD
A	A-1 Formulation and launch	Done	<ul style="list-style-type: none"> Started to develop NRDS in 2008. NRDS was approved and established in 2009.
	A-2 Gap analysis & prioritization and concept note formulation	Done	<ul style="list-style-type: none"> Developed road map and concept notes.
	A-3 Lobbying for funding and project formulation	In progress	<ul style="list-style-type: none"> Several rice projects were created after NRDS, some of which were based on NRDS. (JICA and USAID) Basically regular donor meetings for rice were not held for project formulation.
	A-4 Implementation	In progress	<ul style="list-style-type: none"> There are 15 CARD-labeled projects. Taskforce members are not gathering to monitor NRDS implementation due to the lack of funds.
B	Rice seed strategy	In progress	<ul style="list-style-type: none"> The seed strategy was about to be completed, but was not able to be finalized because of the financial constraints.
C	Mechanization strategy	Not Started	-

Figure 326 : Status of NRDS Process in Tanzania

List of CARD-labeled projects

These CARD-labelled projects are/were implemented in Tanzania according to the CARD Secretariat.

Table 34: List of CARD-labeled projects in Tanzania

Name of Project	Donor	Duration	Modality	Budget	Area of Intervention (Sub-Sector)	Area of Intervention (Geographic)	Outputs/Activities
Formulation and	JICA	2007-	Technical	268	Irrigation,	Dares	(i) DADP Guidelines on irrigation

Training of the Guideline of the DADP Guidelines on Irrigation Scheme Development		2010	cooperation	million Yen	Capacity building	Salaam, Morogoro, and Kilimanjaro Irrigation Zone	scheme development are formulated; (ii) The supporting system for district irrigation staff is improved
Technical Cooperation in Supporting Service Delivery Systems of Irrigated Agriculture (Tanrice)	JICA	2007-2012	T/A Pro. related to ODA loan	540 million Yen	Capacity building, Extension	Whole Country	(i) Rice cultivation practices are improved in priority irrigation schemes through the farmer-to-farmer extension approach; (ii) Technical capacities of research, training, and extension institutions are enhanced to further promote rice production in the future.
Technical Cooperation in Capacity Development for the ASDP Monitoring and Evaluation System	JICA	2008-2011	Technical cooperation	250 million Yen	Capacity building	Whole Country	(i) ARDS is rolled out nationwide and made operational; (ii) Backstopping activities for ARDS by M&E TWG are strengthened; (iii) Coordination of ASDP M&E to implement ARDS is enhanced
Capacity Development for the Promotion of Irrigation Scheme Development Under the District Agriculture Development Plans (DADPs)	JICA	2010-2013	Technical cooperation	310 million Yen	Irrigation	Whole Country	(i) The supporting system for the implementation of irrigation scheme development (i.e., planning and institutional set-up, feasibility study, design, tender and contract management, and construction supervision) by zonal/district irrigation staff is improved in line with the Comprehensive GL; (ii) The supporting system for IO's Operation and Maintenance (O&M) system for irrigation schemes implemented by Zonal Irrigation and Technical Service Units (ZITSUs) and district irrigation staff is improved
Project for Capacity Development for the ASDP Monitoring and Evaluation System Phase 2	JICA	2011-2015	Technical cooperation	560 million Yen	Capacity building	Whole Country	(i) ARDS is rolled out nationwide and operational. (ii) Backstopping activities for ARDS by M&E TWG are strengthened. (iii) Coordination of ASDP M&E to implement ARDS is enhanced.
Feed the Future – Staples Value Chain Activity (NAFAKA)	USAID	2011-2015	Grant	30 million USD	Production, Marketing, Public-private partnerships	Kilombero , Kiteto, Kongwa, Mvomero and Zanzibar	(i) Improving the competitiveness and productivity of maize and rice value chains; (ii) Facilitating improved domestic and regional trade; (iii) Expanding the depth and breadth of benefits from the growth of the maize and rice subsectors, including increased benefits to women and youth
Project for Strengthening the Backstopping Capacities for the DADP Planning and Implementation under the ASDP Phase 2	JICA	2012-2016	Technical cooperation	520 million Yen	Capacity building	Whole Country	(i) Backstopping activities for the planning, implementation, and monitoring of strategic DADP are improved; (ii) DADPs of pilot LGAs become strategic and comprehensive, with special focus on collaboration with the private sector, including NGOs
Project for Supporting Rice	JICA	2012 - 2018	Technical cooperation	950 million	Training, Extension,	Whole Country	Training-based extension approach in irrigated & rain-fed ecologies for

Industry Development in Tanzania (TANRICE-2)			n	Yen	Production		rice production—cascading technology transfer from extension officers and key farmers (KFs) to intermediate farmers (IFs), and IFs to other farmers (OFs)
Small Scale Irrigation Development Project (SSIDP)	JICA	2013-2017	Loan aid	3,443 million Yen	Irrigation, Infrastructure	44 districts in 7 zones	(i) Construction of small-scale irrigation facilities; (ii) Rehabilitation of existing small-scale irrigation facilities; (iii) Building of local governments' technical capacities
Project for Irrigation Human Resource Development by Strengthening the Capacity of Arusha Technical College	JICA	2014-2018	Technical cooperation	140 million Yen	Capacity building, Irrigation	Arusha	(i) Vocational training for designing and constructing irrigation infrastructures and field irrigation demonstration plots/farms; (ii) Improvement of the curriculum of civil and irrigation engineering programs, thus achieving high-quality education
Expanding Rice Production Project (ERPP)	WB	2014-2019	Global Agriculture and Food Security Program	22.9 million USD	Seed, Marketing	Morogoro and Zanzibar	(i) Introducing new varieties to smallholder farmers; (ii) Promoting the sustainable production and delivery of preferred varieties; (iii) Strengthening seed quality control; (iv) Expanding and rehabilitating irrigation infrastructure; (v) Promoting adoption of improved agronomic practices; (vi) Providing marketing infrastructure; (vii) Strengthening market linkages and market information
Tanzania Agricultural Sector Development Project - PHRD - policy & human resource development	WB	2014-2019	Specific Investment loan	14.25 million USD	Marketing, Extension, Water management/Irrigation,	Whole Country	(i) Strengthen access to improved technologies; (ii) Improve access to markets and value addition/processing; (iii) Capacity building for irrigation development
Project for Capacity Development for the Promotion of Irrigation Scheme Development Under the District Agricultural Development Plan Phase 2	JICA	2015-2019	Technical cooperation	570 million Yen	Capacity building, Irrigation	Whole Country	(i) Capacities of irrigation staff of Zonal Irrigation and Technical Service Units (ZITSUs) and district offices for F&C are improved; (ii) Capacities of irrigation staff of Zonal Irrigation and Technical Service Units (ZITSUs) and district offices for O&M are improved
Partnership For Sustainable Rice Systems Development In Sub-Saharan Africa	FAO, Bolivarian Republic of Venezuela	2016-2017	Grant	5,000,000 USD (9 countries)	Seed, Marketing, Infrastructure	Whole Country	(i) Promotion of best practices; (ii) Business models along the rice value chain, (iii) Exchange of technologies between countries; (iv) Creation of awareness regarding post-harvest handling, (v) In-country evaluation of NRDS implementation
RNIMP: Project on the Revision of National Irrigation Master Plan	JICA	2016-2018	Study	320 million Yen	Water management/Irrigation,	Whole Country	Develop an irrigation master plan b/w 2018 and 2035

Intervention areas

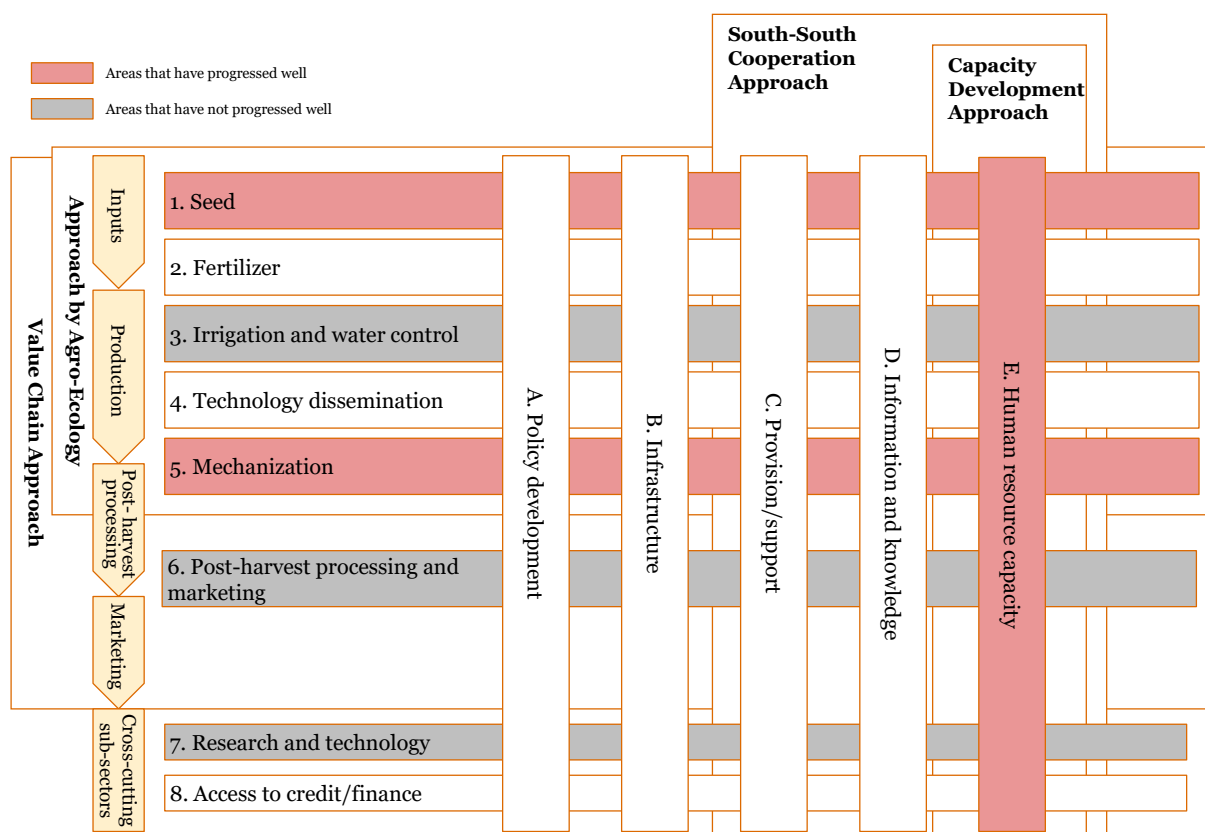


Figure 337 : Intervention Areas in Tanzania

Projects are implemented in the area of *E. Training of farmers and extension staff*. Also, the focal point observed that there has been progress in the use of *1. Improved seeds*, as there are more rice varieties being released. Likewise, there has been a justifiable increase in agricultural *5. Mechanization* in rice sub-sectors at almost every stage of the crop (production to consumption), while some donors think that the adoption of new seeds and machinery has not yet been fully achieved.

However, more progress is expected from government officials in the areas of *3. Irrigation and water management* and *6. Post-harvest processing and marketing*. The potential areas for irrigation in the country are very significant, but they are not being sufficiently leveraged. In addition, the agro industries and processing sectors are not well developed.

Another area that requires more attention is the availability of statistics for the sector, which is necessary when the government seeks external support and needs to demonstrate how much improvement/increase is expected.

4.12.3. Outcome

Human resource development

Government officials interacted with Asian countries including Thailand and the Philippines through South-South Cooperation opportunities, where they acquired knowledge about irrigation, technologies, marketing and other agricultural practices of Asian countries. Notably, researchers have benefited from the knowledge provided through such cooperation regarding seed development and breeding in Asia.

NRDS development gave policy makers new insights about crop-specific strategies, as in the past the Tanzanian government did not have such documentation. Also, strategy development was carried out with an emphasis on government ownership, and this helped deepen the policy makers' understanding of the rice sector. In addition, the process of NRDS development allowed government officials to gain a clearer understanding of the linkage between what the government needs and projects being formulated and implemented.

Project formulation and implementation

Contributions to increase in rice sector projects funded by the government and donors

It can be said that the initiative contributed to sparking and revamping existing initiatives. However, it is not only CARD/NRDS that can claim to have created an increase in the number of rice projects. Rather, the development of NRDS coincided with a rice deficit in Africa as well as on-going government efforts. One of the reasons is that the Tanzanian government initially did not allow the CARD Secretariat to support fund matching. However, the CARD focal point has suggested that the CARD Secretariat should confirm the current senior officials' interest in fund matching.

JICA stated that NRDS allowed them to justify new projects in the rice sector, which consequently made it easier for the Tanzanian government to receive assistance from JICA.

Contributions to efficient, effective, and strategic project formulation

Some government officials indicated that NRDS highlights exactly what areas need attention and what kind of attention is needed, hence making better allocation of government resources possible.

Contribution of the CARD focal point to the promotion of projects

The CARD focal point is trying his best to implement the strategy, but limited resources are a barrier to implementation and coordination in the sector.

Contributions to correlative improvements and timing adjustments between governments and donors

One example is that the second phase of JICA's TANRICE project has a longer implementation period. The end year (2018) was set to be in line with the target year of the CARD initiative.

4.12.4. Impact

Quantitative impact

Table 35: Production, consumption, and self-sufficiency of rice in Tanzania

(1000MT)	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Production of rice (paddy) FAO ³²⁴	1,421	1,335	2,650	2,248	1,801	2,195	2,621	2,980	2,986	N/A
Production of rice (paddy) USDA ³²⁵	1,421	1,335	2,000	2,248	1,802	2,197	2,576	2,600	2,800	2,800
Production of rice (milled) USDA ³²⁶	938	881	1,320	1,484	1,189	1,450	1,730	1,782	1,848	1,848
Consumption of rice (milled) USDA ³²⁷	963	961	1,360	1,584	1,359	1,610	1,875	1,972	2,018	2,018
Self-sufficiency of rice ³²⁸	97.4%	91.7%	97.1%	93.7%	87.5%	90.1%	92.3%	90.4%	91.6%	91.6%

Table 36: Production targets for rice in the NRDS

(1000 MT)	2008	2018
Irrigated ³²⁹	426	1,365
Rain-fed upland ³³⁰	9	50
Rain-fed lowland ³³¹	464	548
Total	899	1,963

4.12.5. Success factors and challenges

Success factors

■Government

The importance of rice for the national economy and/or food security

Rice is now one of most important agricultural commodities in Tanzania following maize in terms of food supply as well as income source. The Tanzanian government has put rice as one of eight priority

³²⁴ FAO STAT database "Crops" (<http://www.fao.org/faostat/en/#data/QC>) 10/1/2018 update

³²⁵ Calculated based on United States Department of Agriculture (USDA) PSD online database "Grains" 8/10/2017 update

³²⁶ USDA PSD online database "Grains" 8/10/2017 update

(<https://apps.fas.usda.gov/psdonline/app/index.html#/app/downloads?tabName=default>)

³²⁷ Ibid.

³²⁸ Calculated based on USDA PSD online database "Grains" 8/10/2017 update

³²⁹ The United Republic of Tanzania, Ministry of Agriculture, Food Security and Cooperatives, "National Rice Development Strategy," 2009.

³³⁰ Ibid.

³³¹ Ibid.

crops in Five-Year Development Plan II (FYDP II). Thus there is no possibility of the government in setting aside rice.

■General Meetings and SC

Venue

By virtue of one of the General Meetings being organized by CARD in Arusha, CARD activities and NRDS were made known to all the stakeholders. Therefore, in Tanzania, the participants in the meeting were at least then well-aware of NRDS.

■Others

Private-sector involvement

The private sector has been involved with the rice value-chain in Tanzania. There are many small- and medium-scale rice millers in Tanzania, and some of them have expanded their businesses through increasing the number of contract farmers and purchasing bigger milling machine. In addition, several multi-national corporations have opened rice farms in Tanzania with their massive investments.

Challenges

■Government

Authority/level of focal point

A few government officials and donor organizations mentioned that the CARD focal point at MALF is burdened with a lot of tasks since he is responsible for all the crops, and can easily put aside the work for the CARD initiative if it is not urgent. The appointment of junior-level staff responsible for rice and CARD activities is desired.

Authority of the NRDS

In Tanzania, the ASDP—which was established before the launch of CARD—has been the master document in the agriculture sector development for the government and donors. It is difficult for CARD to have a direct influence on project formulation unless the strategy is clearly mentioned in the program, which is not the case with both ASDP Phase 1 and also for upcoming Phase 2.

Assignment of appropriate unit

Currently, the Department of Crop Development oversees the implementation of the NRDS. In relation to the previous point, in order for the NRDS to be linked to the ASDP, the DPP (which manages ASDP) should be part of the discussions regarding NRDS implementation.

Continuity of CARD focal point/taskforce/high-ranking officials

In both the MALF and research institutions, commitment to CARD is dependent on individual skills. If an officer is new to his or her current position, they would not be aware of previous CARD activities.

Financial resources

Due to financial constraints, it was difficult for the government to convene scheduled meetings where the taskforce could discuss policy and project implementation. The government does not comply with the Maputo and Malabo declarations requiring an allocation of 10% of the national budget to agriculture. Furthermore, the ministry regularly suffers a significant gap between the planned and disbursed budgets as well as delay of disbursement. As a result, there is a lack of funds to cover travel costs and other logistics for meeting participants coming from outside of Dar es Salaam. For this reason, implementation by the government was limited, and the seed strategy has not been finalized.

Number and capacity of government officials

Depending on the capacity (and motivation) of the CARD focal point, sometimes requests for assistance from the CARD Secretariat were rejected, or the CARD Secretariat was not given the opportunity to discuss these requests with higher-level officials. Compared with other countries, the Tanzanian focal point to CARD was not proactive.

Some donors think that inadequate human resource capacity has led to the inefficient budget allocation/usage of basket funds established under the ASDP to deal with issues in the agricultural sector.

■ SC members

Communication between the SC member representative and SC local office

For many of the SC members, no information is trickling down to the country office level with regard to discussions at the HQ level concerning CARD. Thus the CARD Secretariat could not receive cooperative support from local offices of SC members, and no significant activities were conducted until 2015.

■ CARD Secretariat

Communication

Communication between the government and the CARD Secretariat could have been more frequent. Having no permanent staff in the country affected the visibility of CARD both for the government and the SC local offices.

■Other

Awareness of CARD

The activities of CARD are not visible in Tanzania from the perspective of the SC local offices. CARD has not been mentioned in key donor meetings. If CARD desires to be paid more attention, its activities should be shared at existing forums such as the agricultural sector working group.

Availability of reliable statistics and evaluation of progress

The lack of agricultural statistics is a serious problem in the Tanzanian agricultural sector. Like the other sub-sectors, stakeholders are not able to know which goals are being achieved and which issues are being addressed through the projects.

Introduction of rice as a new crop

Assistance to rice development has been provided in Tanzania since before the establishment of CARD. Therefore, the government has tended to focus on maintaining existing aid sources, paying less attention to CARD. This may have affected the stance of the CARD focal point.


Other government policies

One of the difficulties faced by rice farmers in Tanzania is unpredictable export controls. In 2016, government announced that export controls will not be applied anymore. However, it is still possible for the government to control exports through stopping the issuing of permits for exports. According to the government, traders can now acquire permits anytime if they fulfill criteria such as the availability of written trade agreements, the capacity of warehouses, etc. Due to the long-term government controls on exports, traders are still afraid of export bans, and this discourages large investment from them. The government is therefore expected to remove these suspicions through formulating appropriate regulations for their operation.

4.13 Group 1: Uganda

4.13.1. Context/Background

Basic country information

Republic of Uganda		
Exchange rate (2017) ³³²	3,577.16 UGX = 1USD	
Land ³³³	241,038 sq km	
Population (2016) ³³⁴	38,319,241	
Climate ³³⁵	Tropical	
Languages ³³⁶	English Ganda or Luganda (most widely used of the Niger-Congo languages, preferred for native language publications in the capital and may be taught in schools), other Niger-Congo languages, Nilo-Saharan languages, Swahili, Arabic	
Ethnic groups (2014 est.) ³³⁷		Baganda 16.5%, Banyankole 9.6%, Basoga 8.8%, Bakiga 7.1%, Iteso 7%, Langi 6.3%, Bagisu 4.9%, Acholi 4.4%, Lugbara 3.3%, other 32.1%
Per capita GDP (2017) ³³⁸	642.127	USD per capita
Per capita GDP Growth rate (2017) ³³⁹	5	%
Population growth rate (2016) ³⁴⁰	3.22	%
Age composition of population (2016 est.) ³⁴¹	0-14 years: 48.26% (male 9,223,926/female 9,268,714) 15-24 years: 21.13% (male 4,010,464/female 4,087,350) 25-54 years: 26.1% (male 5,005,264/female 4,997,907) 55-64 years: 2.5% (male 460,000/female 496,399) 65 years and over: 2.01% (male 337,787/female 431,430)	
Population % between 15-54 years ³⁴²	47.23	%
Unemployment rate (both sexes; aged 15+) (2016) ³⁴³	2.4	%
FDI inflow (2015) ³⁴⁴	1,057	Million USD
Internet penetration (percentage of individuals using the Internet) (2015) ³⁴⁵	19.22	%

³³²Oanda, <https://www.oanda.com/lang/ja/currency/converter/>

³³³CIA (Central Intelligence Agency), "The World Factbook"

³³⁴Ibid.

³³⁵Ibid.

³³⁶Ibid.

³³⁷Ibid.

³³⁸IMF

³³⁹Ibid.

³⁴⁰CIA (Central Intelligence Agency) "The World Factbook"

³⁴¹Ibid.

³⁴²Ibid.

³⁴³ILO STAT (<http://bit.ly/2oIwFux>)

³⁴⁴Worldbank World Development Indicators, 27/4/2017 update

³⁴⁵ITU Country ICT Data (until 2015)

Mobile penetration (mobile-cellular telephone subscriptions) (2015) ³⁴⁶	50.37	%
Consumer Price Index growth (1960-2016) ³⁴⁷	5.34	

Information on the country's rice sector

Level of rice demand

The demand for rice is increasing. The country has witnessed the change in the status of rice from being a delicacy to becoming a part of the daily diet. Rice is still new to the country, but people in Uganda consider rice as a staple food. Other staple crops include matoke (plantain), maize, cassava, potato, and sorghum according to the CARD focal point.

The importance of rice for the economy and the food security

The Ministry of Agriculture, Animal Industry & Fisheries (MAAIF) selected rice as a priority commodity and considers it as an area of investment.³⁴⁸ This priority was allocated primarily for (a) ensuring food security, (b) enhancing farmers' income, and (c) reducing the burden on foreign exchange as Uganda is a net importer of rice.

Donors' interest in rice development

Japan has been the main donor in the field of rice, but other donors including the WB, AfDB, Islamic Development Bank, and Korean International Cooperation Agency (KOICA) have shown increasing interest in rice projects.

Positioning of rice development and NRDS within priority policies

Rice is among the top 12 focus commodities for the government. These 12 commodities are bananas, beans, maize, rice, cassava, tea, coffee, fruits and vegetables, dairy, fish, livestock (meat).³⁴⁹ Moreover, the focal point feels that the NRDS was instrumental in bringing rice up to least a top 5 commodity among these 12 commodities in terms of the government's interest. The NRDS is aligned with the overarching agricultural strategy and has been largely incorporated into the Agriculture Sector Development Strategy and Investment Plan (2010/11-2014/15), as well as the new Agriculture Sector Strategic Plan (2015/16-2019/20). These documents are equivalent to CAADP Investment Plan, which employs a commodity-based approach. The rice section of the documents reflects the

³⁴⁶Ibid.

³⁴⁷AfDB Socio Economic Database

³⁴⁸ Government of Uganda, Ministry of Agriculture, Animal Industry and Fisheries, "Uganda National Rice Development Strategy 2008-2018," revised in 2012

³⁴⁹ The Republic of Uganda, Ministry of Agriculture, Animal Industry and Fisheries, "Agriculture Sector Strategic Plan (2015/16 – 2019/20)," 2016

content of the NRDS concept notes.

Authorization status of NRDS

The MAAIF signed the NRDS in 2012, and it became a government document. The NRDS is treated as a master document for rice development planning and intervention in the country. The targets under this document have been referred to in various projects.

Existence of champions such as high-ranking ministry officials who support NRDS

The former Vice-President of the country was supportive of the NRDS and was one of the key figures who played an important role in the rice sector.

Government structure for NRDS implementation

The CARD focal point is the Program Officer for the Crop Production Department of MAAIF. A Rice Industries Secretariat headed by the Commissioner of Crop Production has been established. Secretariat members comprise rice desk officers and assistant program officers.

The Secretariat's responsibility is to organize meetings for the a) Rice Steering Committee (twice a year) and the b) Rice Technical Committee (quarterly). The Rice Steering Committee is a multi-stakeholders committee whose members include the MAAIF, the Ministry of Water and Environment, Ministry of Trade, donor agencies, farmers' organizations, the National Crops Resources Research Institute (NaCRRI) and private sector players. The Technical Committee was created under the Rice Steering Committee for the purpose of hosting specific discussions on topics such as rice seed. Members comprise MAAIF and its agencies and also formed the CARD Taskforce, which consisted of representatives from MAAIF's Planning, Crop, Mechanization, Extension, and Crop Certification and Inspection Departments. The Rice Technical Committee is currently not very active, but the Rice Steering Committee is organized jointly with the Promotion of Rice Development Project (PRiDe) Joint Coordination Committee.

4.13.2. Output

Status of the NRDS process

		Status		Support by CARD
A	A-1 Formulation and launch	Done	<ul style="list-style-type: none"> Started to develop NRDS in 2008. Conducted a survey in 2008 and 2009 to collect information for NRDS. NRDS was officially approved by the ministry in 2012 and became the official government document. 	<ul style="list-style-type: none"> Provided technical assistance through working weeks. This assistance included providing NRDS tools and templates for the required information and sending a CARD consultant from the CARD Secretariat to assist with the write-up and analysis during working weeks.
	A-2 Gap analysis & prioritization and concept note formulation	Done	<ul style="list-style-type: none"> Developed concept notes. 	
	A-3 Lobbying for funding and project formulation	In progress	<ul style="list-style-type: none"> Visited donor agencies to advertise concept notes, the day after the Rice Stakeholder Meeting. Asked CARD for assistance in gathering information necessary for the World Bank's Agricultural Cluster Development Project. 	<ul style="list-style-type: none"> Accompanied MAAIF to bring concept notes to donors. Assisted in estimating seed demands, which led to project formulation.
	A-4 Implementation	In progress	<ul style="list-style-type: none"> There are 7 CARD-labeled projects in Uganda. The government has a plan to review NRDS. 	<ul style="list-style-type: none"> Visited MAAIF about once a year as requested.
B	Rice seed strategy	In progress	<ul style="list-style-type: none"> Developed seed roadmap. Collected information on the needs for rice seeds in the country through the development of roadmap. Developed 6 concept notes. 	<ul style="list-style-type: none"> Provided technical assistance with the development of seed roadmap and concept notes.
C	Mechanization strategy	Not Started	-	-

Figure 34 : Status of NRDS Process in Uganda

List of CARD-labeled projects

These CARD-labelled projects are/were implemented in Uganda according to the CARD Secretariat.

Table 37: List of CARD-labeled projects in Uganda

Name of the Project	Donor	Duration	Modality	Budget	Area of Intervention (Sub-Sector)	Area of Intervention (Geographic)	Outputs/Activities
Technical Assistance Support to Sustainable Irrigated Agricultural Development Project in Eastern Uganda	JICA	2008-2011	Technical Cooperation	312 million Yen	Capacity building, Irrigation	Eastern regions of Uganda	(i) Capacities to provide training and extension on irrigated rice production techniques to the smallholders are developed among the District Agricultural Officers in the target area, (ii) Irrigated rice cultivation techniques are promoted among smallholders in the project sites
NERICA Rice Promotion Project in Uganda	JICA	2008-2011	Technical cooperation	328 million Yen	Capacity building, Research, Extension	Whole country	(i) Research and extension capacity in terms of system and personnel development and NaCRRI/ZARDI NERICA (and paddy rice) research systems

							and staffing are enhanced; (ii) Appropriate NERICA rice cultivation techniques are introduced to farmers and farmer groups, etc., in the project area.
The Project for Construction of Rice Research and Training Centre	JICA	2009-2011	Grant	651 million Yen	Infrastructure	Namulonge NaCRRRI	(i) Construction of buildings and procurement of machinery necessary for research and training by NaCRRRI
Promotion of Rice Development Project (PRiDe)	JICA	2011-2018	Technical Cooperation	950 million JPY	Research, Extension, Quality Improvement, Marketing	Whole country	(i) Research and development capacity of rice related institutes strengthened, (ii) Extension capacity of rice-related service providers strengthened (iii) Rice quality on the market improved
Policy Action for Sustainable Intensification of Crop Systems (PASIC)	Netherlands	2013-2017	Technical Cooperation	5 million USD	Policy, Value chain	Highlands of southwestern Uganda, Kioga Plains in eastern Uganda	(i) Evidence on key constraints and opportunities for intensification of two cropping systems gathered and communicated, (ii) Zonal investment plans are prepared and owned by key stakeholders, (iii) Action initiated for the removal of bottlenecks in national policies relevant to agricultural intensification, (iv) Capacity strengthened of MAAIF and its partners to undertake evidence-based policy action
The Project on Irrigation Scheme Development in Central and Eastern Uganda	JICA	2014-2016	Technical Cooperation for Development Planning	460 million Yen	Capacity building, Irrigation	Central and Eastern regions of Uganda	(i) An irrigation scheme development plan is formulated; (ii) A feasibility study of prioritized sites is conducted and capacity is developed through the study; (iii) Development potential of irrigation is clarified
Partnership For Sustainable Rice Systems Development In Sub-Saharan Africa	FAO, Bolivarian Republic of Venezuela	2016-2017	Grant	5 million USD (9 countries)	Post-harvest Processing, Marketing	Whole country	(i) Promotion of best practices, (ii) Business models along rice value chain, (iii) Exchange of technologies between countries, (iv) Awareness creation on post-harvest handling, (v) In-country evaluation of implementation of NRDS

Intervention areas

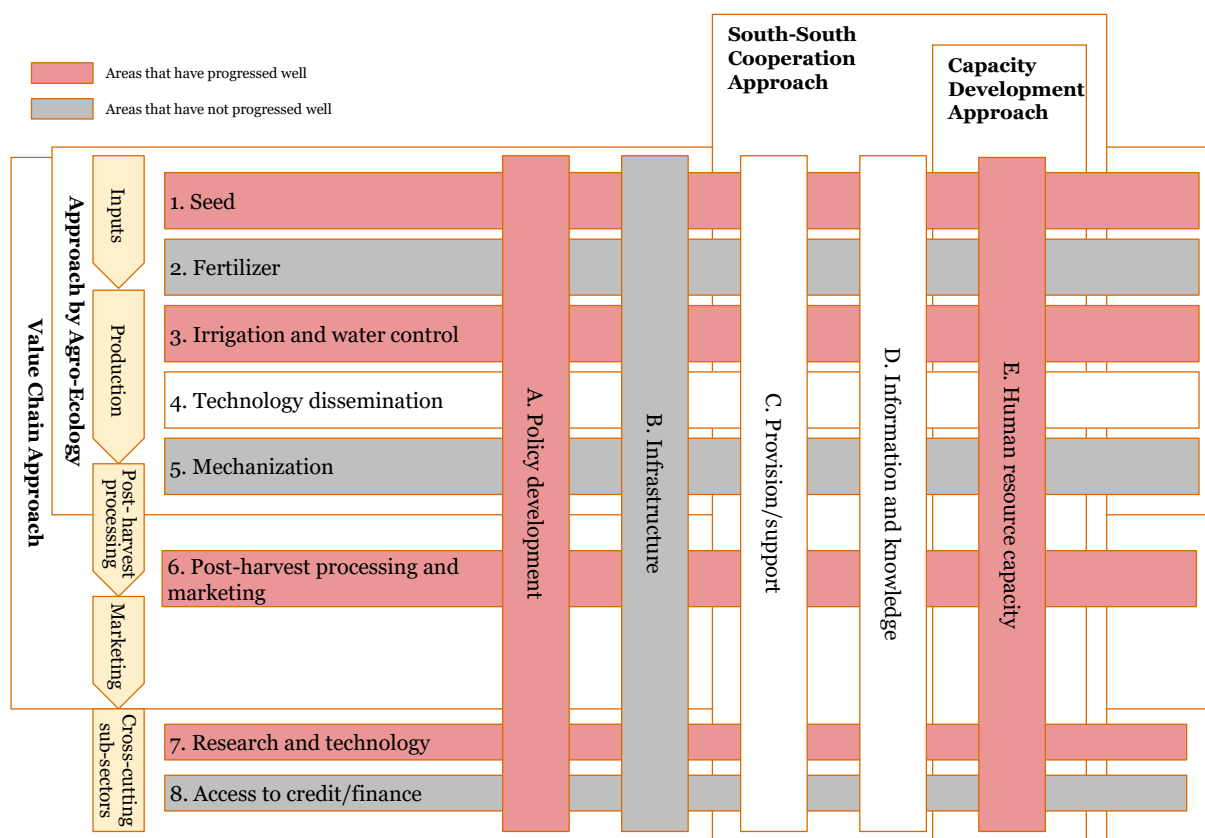


Figure 35 : Intervention Areas in Uganda

The focal point believes that there has been some progress in the development of 1. Seed, 3. Irrigation/water control, and 7. Research through the implementation of the CARD-labelled projects. Most of the projects in these areas place emphasis on E. Capacity development. In addition, A. Policies were developed, including NRDS and rice seed strategies as well as 6. Post-harvest handling and marketing strategies.

However, there are fewer projects aimed at developing B. Infrastructure or investing in capital-intensive areas such as 2. Fertilizer distribution, 5. Mechanization, and 8. Access to credit. However, for irrigation infrastructure, there have recently been interventions by donors including AfDB and JICA.

Although 1. Seed and 7. Research are the areas that demonstrated progress, more than a few people mentioned that further intervention is needed to strengthen extension of services in order to create stronger linkages between research and farmers, as well as to allow farmers access to quality inputs.

In addition to the areas shown in the above chart, how to respond to climate change and unreliable weather seems to be of interest to stakeholders as an area for intervention.

4.13.3. Outcome

Human resource development

A number of training programs targeting CARD taskforce members have been organized in Japan and third party countries. Such training helped policy makers to acquire knowledge about the rice sector.

Project formulation and implementation

Contributions to increase in rice sector projects funded by the government and donors

According to MAAIF, the NRDS has contributed to the channeling of resources. Government development plans use the NRDS to show the need for investment in the rice industry, which has attracted several projects and programs within the government.

The NRDS was also helpful in obtaining funds from donor agencies. The NRDS provided direction to development partners venturing into fund rice-related projects. Some projects are being newly undertaken following the formulation of the NRDS, such as the Promotion of Rice Development Project (PRiDe). However, some donors were already active in the area of rice prior to the launch of CARD, in which case the contribution of CARD cannot be accurately assessed.

Contributions to efficient, effective, and strategic project formulation

The Rice Steering Committee and the Rice Technical Committee were formed based on the NRDS. At the very least, government officials appreciate the contribution of these committees to giving policy direction to projects to ensure coordination among different government ministries, departments, agencies, donors, and other stakeholders.

Contribution of the CARD focal point in promoting projects

The CARD focal point provides information on the rice industry, giving confidence to partners for developing and implanting projects. In addition, the CARD focal point is responsible for the two stakeholder committees, which facilitate coordination among donors.

Contributions to correlative improvements and timing adjustments between governments and donors

The Rice Steering Committee guides general harmonization and consistent approaches between different projects, although specific cases were not mentioned during the evaluation study. With development partners increasingly channeling resources to the rice sector, it has been argued that demarcations should be set to avoid overlaps and contribute further to rice development.

4.13.4. Impact

Quantitative impact

Table 38: Production, consumption, and self-sufficiency of rice in Uganda

(1000MT)	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Production of rice (paddy) FAO ³⁵⁰	178	206	218	233	212	214	237	237	247	N/A
Production of rice (paddy) USDA ³⁵¹	180	206	218	232	212	214	220	231	231	231
Production of rice (milled) USDA ³⁵²	117	134	142	151	138	139	154	150	150	150
Consumption of rice (milled) USDA ³⁵³	157	179	182	216	188	219	234	230	230	230
Self-sufficiency of rice ³⁵⁴	74.5%	74.9%	78.0%	69.9%	73.4%	63.5%	65.8%	65.2%	65.2%	65.2%

Table 39: Production targets for rice in the NRDS

(1000 MT)	2008	2018
Irrigated ³⁵⁵	15	40
Rain-fed upland ³⁵⁶	59	200
Rain-fed lowland ³⁵⁷	104	443
Total	178	689

Qualitative impact

Application to other crops

NRDS guided the government to take a commodity approach and similar institutional mechanisms were incorporated for commodities such as beans, maize, bananas, and potatoes.

Collection of baseline data

The process of NRDS formulation helped in the creation of baseline data. Before the NRDS was formulated, statistics for rice were not available. However, there is still an issue surrounding the collection of data. Without reliable and precise data, the government cannot set the realistic goals, and thus the results of the policy development cannot be effectively evaluated based on such goals.

³⁵⁰ FAO STAT database "Crops" (<http://www.fao.org/faostat/en/#data/QC>) 10/1/2018 update

³⁵¹ Calculated based on United States Department of Agriculture (USDA) PSD online database "Grains" 8/10/2017 update

³⁵² USDA PSD online database "Grains" 8/10/2017 update

(<https://apps.fas.usda.gov/psdonline/app/index.html#/app/downloads?tabName=default>)

³⁵³ Ibid.

³⁵⁴ Calculated based on USDA PSD online database "Grains" 8/10/2017 update

³⁵⁵ Supra note 348.

³⁵⁶ Ibid.

³⁵⁷ Ibid.

4.13.5. Success factors and challenges

Success factors

■Government

The importance of rice for the national economy and/or food security

Uganda is a big importer of rice and the government strongly hopes to reduce the burden on rice importation expenditures, which means that the government prioritizes rice over some other crops.

Continuity of CARD focal point/taskforce/high-ranking officials

The Assistant Program Officer of the Rice Industry Secretariat (CARD focal point) and the Director Crop Resources have been the same person almost since the beginning. Even though the Rice Desk has changed, the Program Officer has contributed largely to the successful handover to the new officer, meaning that the current Rice Desk is aware of most of the previous activities carried out under CARD. This continuity has to a large extent ensured that the NRDS is implemented given the fact that the Rice Desk Officer is always consulted whenever a new rice project is being formulated.

Number and capacity of government officials

In addition to the fact that there is a continuity, the Ugandan focal point to CARD are generally capable and active, compared with other countries' focal points.

Government structure for implementation

The streamlined and strong NRDS implementation structure including the Rice desk, the Rice Steering Committee, and the Technical Committees contributed largely to the successful project formulation and implementation. In fact, this Ugandan model has been adopted in Madagascar and Ghana with some modification

■SC members and Partner Organizations

JICA's support

The capable JICA experts who were dispatched to the Ministry of Agriculture as advisers were strong drivers in the mainstreaming of CARD and NRDS in the government overarching strategy. These advisers also supported the establishment of the NRDS implementation structure.

■Other

Introduction of rice as a new crop

People in Uganda traditionally eat matoke (plantain), maize, cassava, sweet potato, and sorghum. Among these crops, rice is relatively new and people did not have particular preferences regarding its taste. Thus it was easier to introduce different varieties of rice in the country.

Challenges

■Government

Financial resources

The MAAIF does not have sufficient funds either for facilitating meetings across the country or for implementing the NRDS. (The Rice Steering Committee is now being organized in coordination with meetings for the JICA PRiDe project, and meeting costs are borne by the project.)

Number and capacity of government officials

For the effective implementation of NRDS, more staff are necessary.

The Ugandan government's ownership of CARD-related activities is limited, despite their interest in the development of the rice sector. It is rare for the government to initiate a new project. In addition, academic courses about rice are rarely taught at universities, meaning that building the capacity of MAIFF officers is important, and is still a challenge.

Government structure for implementation

There is an inherent issue of delay in the government's approval process. This is a challenge, especially when development partners request approval for new projects. This is especially common with loan projects.

■CARD Secretariat

Provision of personnel

The CARD Consultant visits MAIFF about once a year, during which it is difficult to have substantial discussions, with insufficient time to talk to higher-ranking officials.

■SC members and Partner Organizations

Roles of SC members

There is no clarity on the roles SC local offices are to play during and after the meetings.

Commitment

The participation of SC members and other donor agencies in CARD activities were not as regular as envisaged, particularly after the finalization of the NRDS. Information regarding the progress of and updates on CARD at the headquarters level do not seem to have been shared with the country offices.

■Other

Distribution of roles among the CARD Secretariat, JICA, and other SC members

CARD is seen more as a JICA initiative, and hence the participation of other donor agencies in the common meetings has been more of a formality for them rather than a strategic action.

Availability of reliable statistics and evaluation of progress

There is difficulty in assessing the progress and contribution of individual projects related to rice production. The lack of accurate statistics on rice is a major constraint. In addition, the government has no evaluation mechanisms or framework.


Demarcation of similar initiatives

There are other stakeholder's approaches other than CARD's approach, such as CARI by GIZ and Continental Investment Plan on Rice Self-Sufficiency in Africa (CIPRISSA) by AfDB and Africa Rice. However, MAAIF may become confused because too many frameworks are being used in the same sector. Thus it is one of the challenges to clearly demarcate the functions and role of similar initiatives in the sector in order to avoid repetition and redundancy.

4.14 Group 2: Benin

4.14.1. Context/Background

Basic country information

Republic of Benin			
Exchange rate (2017) ³⁵⁸	601.999 XOF=1USD		
Land ³⁵⁹	112,622 sqkm		
Population (2016) ³⁶⁰	10,741,458		
Climate ³⁶¹	Tropical; hot, humid in the south; semiarid in the north		
Languages ³⁶²	French, Fon and Yoruba (most common vernaculars in south), tribal languages (at least six major ones in north)		
Ethnic Groups (2013t est.) ³⁶³		Fon, Adja, Yoruba, Bariba, Fulani, Ottamari, Yoa-Lokpa, and Dendi	
Per capita GDP (2017) ³⁶⁴	771.585	USD per capita	
Per capita GDP Growth rate (2017) ³⁶⁵	5.4	%	
Population growth rate (2016) ³⁶⁶	2.75	%	
Age composition of population (2016 est.) ³⁶⁷	0-14 years: 43.04% (male2,358,838/female 2,264,204) 15-24 years: 20.32% (male 1,110,607/female 1,072,196) 25-54 years: 30.24% (male 1,641,547/female 1,606,185) 55-64 years: 3.56% (male 165,496/female 217,192) 65 years and over: 2.84% (male 120,629/female 184,564)		
Population % between 15-54 years ³⁶⁸	50.56	%	
Unemployment rate (both sex, age15+) (2016) ³⁶⁹	1	%	
FDI Inflow (2015) ³⁷⁰	229	Million USD	

³⁵⁸ Oanda <https://www.oanda.com/lang/ja/currency/converter/> (31st July 2017)

³⁵⁹ CIA (Central Intelligence Agency) "The World Factbook"

³⁶⁰ Ibid.

³⁶¹ Ibid.

³⁶² Ibid.

³⁶³ Ibid.

³⁶⁴ IMF

³⁶⁵ Ibid.

³⁶⁶ CIA (Central Intelligence Agency) "The World Factbook"

³⁶⁷ Ibid.

³⁶⁸ Ibid.

³⁶⁹ ILO STAT (<http://bit.ly/2oIwFux>)

³⁷⁰ Worldbank World Development Indicators, 27/4/2017 update

Internet penetration (% of Individuals using the Internet) (2015) ³⁷¹	6.79	%
Mobile penetration (Mobile-cellular telephone subscriptions) (2015) ³⁷²	85.64	%
Consumer Price Index growth (1960-2016) ³⁷³	2.38	

Information on the country's rice sector

Level of rice demand

While rice was only consumed during special occasions in the past, it has now become a significant staple food for people in Benin along with maize, cassava and yam. Domestic rice consumption has risen from 215,000MT in 2008 to 588,000MT in 2016 according to USDA.³⁷⁴ However, it is also true that the main staple crop is still maize.³⁷⁵

The importance of rice for the economy and food security

Rice's importance for the Benin economy can be understood in the context of significant increases in import, which is causing a strain on the country's trade balance and food security. This is as a result of an increase in consumption that is not sufficiently met by the increase in production. Some accounts attribute the cause to exports to Nigeria and even claim that 60% of the rice imported into Benin from Thailand is re-exported to Nigeria.³⁷⁶ In Benin rice is the only cereal that has not achieved 100% self-sufficiency.³⁷⁷

Donors' interest in rice development

Donors that have demonstrated interest in Benin's rice sector include CTB (Belgian government), GIZ, AfricaRice, BMGF, AfDB, FAO and international NGOs such as Center for International Studies and Cooperation (Canadian NGO).

Positioning of rice development and NRDS within priority policies

NRDS was positioned as part of the country's agriculture sector strategy, the Plan Stratégique de Relance du Secteur Agricole (PRSR, which has now been revised to: Plan stratégique de développement du secteur agricole (PSDSA) 2017-2025). This umbrella strategy has 13 focus commodities classified into 2 groups, and rice, along with crops like maize and cassava, is placed

³⁷¹ ITU Country ICT Data (until 2015)

³⁷² Ibid.

³⁷³ AfDB Socio Economic Database

³⁷⁴ USDA PSD online database "Grains" 8/10/2017 update

(<https://apps.fas.usda.gov/psdonline/app/index.html#/app/downloads?tabName=default>)

³⁷⁵ FAO, "GIEWS: Country Brief: Benin", accessed on 10/30/2017 (<http://www.fao.org/giews/countrybrief/country.jsp?code=BEN>)

³⁷⁶ 24 Heures au Bénin "Bénin, N°1 des importateurs de riz thaïlandais", February 2017

³⁷⁷ MAEP, "Plan Stratégique de Développement du Secteur Agricole (PSDSA) : Orientations stratégiques 2025. Plan National d'Investissements Agricoles et de Sécurité Alimentaire et Nutritionnelle PNIASAN 2017 – 2021 », May 2017.

within the group which has been identified to have an impact on food security. No priority has been assigned among the crops in this group, but rice is the only commodity with a specific strategy, and that strategy has been developed as a result of CARD support.

Additionally, in the National Development Plan: Government Action Plan 2016-2021 which identified 45 flagship projects for re-launching economic growth and improving living conditions, one of the projects, “Strengthen Conventional Sectors” focuses on rice along with maize and cassava.

Authorization status of NRDS

The Ministry of Agriculture, Livestock and Fisheries (MAEP) approved the NRDS in 2011 and the rice seed strategy in 2016. These strategies along with the concept notes were shared with different stakeholders of the rice value-chain at a stakeholder meeting and donors who were interviewed were aware of the NRDS. In regard to the rice seed strategy, it has served as input for the rice section in an overall strategy on seeds, which was developed with the support of FAO.

Existence of champions such as high-ranking ministry officials who support NRDS

Although rice is not the principal crop for Benin, high-level officials such as the Minister and the General Secretary of MAEP have shown interest in, and welcome CARD support. Additionally, one of the taskforce members is an advisor in the Cabinet and has the capacity to exercise her influence.

Government structure for NRDS implementation

A division head at the Information System Management Department at the Directorate of Programming and Planning at MAEP serves as the CARD focal point and is supported by the taskforce.

There is no structured implementation framework for the implementation of NRDS and rice seed strategy except for the taskforce, which is an ad-hoc structure. The taskforce has no fixed meeting frequency; rather, they meet based on the CARD-supported activities to be managed, as and when required. Each member of the taskforce has a role defined based on his/her expertise.

4.14.2. Output

Status of the NRDS process

		Status	Support by CARD
A	A-1 Formulation and launch	Done	<ul style="list-style-type: none"> The NRDS was developed and approved by MAEP in 2011, and validated by stakeholders. NRDS evaluation is underway, supported by FAO, in preparation for revised NRDS development.
	A-2 Gap analysis & prioritization and concept note formulation	Done	<ul style="list-style-type: none"> Developed 5 concept notes.
	A-3 Lobbying for funding and project formulation	Done	<ul style="list-style-type: none"> The taskforce, sometimes together with CARD consultant, visited several donors to present the strategy and concept notes.
	A-4 Implementation	In progress	<ul style="list-style-type: none"> There are 7 CARD labeled projects in Benin. Donors have not necessarily financed the whole concept note but parts of it.
B	Rice seed strategy	Done	<ul style="list-style-type: none"> The development of rice seed strategy started in 2015 and it was approved by MAEP in 2016 8 concept notes were developed, which were merged into 1 project document at the request of the taskforce.
C	Mechanization strategy	Not Started	-

Figure 368 : Status of NRDS Process in Benin

List of CARD-labeled projects

These CARD-labeled projects are/were implemented in Benin, according to the CARD Secretariat.

Table 40: List of CARD-labeled projects in Benin

Name of the Project	Donor	Duration	Modality	Budget	Area of Intervention (Sub-Sector)	Area of Intervention (Geographic)	Outputs/Activities
Food Security through Agricultural Intensification Project (PSAIA)	West African Development Bank (BOAD)	2007 - 2017	Loan	28.2 Billion FCFA	Agricultural intensification, Capacity building of farmer organizations, Irrigation infrastructure, Access to Market (rural roads).	Kandi, Péhunco, Djougou, Tchaourou, Glazoué, Lalo, Tori-Bossito et Dangbo	Capacity building of grassroots organizations; development of 1,095.37 ha of lowland rice and 42 ha of small irrigated areas; establishment of field-schools for the dissemination of diversification activities; rehabilitation of 87,244 km of rural feeder roads
Agricultural Productivity and Diversification Project	WB, Global Food Crisis Response	2012 - 2017	Loan & Grant	61.4 Millions USD	Improved technology dissemination, Irrigation infrastructure,	Whole country	(i) Adoption of improved technologies and restoration of productivity. (ii) Development and rehabilitation of irrigation and market infrastructures. (iii) The

	Program (GFRP)				Quality improvement, Marketing, Access to credit		Value Chain Coordination and Agricultural Financing. (iv) Sector Program Coordination and Project Management.
Projet de Productivité Agricole en Afrique de l'Ouest (PPAAO-Benin/ProCAD)	WB	2012 - 2019	Loan	9.97 Billion FCFA + 7 Millions USD additional financing	Seeds, Dissemination of improved technologies (including agricultural equipment), agricultural research (rice, maize, cashew nuts)	Whole country	Implementation of 30 research projects; research and dissemination of quality seeds; dissemination of improved technologies (grading tillers, rice steamers, etc.); implementation of an efficient competitive fund; platform organization and capacity building of actors (researchers, seed users and appropriate technologies)
Project to Support the Structuring of the Rice Sector in Benin (PASFiR-Benin)	West African Economic and Monetary Union (UEMOA)	2015 - 2017	Grant	0.3 Billion FCFA	Structuring of rice producers	Whole country	Organization of rice producers from the grassroots-level to the national level.
Partnership for Sustainable Rice Systems Development in Sub-Saharan Africa (Benin)	Venezuela /FAO	2016 - 2018	Grant	0.42 Million USD	Research, Post-harvest Processing, Productivity Improvement (seeds, mechanization, etc.)	Whole country (in 10 countries)	Rice research: production, harvest, post-harvest, marketing
Support Program for the Development of Agricultural Subsectors (PROFI)	Belgian Development Agency (CTB)	2016 - 2019	Grant	11.25 Billion FCFA	Irrigation infrastructure, Mechanization, Extension, Access to Credit	Whole country	Lowland development
Support for Livestock Production and Resilience in Alibori, Borgou and the Hills (PAPVIRE-ABC)	AfDB, Global Agriculture & Food Security Program (GAFSP)	2016 - 2021	Grant	24 Million USD	Irrigation infrastructure, Post-harvest (storage, threshing, packaging etc.), Access to Market sheds, rural roads)	Alibori, Borgou and the Hills	Rehabilitation of dams, development +G4+B2:I9+B3:I9

Intervention areas

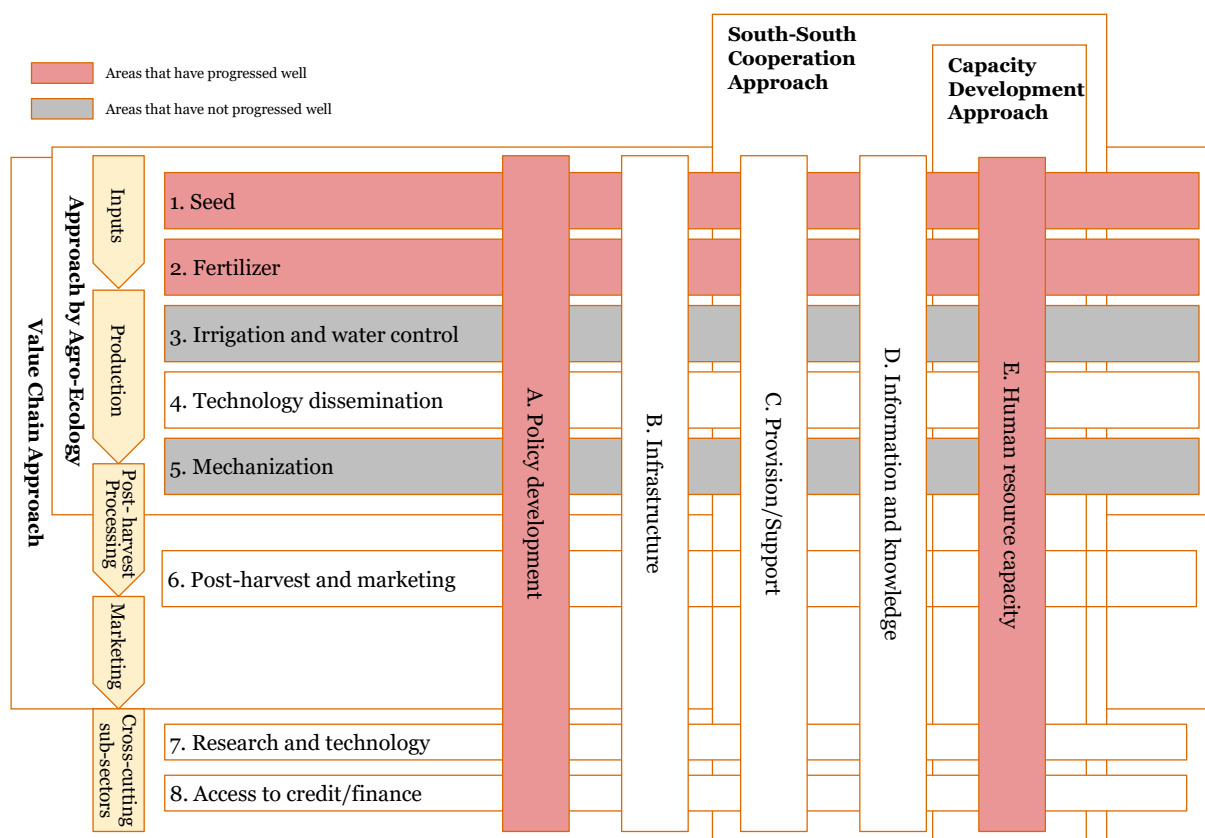


Figure 37 : Intervention Areas in Benin

The taskforce remarked on the progress in 1. Seed sub-sector as the production and use of certified seeds have improved. According to them, in 2014 Benin produced a total of 5,219 tons of certified seeds against the requirement of 2,800 tons. Further, farmers started to use more 2. Fertilizers, when earlier sufficient quantities of fertilizers were not used. In terms of intervention areas, progress in 4. policy development can be observed with the development of the NRDS and rice seed strategy. In CARD's framework, E. Human resource capacity was enhanced through policy development support and training for policy makers.

On the other hand, they noted the limited progress in the 3. Irrigation and water control and 5. Mechanization, mainly on cultivation side.

4.14.3. Outcome

Human resource development

For policy makers, trainings targeting taskforce members have been organized in Japan and third party countries. Policy makers mentioned that the technical advice and experience and information sharing at these training sessions have contributed to better developing their own strategies. Further, the participants shared their learning with the taskforce members on an informal basis and wrote feedback reports in order to ensure that knowledge is shared to those concerned.

Project formulation and implementation

Contributions to increase in rice sector projects funded by the government and donors

According to the taskforce, the overall agriculture budget increase has been observed. However, the increased outlay for rice cannot be deduced from this. According to the CARD taskforce, increased interest of donors in the rice sector has also been observed with about 80% of donors currently working in the sector, although it is difficult to assert that this is exclusively linked to CARD support.

Contributions to efficient, effective, and strategic project formulation

The taskforce has remarked that the strategies developed under the CARD initiative has contributed to better planning of projects and that they have served as the reference point for projects that cover the rice sector. Most of the recent projects in the rice sector refer to the NRDS or rice seed strategy in their project documents.

Contribution of the CARD focal point to the promotion of projects

In Benin, the taskforce has been the main driver of project promotion, partly due to the CARD focal point being ill. The taskforce was supported by the CARD Consultant to present the strategy and concepts notes to donors through individual office visits. The taskforce mentioned that they tried to replicate the CARD approach for fund matching at least for the rice seed strategy, but were not successful in project formulation.

Contributions to correlative improvements and timing adjustments between governments and donors

No examples were mentioned, and although there is a structure for the coordination for the entire agriculture sector, there is no such structure tasked specifically for the rice sector.

4.14.4. Impact

Quantitative impact

Table 41: Production, consumption, and self-sufficiency of rice in Benin

(1000MT)	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Production of rice (paddy) FAO³⁷⁸	109	151	125	220	217	363	234	204	281	N/A
Production of rice (paddy) USDA³⁷⁹	109	113	125	220	219	206	234	220	216	236
Production of rice (milled) USDA³⁸⁰	70	72	80	141	140	132	150	131	138	151
Consumption of rice (milled) USDA³⁸¹	215	232	265	391	490	482	500	556	588	626
Self-sufficiency of rice³⁸²	32.6%	31.0%	30.2%	36.1%	28.6%	27.4%	30.0%	23.6%	23.5%	24.1%

Table 42: Production targets of rice in NRDS

(1000MT)	2008	2018
Irrigation fed³⁸³	14	90
Rain fed highland³⁸⁴	21	310
Rain fed lowland³⁸⁵	75	300
Total	110	700

Qualitative impact

Sensitization of government and stakeholders to rice development

Some stakeholders mentioned that although CARD was not the sole reason, it was part of the effort to sensitize the government on the importance of rice development and to position it as one of the priorities for the country.

Application to other crops/sectors

CARD's support for developing the rice sector strategy sensitized the government on the need of formulating a strategy for each important commodity. They have started the work on cashew nuts, for which a strategy was developed in 2016.

³⁷⁸ FAO STAT database "Crops" (<http://www.fao.org/faostat/en/#data/QC>) 10/1/2018 update

³⁷⁹ Calculated based on United States Department of Agriculture (USDA) PSD online database "Grains" 8/10/2017 update

³⁸⁰ USDA PSD online database "Grains" 8/10/2017 update

(<https://apps.fas.usda.gov/psdonline/app/index.html#/app/downloads?tabName=default>)

³⁸¹ Ibid.

³⁸² Calculated based on USDA PSD online database "Grains" 8/10/2017 update

³⁸³ Supra note 377.

³⁸⁴ Ibid.

³⁸⁵ Ibid.

Also, based on its experience of developing a rice seed strategy, Benin used the same methodology to develop an aqua seed strategy in 2016.

4.14.5. Success factors and challenges

Success factors

■Government

Ownership and support from high-level government officials

High-level officials welcome CARD support, and the CARD Consultant has access to the Minister and Secretary-General of MAEP. Also, one of the members of the taskforce is an advisor in the Cabinet. This has enabled the full recognition and alignment of the NRDS and the rice seed strategy with their umbrella strategies.

■SC members and Partner Organizations

Role of SC members

The presence of AfricaRice's headquarters in Benin (2004- 2015) during the political crisis in Cote d'Ivoire played a large role in the promotion of rice development in Benin. MAEP was sensitized on the topic of rice during this period, and rice is now considered as one of the priorities for the Ministry, thereby creating a favorable ground to embrace CARD support.

■Others

Adaptation to local context

In regard to the rice seed concept notes, the Benin government has requested CARD to help them develop a project document that incorporates all the 8 concept notes. This was done in consideration of the limited number of donors present in the country and the perceived difficulty for focus and effective management of multiple independent projects.

Challenges

■Government

The importance of rice for the national economy and/or food security

According to one of the stakeholders, although rice was identified as one of the 13 promising crops as part of the agriculture diversification strategy, it is considered only as one among the crops, as cotton is still the main agricultural product in Benin which receives heavy government support. This perceived lack of prioritization of domestic rice may be attributed to Benin's 100% self-sufficiency in cereals and the large population that rely on the rice import business as opposed to rice production.

Number and capacity of government officials

Several interviewees mentioned about the limited technical capacity of some of the taskforce members in drafting the strategies and concept notes. Also, that the taskforce is not well-equipped to deal with fund mobilization.

Incentives for rice development promotion

There is a lack of financial and non-financial incentives for taskforce members to promote CARD-supported strategies, leading to a lack of accountability. For example, many of the taskforce members are not working in the capital, but a transportation budget is not allocated to them to attend meetings at the capital. Further, no specific budget is allocated to the taskforce to allow them to carry out activities such as reaching out and engaging with donors. One of the taskforce members stated that since last year, the only activity that has been implemented is the ongoing evaluation of the NRDS through an FAO project.

Authority/level of CARD focal point

Currently, a division head is appointed as the CARD focal point. However, in order to exercise more influence and induce action, the appointment of higher-level staff may be more appropriate.

Government structure for implementation

There is no structured framework for the implementation of CARD-supported strategies. The taskforce is an ad-hoc structure, and there is no specific unit in charge of rice promotion at the MAEP, and hence there is no dedicated staff or budget for strategy implementation.

Action plan for NRDS implementation

One of the stakeholders mentioned that there was insufficient clarification on what to do with the strategy. Despite the fact that detailed plans would be necessary for strategy implementation, they were not created.

Other government policies

Rice farmers have been asking the government for price assurance as well as policies for the protection of local rice (i.e. imposing tariffs on imported rice). However, there was no policy response from the government. While the direct causal relationship cannot be determined, one of the stakeholders mentioned that this could be one of the reasons for the insufficient uptake of the strategies, especially by non-state actors.

■CARD Secretariat

Communication

One of the stakeholders mentioned the lack of regular information sharing by the CARD Secretariat. Also, even if one tried to access information, CARD's website was not updated enough for that endeavor, and lacked the dynamism to sustain attention on itself.

■ SC members and Partner Organizations

Awareness of CARD

There is lack of knowledge regarding CARD among some of the SC local offices as CARD's follow-up was mainly at a high-level. CARD/NRDS has not been touched upon in discussions in agriculture sector donor coordination meetings, according to several respondents.

Communication between the SC member representative and SC local office

The communication gap between the headquarter-level SC members and the SC local office was observed. Several stakeholders mentioned that usually, information regarding initiatives operating at global and regional level is shared from the HQ but this was not the case for CARD.

Success stories from rice projects

One of the stakeholders mentioned that the lack of success stories from prior or existing rice projects might have contributed to the lack of momentum for rice production promotion. For example, according to that stakeholder, the Belgian government had supported a rice promotion project and transferred technology for rice production and parboiling, but the project ended without many notable achievements.

Donor presence and office functions

Limited donor presence in the country also affected the take-up of projects for implementation. For example, JICA does not have a country office but only a field office, AfDB has no staff for agriculture stationed in Benin, and the WB office is mainly for information collection.

■ Other


Availability of reliable statistics and evaluation of progress

The unavailability of reliable data can hinder project formulation and the showcasing of achievements.

4.15 Group 2: Burkina Faso

4.15.1. Context/background

Basic Information of the country

Burkina Faso			
Exchange rate (2017) ³⁸⁶	601.999 XOF=1USD		
Land ³⁸⁷	274,200 sqkm		
Population (2016) ³⁸⁸	19,512,533		
Climate ³⁸⁹	Tropical; warm, dry winters; hot, wet summers		
Languages ³⁹⁰	French, native African languages belonging to Sudanic family spoken by 90% of the population		
Ethnic Groups (2014 est.) ³⁹¹		Mossi, Fulani, Gurma, Bobo, Gurunsi, Senufo, Bissa, Lobi, Dagara, Tuareg/Bella, Dioula	
Per capita GDP (2017) ³⁹²	647.384	USD per capita	
Per capita GDP Growth rate (2017) ³⁹³	6.1	%	
Population growth rate (2016) ³⁹⁴	3.01	%	
Age composition of population (2016 est.) ³⁹⁵	0-14 years: 45.04% (male 4,402,311/female 4,386,518) 15-24 years: 20.08% (male 1,966,644/female 1,951,722) 25-54 years: 29.28% (male 2,898,407/female 2,813,923) 55-64 years: 3.16% (male 267,763/female 349,433) 65 years and over: 2.44% (male 178,127/female 297,685)		
Population % between 15-54 years ³⁹⁶	49.36	%	
Unemployment rate (both sex, age15+) (2016) ³⁹⁷	2.9	%	

³⁸⁶ Oanda <https://www.oanda.com/lang/ja/currency/converter/> (31st July 2017)

³⁸⁷ CIA (Central Intelligence Agency) "The World Factbook"

³⁸⁸ Ibid.

³⁸⁹ Ibid.

³⁹⁰ Ibid.

³⁹¹ Ibid.

³⁹² IMF

³⁹³ Ibid.

³⁹⁴ CIA (Central Intelligence Agency) "The World Factbook"

³⁹⁵ Ibid.

³⁹⁶ Ibid.

³⁹⁷ ILO STAT (<http://bit.ly/2oIwFux>)

FDI Inflow (2015) ³⁹⁸	167	Million USD
Internet penetration (% of Individuals using the Internet) (2015) ³⁹⁹	11.39	%
Mobile penetration (Mobile-cellular telephone subscriptions) (2015) ⁴⁰⁰	80.64	%
Consumer Price Index growth (1960-2016) ⁴⁰¹	1.92	

Information on the country's rice sector

Level of rice demand

National demand for milled rice is constantly rising thanks to population growth and an increase in per capita rice consumption.⁴⁰² While more urban residents are eating rice at least once a day, many rural residents still consume Tô, a type of local porridge made of sorghum, millet, or other non-rice starchy food ingredients.⁴⁰³

The importance of rice for the economy and food security

Rice is the fourth most produced cereals in Burkina Faso, both in cultivation area and production volume after sorghum, millet and maize. Despite not occupying the top spot for production and consumption of staples, rice is considered by the Burkina Faso government to be very important to the country. As a reflection of this importance, the government has undertaken efforts to encourage its citizens to buy local rice rather than imports. Nonetheless, the government's involvement in rice development in Burkina Faso is not as high as other West African countries such as Senegal and Mali.

⁴⁰⁴

Despite strong potential, particularly when land improvement is implemented, national rice production remains poor, covering just 47%⁴⁰⁵⁴⁰⁶ of the country's rice needs, the remainder provided by imports at the expense of major currency outflows. As a result, this trade imbalance of rice not only affects national food security, it deprives the government of potential revenue that could be spent on national development and poverty eradication. Accordingly, increasing national rice production is a strategic issue for the government.

³⁹⁸ Worldbank World Development Indicators, 27/4/2017 update

³⁹⁹ ITU Country ICT Data (until 2015)

⁴⁰⁰ Ibid.

⁴⁰¹ AFDB Socio Economic Database

⁴⁰² National Rice Development Strategy – Burkina Faso, October 2011.

⁴⁰³ Minutes of the meeting with CARD Consultant, October 13, 2017.

⁴⁰⁴ Ibid.

⁴⁰⁵ Supra note 402, pg. 3.

⁴⁰⁶ DPSAA/DGPER/MAH, 2010.

Donors' interest in rice development

Apart from CARD-labelled projects, other donors such as WB, IFAD, ECOWAS, the government of Taiwan, and Germany have been funding rice development projects in Burkina Faso. On top of that, the US government's Millennium Challenge Corporation has funded irrigation development projects in the country.

Positioning of rice development and NRDS within priority policies

Burkina Faso's NRDS fits perfectly with the country's National Program for the Rural Sector (PNSR). The second phase of PNSR was approved in November 2017, which is the rural section of the National Plan for Economic and Social Development (PNDES), and envisages making rice growing one of the key levers to achieving food security. Also, development initiatives aimed at growing and intensifying farming production under the NRDS are fully in line with the national objectives in regard to poverty eradication as well as sub-regional and continental policies including CAADP.

Authorization status of NRDS

The NRDS in Burkina Faso has been approved by the ministry and became an official document.⁴⁰⁷ It used a methodology in common with other member countries, namely technical backstopping during working weeks and a validation process with involvement of stakeholders.

Existence of champions such as high-ranking ministry officials who support NRDS

The Burkina Faso government has been fully committed to implementing NRDS policies and strategy, and it has demonstrated its support at all meetings in regard to NRDS and other activities such as strengthening the capacity of stakeholders. Among the policies and actions the government through its champions have been promoting are as below.

- Seed farm and laboratory equipment
- Support for research and varietal selection of rice
- Financing of rice production
- Support for producer access to improved seeds
- Development of seed production areas
- Support to the seed producer organization
- Establishment of the National Seed Service and Committee⁴⁰⁸

Government structure for NRDS implementation

⁴⁰⁷ Questionnaire for the Country Focal Point, Sept 7, 2017.

⁴⁰⁸ Questionnaire for Country Focal Point (Institut de l'Environnement et de Recherches Agricoles (INERA)).

CARD focal point for Burkina Faso is the Secretary-General of the Ministry of Agriculture..

The implementing body is the NRDS coordination unit which is led by a focal point who reports to the steering unit. The focal point oversees the consistency of priorities and directions at both the regional and national levels. He is assisted by a multi-disciplinary task force with proven expertise in rice growing, development, monitoring and evaluation and rural sociology. The deputy chair of the task force is an officer from the Department of Irrigation. At the local level, the institutional structure of the NRDS is built on a strong and dynamic partnership between the coordination unit and the devolved and decentralized technical services of NGOs active in the rural development sector. The close collaboration between the NRDS coordination unit and the traditional chiefs, elected representatives and primary stakeholders further strengthens the aforesaid partnership.

The Burkina Faso government has a different focal point for mechanization. Also, IFAD and FAO have been interested in being members of the taskforce for mechanization.

4.15.2. Output

Status of the NRDS process

		Status	Support by CARD
A	A-1 Formulation and launch	Done	<ul style="list-style-type: none"> The NRDS was developed and approved by the Ministry of Agriculture in 2011.
	A-2 Gap analysis& prioritization and concept note formulation	Done	<ul style="list-style-type: none"> 5 concepts notes were developed, and all concept notes were used for fund matching.
	A-3 Lobbying for funding and project formulation	In progress	<ul style="list-style-type: none"> As a result, 6-7 projects were formulated. All funding requests regarding rice are referred to the NRDS which is the reference document for all rice-related matters in Burkina Faso.
	A-4 Implementation	In progress	<ul style="list-style-type: none"> There are 9 CARD labeled projects in Burkina Faso.
B	Rice seed strategy	In progress	<ul style="list-style-type: none"> The seed strategy was developed There are 3-4 concept notes.
C	Mechanization strategy	In progress	<ul style="list-style-type: none"> The mechanization strategy was drafted and are being finalized. They will develop concept notes.

Figure 38 : Status of NRDS Process in Burkina Faso

List of CARD-labeled projects

These CARD-labeled projects are/were implemented in Burkina Faso according to the CARD Secretariat.

Table 43: List of CARD-labeled projects in Burkina Faso

Name of the Project	Donor	Duration	Modality	Budget	Area of Intervention (Sub-Sector)	Area of Intervention (Geographic)	Outputs/Activities
Project for Dissemination of Improved Seeds in Burkina Faso	JICA	2008-2012	Technical Cooperation	334 million JPY	Seed	8 Provinces (Ouhritenga(Model Province), Houet,Soum, Boulgou,Comoe, Tapoa, Passore, Seno)	(i) Production system of improved variety seeds is developed. (ii) Quality control and inspection techniques of improved variety seeds are strengthened. (iii) Effective method for the extension of improved variety seeds is established.
Participatory Natural Resource Management and Rural Development Project in the North, Centre-North and East Regions (NEER-TAMBA PROJECT)	IFAD	2012-2020	Grant, Loan	110.2 million USD	Water control	Northern, Northern-central, and East region	(i) Strengthening resilience to climate change at the household, farm and village levels through sustainable land development (ii)Intensifying small-scale farmers' production capacity through the dissemination of best practices and the promotion of financing and innovation (iii)Ensuring that poor rural women and men act as full partners in development activities in order to achieve long-term economic independence.
Mainstreaming Food Loss Reduction Initiatives for Smallholders in Food Deficit Areas	FAO	2013-2017	Grant	222 844 USD	Food security	Boucle du Mouhoun Cascades, Hauts Bassins, Western central, Northern central, North, Sahel and East	(i)Promote hermetic storage (ii)Raise awareness on the importance of quantitative losses and their economic value (iii)Provide training on good harvesting and post-harvest systems management (iv)Develop selected value chains by building stakeholder capacity (v)} Promote advocacy for quality control of all post-harvest equipment
Strengthening Agricultural Water Efficiency and Productivity on the African and Global level	FAO	2014-2017	Grant	180 000 USD	Food security	Whole country	(i)Enhanced capacity for improved water productivity in small scale agriculture (ii) Enhanced capacity for increased water use efficiency in small scale irrigation (iii). Enhanced water harvesting capacity (iv)Outreach materials (v)National water audits prepared
Strengthening Capacities and Sharing Experiences for the Sustainable Development of the Rice Value Chain in Africa Through South-South Cooperation (GCP/RAF/497/ROK)	FAO, Korea	2015-2017	Grant	119 627 USD	Food security	Whole country	Achieve efficient and more productive rice systems to increase smallholder food security through the promotion of partnerships, capacity building and the purchase of kits and small agricultural machinery
Project of Study for Formulation of National Development Program of Bas-Fonds	JICA	2017-2019	Study	220million JPY	Water control	Whole country	(i) Priority areas for development of bas-fonds are identified (ii) The efficient water use for improvement for rice and vegetable farming is

							examined (iii) A technical guideline for development of bas-fonds is elaborated (iv) A manual for efficient use of bas-fonds is elaborated (v) A development program for bas-fonds is elaborated
Hydro agricultural Development Projects (Total Control and Lowlands)	Government of Burkina Faso	2017-2020	Grant	402 billion FCFA	Water control	Whole country	
Rainfed Rice Project, Phase 4 (PRP IV)	Taiwan	2017-2020	Grant	11 176 631 200 Taiwan dollar	Water control, Mechanization		
Project on Establishment of the Model for Fertilizing Cultivation Promotion Using Burkina Faso Phosphate Rock	JICA	2017-2022	SATRE PS	400 million JPY	Productivity Improvement	Northern, Central, and East region	(i) Effective methods for solubilization of domestically produced phosphate rocks is specified. (ii) Fertilizer effect of primarily on sorghum and rice cultivation is examined, and particularly on sorghum, the generic cultivation method for sorghum productivity improvements is proposed. (iii) Effective method of phosphate rocks' direct use is proposed by the agricultural interests. (iv) Method of comprehensive effective usage for phosphate rocks' sustainable agricultural production is proposed.

Intervention areas

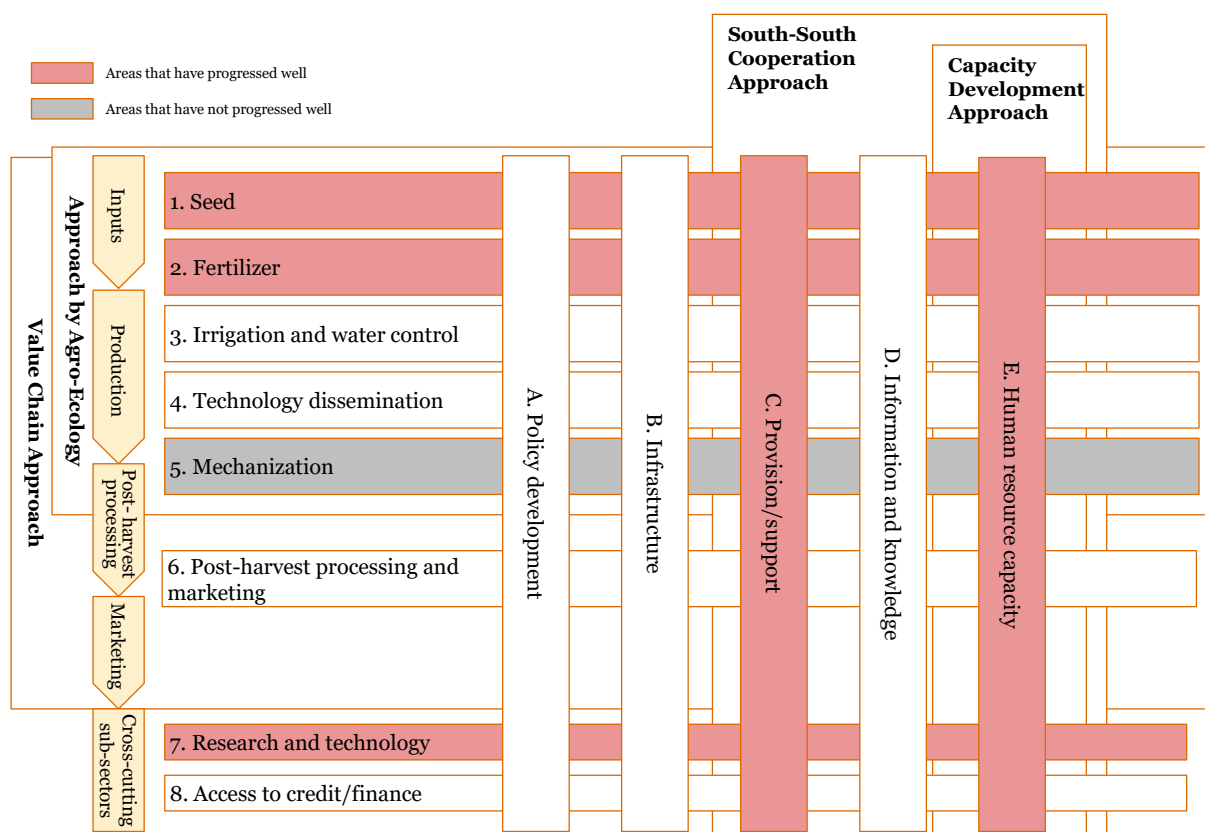


Figure 39 : Intervention Areas in Burkina Faso

In the first phase of CARD, the government stated that they were focusing primarily on expanding rice cultivation areas. The increased land areas for rice production has led to production growth as well as improvement in *1. Seed*, *2. Fertilizer* and *C. Provision/support* have also contributed to the growth. As a result of major rice development projects including the Rain-fed Rice Project (PRP), improved seeds have been subsidized by the government, and more than 600 tons of urea and NPK (Nitrogen, Phosphorus and Potassium) fertilizers have been made available to producers.

Progress has also been satisfactory in *7. Research and technology*, and *E. Human resource capacity*. This is because of research on new varieties and dissemination of research outputs; the capacity of stakeholders have also been strengthened.

The CARD focal point thinks that now they need to work on rice processing as not just production but technical capacity for rice processing is still low. Also *5. Mechanization*, is the area with weak progress despite major efforts made by the Burkina Faso government. This is because little funding has been given to this component, while higher priorities have been placed on input and production of

the value chain. This lack of funding has also affected the research and development of mechanization in Burkina Faso.

4.15.3. Outcome

Human resource development

Through the CARD initiative, the capacity of the different stakeholders such as researchers, producers and policy decision-makers have been strengthened. Further, there has been consistent capacity building by the Japanese as well as Thai governments for the stakeholders. For example, some of the stakeholders participated in the training for decision-makers and trainers in Thailand in 2017 titled “Environmental-Friendly Rice Production for CARD Countries: Cultural Practices, Technology and Management for Subsistence Rice Production”.

Project formulation and implementation

Contributions to increase in rice sector projects funded by the government and donors

Through the NRDS and the country sectoral strategies, the Burkina Faso government was enabled to draw up several projects for donors to achieve rice self-sufficiency in the country.

Contributions to efficient, effective, and strategic project formulation

Some government officials mentioned that the NRDS is a very strategic document that serves as a basis for all interventions in the field of rice cultivation in Burkina Faso, and it is strongly supported by stakeholders.

Contribution of the CARD focal point in promoting projects

The CARD focal point has promoted the development of rice cultivation, as he was responsible for the planning of all the “Working Weeks”. Through his work, he has enhanced the reputation of CARD and the NRDS. That said, CARD focal points are not financially autonomous, and therefore they have not been able to fully execute their role.

Contributions to correlative improvements and timing adjustments between governments and donors

Based on the concept notes, several projects which follow the sector-based approach that integrates the value chains within each sector have been implemented. However, the government officials think that the NRDS and sector strategies did not necessarily help in harmonizing rice-related projects, due to the inadequate coordination between the stakeholders involved in promoting rice seeds.

4.15.4. Impact

Quantitative impact

Table 44: Production, consumption, and self-sufficiency of rice in Burkina Faso

(1000MT)	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Production of rice (paddy) FAO⁴⁰⁹	195	214	271	241	319	305	348	325	340	N/A
Production of rice (paddy) USDA⁴¹⁰	195	214	274	242	323	308	348	362	385	375
Production of rice (milled) USDA⁴¹¹	127	139	178	157	210	200	226	211	250	244
Consumption of rice (milled) USDA⁴¹²	297	359	420	415	470	520	570	575	600	610
Self-sufficiency of rice⁴¹³	42.8%	38.7%	42.4%	37.8%	44.7%	38.5%	39.6%	36.7%	41.7%	40.0%

Table 45: Production targets of rice in NRDS

(1000MT)	2008	2018
Irrigation fed ⁴¹⁴	69	137
Rain fed highland⁴¹⁵	13	155
Rain fed lowland⁴¹⁶	118	440
Total	200	732

4.15.5. Success factors and challenges

Success factors

■ Government

Other government policies

The national government has been subsidizing rice cultivation inputs, namely fertilizer.⁴¹⁷

■ SC Members and Partner Organizations

Donors' interest

Large donors from the People's Republic of China and Taiwan have been investing in rice-related projects in Burkina Faso. Further, irrigation areas in Burkina Faso have been developed due to large

⁴⁰⁹ FAO STAT database "Crops" (<http://www.fao.org/faostat/en/#data/QC>) 10/1/2018 update

⁴¹⁰ Calculated based on United States Department of Agriculture (USDA) PSD online database "Grains" 8/10/2017 update

⁴¹¹ USDA PSD online database "Grains" 8/10/2017 update

(<https://apps.fas.usda.gov/psdonline/app/index.html#/app/downloads?tabName=default>)

⁴¹² Ibid.

⁴¹³ Calculated based on USDA PSD online database "Grains" 8/10/2017 update

⁴¹⁴ Supra at note 402.

⁴¹⁵ Ibid.

⁴¹⁶ Ibid.

institutional donors such as the US government's Millennium Challenge Corporation.

■CARD Secretariat

Provision of personnel

The CARD secretariat has been very active in planning and implementing member country activities. The presence of its consultant every working week has been a catalyst for the success of CARD's activities at all levels in Burkina Faso.

Challenges

■Government

Financial resources

The lack of financial resources remains a big challenge when implementing the activities. The role of CARD focal point was not fully streamlined for greater efficiency due to the lack of financial resources.

■Other


Awareness of CARD

There is a lack of information or awareness not only of partners or donors who can finance NRDS activities, but also on all rice sector related projects in the country in general. There is therefore a need to leverage on all rice-related projects as well as potential donors in Burkina Faso.

4.16 Group 2: Cote d'Ivoire

4.16.1. Context/background

Basic country information

Republic of Côte d'Ivoire			
Exchange rate (2017) ⁴¹⁸	601.999 XOF=1USD		
Land ⁴¹⁹	322,463 sqkm		
Population (2016) ⁴²⁰	23,740,424		
Climate ⁴²¹	Tropical along coast, semiarid in far north ;three seasons - warm and dry (November to March), hot and dry (March to May), hot and wet (June to October)		
Languages ⁴²²	French, 60 native dialects of which Dioula is the most widely spoken		
Ethnic Groups (2011-12 est.) ⁴²³		Akan, Voltaique or Gur, Northern Mande, Krou, Southern Mande, other (European and Lebanese descent),	
Per capita GDP (2017) ⁴²⁴	474.281	USD per capita	
Per capita GDP Growth rate (2017) ⁴²⁵	6.9	%	
Population growth rate (2016) ⁴²⁶	1.88	%	
Age composition of population (2016 est.) ⁴²⁷	0-14 years: 37.45% (male 4,483,215/female 4,407,595) 15-24 years: 20.93% (male 2,504,188/female 2,463,970) 25-54 years: 34.05% (male 4,133,975/female 3,950,734) 55-64 years: 4.15% (male 493,722/female 491,230) 65 years and over: 3.42% (male 389,551/female 422,244)		
Population % between 15-54 years ⁴²⁸	54.98	%	
Unemployment rate (both sex, age15+) (2016) ⁴²⁹	9.3	%	
FDI Inflow (2015) ⁴³⁰	430	Million USD	

⁴¹⁸ Oanda <https://www.oanda.com/lang/ja/currency/converter/> (31st July 2017)

⁴¹⁹ CIA (Central Intelligence Agency) "The World Factbook"

⁴²⁰ Ibid.

⁴²¹ Ibid.

⁴²² Ibid.

⁴²³ Ibid.

⁴²⁴ IMF

⁴²⁵ Ibid.

⁴²⁶ CIA (Central Intelligence Agency) "The World Factbook"

⁴²⁷ Ibid.

⁴²⁸ Ibid.

⁴²⁹ ILO STAT (<http://bit.ly/2oIwFux>)

⁴³⁰ Worldbank World Development Indicators, 27/4/2017 update

Internet penetration (% of Individuals using the Internet) (2015) ⁴³¹	21.00	%
Mobile penetration (Mobile-cellular telephone subscriptions) (2015) ⁴³²	119.31	%
Consumer Price Index growth (1960-2016) ⁴³³	1.89	

Information on the country's rice sector

Level of rice demand

Rice is a staple food in Cote d'Ivoire, and it has been experiencing an increase in demand over the years. Although urban consumers are said to prefer rice to other cereals, rice does not occupy the position of main staple nationally, as cassava is more popular in many rural areas. However, as consumers reportedly prefer rice as incomes increase, rice demand is expected to grow further in Cote d'Ivoire based on the estimated population and income growth.⁴³⁴

The importance of rice for the economy and food security

Although cacao and coffee are recognized as the most important crops in Cote d'Ivoire, rice is also an important commodity given its large demand, but the domestic demand for rice cannot be sufficiently met by domestic production and hence resulting in financial outflows due to large rice imports. This is despite the country's potential to grow more rice due to the availability of suitable land, favorable climate, high-yielding varieties and market potential. Cote d'Ivoire was once an exporter of rice, and it envisions returning to that position after satisfying domestic demand.

Further, about 2 million people are said to be involved in rice production in Cote d'Ivoire, and therefore rice development is also important in the country's fight against poverty.⁴³⁵

Donors' interest in rice development

JICA, the Singapore government, FAO, AfDB, and NEPAD (Grow Africa) are donors with ongoing rice-related projects in Cote d'Ivoire. Furthermore, there is private sector interest in the sector, evidenced by numerous private investments in developing local rice systems.

Positioning of rice development and NRDS within priority policies

Due to the importance placed on rice development by the government, different rice policies and

⁴³¹ ITU Country ICT Data (until 2015)

⁴³² Ibid.

⁴³³ AfDB Socio Economic Database

⁴³⁴ USDA Agricultural Services, "Grain and Feed Annual - 2017 West Africa Rice Annual", April 2017

⁴³⁵ Ministry of Agriculture, "Revised National Rice Development Strategy for the Cote d'Ivoire Rice Sector (NRDS) 2012-2020", January 2012

programs have been implemented from as far back as the 1960s. In terms of priority policies that cover the period of the CARD initiative, the Agricultural Development Master Plan 1992-2015 advocated research on the topic of food security and food self-sufficiency through satisfying domestic rice demands and making national agricultural systems competitive.⁴³⁶ In the Poverty Reduction Strategy Paper that was adopted in 2009, rice is referred to as a basic pillar in achieving food security and food self-sufficiency.⁴³⁷ The revised NRDS constitutes the rice section of the National Agricultural Investment Program (NAIP) that was developed under the CAADP framework in 2010.

Authorization status of NRDS

The revised NRDS was approved by the Ministry of Agriculture and Rural Development (MINADER) in 2012. The rice seed strategy and concept notes which were developed in 2014 have been submitted to MINADER for approval, but since the validation of other sector seed concept notes is still in progress, the final approval has yet to be obtained. The mechanization strategy was developed as part of an entire agricultural mechanization strategy that was JICA supported, and the said strategy was approved by MINADER in 2015. The strategy is currently awaiting Cabinet approval. All the strategy documents are well-known and respected within MINADER and the National Rice Development Office (ONDR), according to the interviewees.

Existence of champions such as high-ranking ministry officials who support NRDS

The interviewees generally agree that the CARD focal point and the revised NRDS enjoy support from high-ranking officials at MINADER. They believe that such support is motivated by the dire need to ease pressure on foreign currency reserves which is caused by increasing rice imports.

Government structure for NRDS implementation

ONDR is a statutory administrative body, established in 2010 with the mandate to develop the rice sector in Cote d'Ivoire, and therefore it has been charged with the role of implementing the NRDS through a 5-year contract with MINADER. The contract details the objectives, performance indicators and the modalities of evaluation in regard to NRDS implementation. The CARD focal point is the General Manager of ONDR and is assisted by the Chief of Department. Further, the board of administrators of ONDR functions as the taskforce for the NRDS.

Technical guidance is provided by MINADER, and financial guidance by the Ministry for Economy and Finance. They also administer oversight in terms of monitoring, control and evaluation.

⁴³⁶ Ibid.

⁴³⁷ Ibid.

4.16.2. Output

Status of the NRDS process

		Status		Support by CARD
A	A-1 Formulation and launch	Done	<ul style="list-style-type: none"> CARD support began with the development of the revised NRDS in 2012 (CARD was not involved in the rice development strategy formulated in 2008) 2 evaluations have been conducted for the revised NRDS: The 1st by the country, and the 2nd by CARD. 	<ul style="list-style-type: none"> Provided technical assistance remotely and on the ground through working weeks etc. Although the revised NRDS formulation was conducted under the framework of CARD, FAO funded the activities.
	A-2 Gap analysis & prioritization and concept note formulation	-	<ul style="list-style-type: none"> 5 concept notes were developed for the revised NRDS. 	
	A-3 Lobbying for funding and project formulation	Done	<ul style="list-style-type: none"> Donors, the government, and a few private sector companies were lobbied for funding with and without the accompaniment of the CARD Consultant. 	<ul style="list-style-type: none"> Accompany visits to donors during mission. The CARD focal point commented on the particular usefulness of the matrix to identify specificities and the interests of donors. Oversee implementation through visiting the CARD Consultant, who visits every 6 months or so for follow-up.
	A-4 Implementation	In progress	<ul style="list-style-type: none"> There are 12 CARD labeled projects in Cote d'Ivoire. Of these, 7 are financed by the private sector and is a reflection of Cote d'Ivoire's success in brining the private sector on board. 	
B	Rice seed strategy	Done	<ul style="list-style-type: none"> The rice seed strategy and 9 concept notes have been developed. They have been submitted to MINADER for approval but since the validation of other sector seed concept notes is still in progress, final approval is yet to be given. 	<ul style="list-style-type: none"> Provided technical assistance and venue for focused discussion on developing the rice seed strategy and concept notes.
C	Mechanization strategy	Done	<ul style="list-style-type: none"> The mechanization strategy was developed as part of an entire agricultural mechanization strategy and approved by MINADER in 2015. 7 concept notes in agricultural mechanization were developed, of which 2 relate to rice. 	<ul style="list-style-type: none"> Since JICA was already supporting the entire agricultural mechanization strategy, CARD provided technical support to improve the section on rice.

Figure 40 : Status of NRDS Process in Cote d'Ivoire

List of CARD-labeled projects

These CARD-labelled projects are/were implemented in Cote d'Ivoire according to the CARD Secretariat.

Table 46: List of CARD-labeled projects in Cote d'Ivoire

Name of Project	Donor	Duration	Modality	Budget	Area of Intervention (Sub-Sector)	Area of Intervention (Geographic)	Outputs/Activities
Rice Emergency Program	Government	2008-	Subsidies	1.2 billion FCFA in 2015	Value chain	Whole country	Irrigation scheme development; acquisition of inputs; processing equipment and seed conditioning units; promoting mechanization
Agricultural Infrastructure Support Project of the Indenieduablin	AfDB	2012-	Subsidies	18.34 billion FCFA	Production, Irrigation, Mechanization	Abengourou, Agnibilekrou, Betie	Development of 923 ha irrigated area; acquisition of processing and mechanization equipment

Region (PAIA-ID)							
Rice Development Program	Singapore Gaelic Lions	2013-	Private investment	2 billion FCFA	Value chain	Bondoukou, Agnibilekro, Abengourou, Tanda	Installing a hulling mill and supporting 7,500 rice farmers
Local Rice Production Project	OLAM/IG8	2013-	Private investment	25 billion FCFA	Value chain	Gbeke and Iffou regions	Process started but is currently suspended
Rice Development Project	Louis Dreyfus Commodities (LDC)	2013-	Private investment	22 billion FCFA	Value chain	Tchologo, Poro, and Bagoue regions	Establishment of a pilot farm; establishment of a pilot farm input distribution; purchase of paddy and rice processing; marketing
Local Rice Development Project	Export Trading Group (ETG)	2013-	Private investment	25 billion FCFA	Value chain	Folon, Bafing, Worodougou and Bere regions	Rice production; purchase of paddy and rice processing; marketing
Local Rice Production and Marketing Project	YANO VEL	2013-	Private investment	63 billion FCFA	Value chain	Belier region	Creating a farm for mechanization and a seed center; rehabilitation and extension of the irrigated perimeters on 15,000 ha; establishment of a complete processing rice unit and implementation of storage units
Rice Development Project	AMC	2013-	Private investment	Not available	Value chain	Nawa and Gbokle regions	Processing capacity: 60000 tons/year
Project for the Promotion and Marketing of Local Rice	GAN LOGIS	2013-	Private investment	Not available	Value chain	Moronou, Lame, South Comoe, and Nzi regions	Development of 560 ha of irrigated area; purchase of paddy processing and marketing
Local Rice Promotion Project (PRORIL)	JICA	2014-2019	Technical cooperation	500 million JPY	Value chain	District Autonome de l'Abidjan special administration, District Autonome du Yamoussoukro, Belier and Gbeke regions	1. Stakeholder engagement is increased, 2. Knowledge/technology acquired through trainings are utilized by target group, 3. Capacity of selected producers, processors and distributors is strengthened, 4. Rice promotion by stakeholders is accelerated
Partnership for Sustainable Rice Systems Development in Sub-Saharan Africa (Cote d'Ivoire)	Venezuela/FAO	2016 - 2018	Grant	350,000 USD	Value chain	Pilot phase Small and Medium-sized Agricultural Enterprises (PMEA): Gagnoa, Daloa, Sinfra, Yamoussoukro/ Rice promotion: Korhogo, Abidjan, San pedro / Seeds: Korhogo, Katiola, Bouaké, Dimbokro, Yamoussoukro /Rice diseases: West regions	Intensification of rice production in rainfed cultivation areas
Project to Set Up a Platform for Rice Stakeholders	NEPAD /GROW AFRICA	2017-	Subsidies		Value chain	Whole country	Implementation of a platform of all actors involved in the rice value chain

Intervention areas

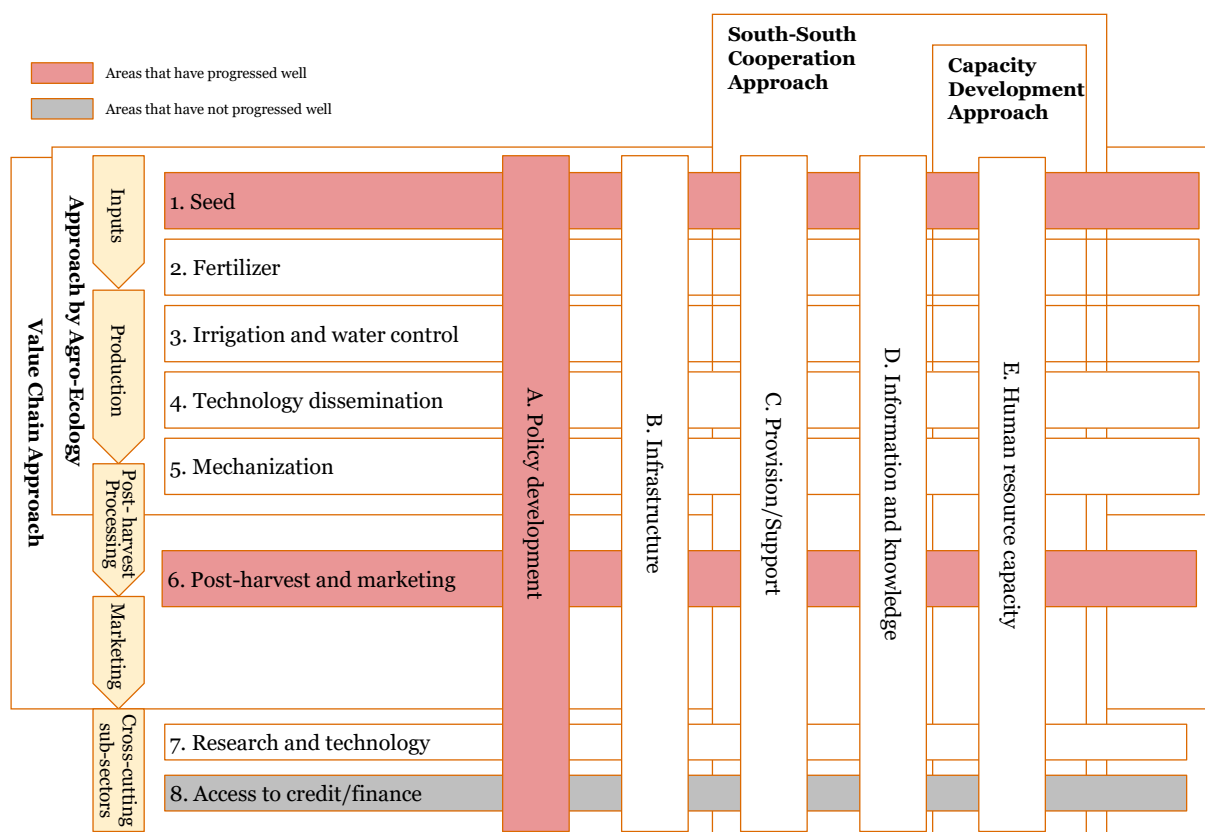


Figure 419 : Intervention Areas in Cote d'Ivoire

According to the focal point, progress has been observed in the areas of *1. Seed* and *6. Post-harvest processing*. *A. Policy* has been developed for the seed sub-sector with CARD support, and the seed supply has improved, as evidenced by certified seed coverage increasing from 5 to 10% of the total cultivated area. This is expected to improve further through a project on conditioning centers that will begin soon. Further, capacity and quality improvements in post-harvest processing has been observed, helped by increased investment from the private sector.

On the other hand, *8. Access to credit/finance* has not seen much improvement, as apparently the banks are still reluctant to finance the rice sector.

4.16.3. Outcome

Human resource development

For policy makers, a number of training sessions have been organized in Japan and third countries. Although the interviewees could not cite specific examples of positive takeaways from the trainings, they did observe that the participant (the CARD focal point) was able to use the opportunity to

develop networks with his counterparts in others member countries and has been exchanging information beyond the training times. However, some of the challenges raised were that participation was usually the CARD focal point, and unless proactive actions are taken to disseminate the learnings, the impact of the trainings would remain rather limited (as noted in the case in Cote d'Ivoire by some stakeholders).

There were also opportunities for capacity development in the wider CARD task force through 1) videoconference-based training on thematic issues like seed, and 2) working weeks where CARD even brought experts to conduct presentations. These have been helpful building blocks for enhancing capacity within government institutions.

Project formulation and implementation

Contributions to increase in rice sector projects funded by the government and donors

While it could not be ascertained whether CARD contributed to the increased number of rice projects in Cote d'Ivoire, there were 13 rice-related projects developed within the course of the CARD initiative. These were financed by the government, development partners as well as by the private sector. While most of the projects were financed/implemented by multilateral or bilateral donors in other countries, in Cote d'Ivoire private sector players took up 7 out of the 13 projects.

Contributions to efficient, effective, and strategic project formulation

According to some of the stakeholders from the SC members' local offices, the NRDS and concept notes have been helpful in facilitating discussions for project formulation with the Cote d'Ivoire government. The NRDS provides a coherent framework that functions as the reference point in developing projects. Some of the stakeholders also mentioned about the influence of CARD's approach in project formulation (e.g. JICA's PRORIL project was influenced by CARD's "Value-chain approach").

Contribution of the CARD focal point in promoting projects

The CARD focal point is the head of ONDR, a statutory body in charge of promoting rice development in the country. While it is difficult to tell whether the appointment a "CARD focal point" specifically contributed to promoting rice projects, as the leader and point of contact for both the government and donors with regard to rice development and with a good relationship with MINADER, his contribution to project promotion was significant.

Contributions to correlative improvements and timing adjustments between governments and donors

No supporting evidence could be found. According to several stakeholders, donor coordination is generally weak in Cote d'Ivoire and no examples from the rice sector could be heard.

4.16.4. Impact

Quantitative impact

Table 47: Production, consumption, and self-sufficiency of rice in Cote d'Ivoire

(1000MT)	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Production of rice (paddy) FAO⁴³⁸	680	688	1,206	873	1,562	1,934	2,054	2,041	1,768	N/A
Production of rice (paddy) USDA⁴³⁹	680	688	1,206	872	1,538	1,846	2,062	2,154	2,054	2,200
Production of rice (milled) USDA⁴⁴⁰	442	447	784	567	1,015	1,257	1,335	1,399	1,335	1,430
Consumption of rice (milled) USDA⁴⁴¹	1,350	1,330	1,450	1,600	1,900	2,200	2,400	2,600	2,800	2,900
Self-sufficiency of rice⁴⁴²	32.7%	33.6%	54.1%	35.4%	53.4%	57.1%	55.6%	53.8%	47.7%	49.3%

Table 48: Production targets of rice in NRDS

(1000MT)	2008	2018
Irrigation fed⁴⁴³	180	500
Rain fed⁴⁴⁴	480	2600
Flooded⁴⁴⁵	1	150
Total	661	3,250

Qualitative impact

Influence to other sectors

Although results have not been achieved yet, Cote d'Ivoire has shown interest in structuring the maize and legume sectors, similar to its efforts for the rice sector (e.g. bringing together the different value chain actors etc.).

Influence to other countries

Looking at the success of rice development through a dedicated institution for rice, other countries

⁴³⁸ FAO STAT database "Crops" (<http://www.fao.org/faostat/en/#data/QC>) 10/1/2018 update

⁴³⁹ Calculated based on United States Department of Agriculture (USDA) PSD online database "Grains" 8/10/2017 update

⁴⁴⁰ USDA PSD online database "Grains" 8/10/2017 update

(<https://apps.fas.usda.gov/psdonline/app/index.html#/app/downloads?tabName=default>)

⁴⁴¹ Ibid.

⁴⁴² Calculated based on USDA PSD online database "Grains" 8/10/2017 update

⁴⁴³ Supra note 435.

⁴⁴⁴ Ibid.

⁴⁴⁵ Ibid.

(e.g. Guinea, Senegal) have been trying to replicate this model and establish an ONDR-like structure.

Further, as a result of information/experience-sharing that was facilitated by one of the CARD-labelled projects, namely the WAAPP, Cote d'Ivoire shared their strategy for milling and processing with the taskforce in Mali, and the Malian government later decided to invest in this sub-sector.

4.16.5. Success factors and challenges

Success factors

■ Government

Number and capacity of government officials

Several stakeholders commended the high commitment and capacity of the CARD focal point and assistant focal point. Possessing technical skills and problem-solving capabilities, they are well equipped to lead the country's rice development. Increased participation of the private sector in Cote d'Ivoire was also as the result of their ability and initiative to capitalize on the know-how developed through their country's experience in cacao and coffee sectors. Further, some stakeholders mentioned that the CARD focal point takes the initiative to promote CARD, often referring to the rice development in Cote d'Ivoire as being promoted under the NRDS.

Ownership and support from high-level government officials

Stakeholders generally agreed that the NRDS and CARD focal point enjoys high-level support even if rice is not the most important crop in Cote d'Ivoire, because rice is still strategically important in terms of food security and household income. ONDR has a good relationship with MINADER, and resources are allocated to fulfill their mandate.

Assignment of appropriate unit

Assignment of the CARD focal point at the ONDR was appropriate, as ONDR is the sole governmental institution mandated with the development of the rice sector in Cote d'Ivoire. As such, the goals of ONDR and CARD are aligned and ONDR officials have incentives to promote rice development in their day-to-day work.

Government structure for NRDS implementation

The institutional arrangement for NRDS was based on the existing/working structure at the ONDR. Several stakeholders believe that a dedicated office with clearly defined roles and responsibilities was instrumental in Cote d'Ivoire's implementation of the NRDS, especially in a country where there are other more prominent crops, namely coffee and cacao. Further, some noted the contributions of ONDR's result-based management-style in producing results.

Other government policies

One of the stakeholders mentioned that Cote d'Ivoire's openness to donor support contributed to the successful formulation of several projects in the rice sector.

■CARD Secretariat

Provision of personnel/Communication

From the ONDR's perspective, the provision of support by and communication with the CARD Secretariat were key success factors for the smooth roll out of the NRDS process within the country. The CARD focal point maintains frequent communication with the CARD Consultant whose extensive knowledge of the member countries allows him to provide appropriate and comprehensive advice.

Challenges

■Government

Action plan for NRDS implementation

The lack of an action plan has inhibited implementation. For example, one of the approaches ONDR wanted to take was to promote private sector involvement. Although they had a few guidelines, the taskforce could not manage to develop specific actions plans for the different value-chain components.

Bureaucracy

Operational hurdle has been one of the key reasons for slowing progress. Many protocols are in place, and much of the decision-making power is concentrated at the Minister-level in Cote d'Ivoire.

Other government policies

In terms of private investments, although progress has been observed as previously mentioned, the lack of incentives from the government as well as the cumbersome administrative processes remain some of the challenges in promoting further investments.

■CARD Secretariat

Communication

Several SC local office representatives mentioned that the CARD Secretariat is not active enough in reaching out or communicating at the country-level. Expectations at the country-level are often for funding, however, and CARD's communication with decision makers was not visible.

■SC members and Partner Organizations

Role of SC members

Clarity on the role and responsibilities and the expectations of CARD was not clear for many of the SC local office representatives, hence leading to the lack of involvement.

Inclusion in organization's development assistance strategy/policy

There was lack of proactive effort to make sure that the rice agenda is reflected in the SC member's development assistance strategy or policy, which is necessary for the implementation of NRDS.

■Other


External factors

Cote d'Ivoire experienced a long period of instability, starting with the first Ivorian civil war in 2002 until about 2012. During this time, many donors and private investors scaled back their operations and only recently have they come back to resume their operations.

4.17 Group 2: Central African Republic⁴⁴⁶

4.17.1. Context/background

Basic Information of the country

Central African Republic			
Exchange rate (2017) ⁴⁴⁷	601.999 XOF=1USD		
Land ⁴⁴⁸	622,984 sqkm		
Population (2016) ⁴⁴⁹	5,507,257		
Climate ⁴⁵⁰	Tropical; hot, dry winters; mild to hot, wet summers		
Languages ⁴⁵¹	French, Sangho (lingua franca and national language), tribal languages		
Ethnic Groups (2014 est.) ⁴⁵²		Baya, Banda, Mandjia, Sara, Mboum, M'Baka, Yakoma	
Per capita GDP (2017) ⁴⁵³	399.787	USD per capita	
Per capita GDP Growth rate (2017) ⁴⁵⁴	4.7	%	
Population growth rate (2016) ⁴⁵⁵	2.12	%	
Age composition of population (2016 est.) ⁴⁵⁶	0-14 years: 40.27% (male 1,114,727/female 1,102,809) 15-24 years: 19.98% (male 553,264/female 547,308) 25-54 years: 32.24% (male 888,304/female 887,348) 55-64 years: 4.04% (male 101,306/female 120,964) 65 years and over: 3.47% (male 74,516/female 116,711)		
Population % between 15-54 years ⁴⁵⁷	52.22	%	
Unemployment rate (both sex, age15+) (2016) ⁴⁵⁸	6.9	%	
FDI Inflow (2015) ⁴⁵⁹	3	Million USD	

⁴⁴⁶ Note that information on the CAR CARD initiatives is extremely limited due to the ongoing conflict there, and all information here was gathered from the former focal point, David Kadekoy-Tigague (University of Bangui) which may not be the most recent.

⁴⁴⁷ Oanda <https://www.oanda.com/lang/ja/currency/converter/> (31st July 2017)

⁴⁴⁸ CIA (Central Intelligence Agency) "The World Factbook"

⁴⁴⁹ Ibid.

⁴⁵⁰ Ibid.

⁴⁵¹ Ibid.

⁴⁵² Ibid.

⁴⁵³ IMF

⁴⁵⁴ Ibid.

⁴⁵⁵ CIA (Central Intelligence Agency) "The World Factbook"

⁴⁵⁶ Ibid.

⁴⁵⁷ Ibid.

⁴⁵⁸ ILO STAT (<http://bit.ly/2oIwFux>)

⁴⁵⁹ Worldbank World Development Indicators, 27/4/2017 update

Internet penetration (% of Individuals using the Internet) (2015) ⁴⁶⁰	4.56	%
Mobile penetration (Mobile-cellular telephone subscriptions) (2015) ⁴⁶¹	25.87	%
Consumer Price Index growth (1960-2016) ⁴⁶²	4.02	

Information on the country's rice sector

Level of rice demand

In the last ten years, the average consumption of rice increased from 4.5 kg per person annually to 5 kg per person annually. At the same time, the consumption of traditional cereals, mainly maize and sorghum, has declined from 21 to 27 kg per person annually for maize and from 7 to 9 kg per person annually for sorghum (FAOSTAT, 2009).⁴⁶³

The importance of rice for the economy and food security

Rice is one of the major food crops that plays an important role in the economy of the CAR. Of the cereals grown in the country, rice ranks third after maize and sorghum, in terms of area and level of production.

Donors' interest in rice development

The creation of the NRDS has contributed to the mobilization of financial resources from certain donors for the implementation of rice projects drawn up by the CAR. These include projects funded by the Common Fund for Commodities (CFC), the Food and Agriculture Organization (FAO) and Japan.

However, the government is currently unable to gather donor funds for project mobilization, due to the political instability.

Positioning of rice development and NRDS within priority policies

NRDS is broadly in line with national strategies and policies, and are consistent with regional and sub-regional development strategies. In economic policy documents, the data for rice is rather general and not detailed, and the issue of rice production is integrated with that of food crops in general.

Authorization status of NRDS

While the NRDS in CAR was validated and approved, the current conflict has disrupted its

⁴⁶⁰ ITU Country ICT Data (until 2015)

⁴⁶¹ Ibid.

⁴⁶² AFDB Socio Economic Database

⁴⁶³ CAR Ministry for Agriculture and Rural Development, "National Rice Development Strategy for the Central African Republic," October 2012.

implementation.

Existence of champions such as high-ranking ministry officials who support NRDS

The selected focal point when the government joined CARD has significantly contributed to the NRDS's development in the CAR. However, the lack of leadership of the ministry in charge of the rice sector and its development to appeal to partners and to the government for resource mobilization, as well as the recurrence of the security crisis are major obstacles to the implementation of the NRDS.

Government structure for NRDS implementation

The Ministry of Agriculture and Rural Development (MADR) is the ministry in charge for the development and implementation of the NRDS. However, currently no government official is assigned as a focal point.

4.17.2. Output

Status of the NRDS process

		Status	Support by CARD
A	A-1 Formulation and launch	Done	<ul style="list-style-type: none"> The Ministry of Agriculture and Rural Development (MADR) developed NRDS and approved in 2012
	A-2 Gap analysis& prioritization and concept note formulation	Not Started	-
	A-3 Lobbying for funding and project formulation	Not Started	-
	A-4 Implementation	Not Started	-
B	Rice seed strategy	Not Started	-
C	Mechanization strategy	Not Started	-

Figure 42 : Status of NRDS Process in Central African Republic (CAR)

List of CARD-labeled projects

No CARD-labelled projects have been implemented in CAR according to the CARD Secretariat.

Intervention areas

Although NRDS is yet to be implemented, the former focal point mentioned that the relevant areas of the NRDS which have made some progress include: 1. rice seeds (production and growth, dissemination of adapted varieties and the structuring the network of seed growers among others); E. capacity building for farmers through training on production and processing techniques; set up of 6. Modern processing units.

However, generally intervention has been difficult since the political situation has become worse and many of the development partners were forced to close their local offices.

4.17.3. Outcome

Human resource development

The CARD supported the NRDS drawing up process which in turn contributed to the capacity building of task force members who participated in the creation of the NRDS. In addition, the national validation workshop for this document provided an opportunity for all participants to exchange experiences and share information on the rice sector in the CAR.

Project formulation and implementation

Contributions to increase in rice sector projects funded by the government and donors

According to the former focal point, the creation of the NRDS contributed to an increase of projects financed by the government and donors through the provision of necessary human resources and infrastructure for project implementation. However, without a focal point at the ministry, there has been little activity regarding project formulation.

Contributions to efficient, effective, and strategic project formulation

The NRDS used to be able to contribute to better project planning and an efficient allocation of resources in priority sector areas. The former focal point mentioned that at the moment, the major challenge is better coordination of projects in the overall context of the country's Recovery Plan.

Contribution of the CARD focal point in promoting projects

The designation of a focal point has indeed contributed to an increased number of rice-related projects, as it constantly reminds the various working groups involved in drawing up development projects, of the need to take into account projects or components related to the development of the rice

sector in the CAR. Currently, there is no focal point appointed for CARD activities in the CAR.

Contributions to correlative improvements and timing adjustments between governments and donors

The said correlative improvements and timing adjustments might have been possible when NRDS was created but currently no CARD-labeled projects are being monitored.

4.17.4. Impact

Quantitative impact

Table 49: Production, consumption, and self-sufficiency of rice in CAR

(1000MT)	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Production of rice (paddy) FAO⁴⁶⁴	38	39	39	40	42	29	13	10	12	N/A
Production of rice (paddy) USDA⁴⁶⁵	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Production of rice (milled) USDA⁴⁶⁶	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Consumption of rice (milled) USDA⁴⁶⁷	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Self-sufficiency of rice⁴⁶⁸	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table 50: Production targets of rice in NRDS

(1000MT)	2008	2018
Total⁴⁶⁹	112	188

⁴⁶⁴ FAO STAT database "Crops" (<http://www.fao.org/faostat/en/#data/QC>) 10/1/2018 update

⁴⁶⁵ Calculated based on United States Department of Agriculture (USDA) PSD online database "Grains" 8/10/2017 update

⁴⁶⁶ USDA PSD online database "Grains" 8/10/2017 update

(<https://apps.fas.usda.gov/psdonline/app/index.html#/app/downloads?tabName=default>)

⁴⁶⁷ Ibid.

⁴⁶⁸ Calculated based on USDA PSD online database "Grains" 8/10/2017 update

⁴⁶⁹ Supra note 463.

4.17.5. Success factors and challenges

Challenges

■Government

Ownership and support from high-level government officials

The Government's apparent lack of will is the decisive factor in hampering the implementation of the NRDS.

■SC members and partner organizations

Donor presence and office functions

Due to the internal conflict some of the SC members have limited presence in CAR.

■Other


External factors

CAR's relapse to conflict is also a major obstacle to the said implementation.

4.18 Group 2: Democratic Republic of the Congo

4.18.1. Context/background

Basic Information of the country

Democratic Republic of the Congo			
Exchange rate (2017) ⁴⁷⁰	1,361.00 CDF=1USD		
Land ⁴⁷¹	2,344,858 sqkm		
Population (2016) ⁴⁷²	81,331,050		
Climate ⁴⁷³	Tropical ; rainy season (March to June); dry season (June to October); persistent high temperatures and humidity; particularly enervating climate astride the Equator		
Languages ⁴⁷⁴	French, Lingala (a lingua franca trade language), Kingwana (a dialect of Kiswahili or Swahili), Kikongo, Tshiluba		
Ethnic Groups (2014 est.) ⁴⁷⁵		The four largest tribes - Mongo, Luba, Kongo (all Bantu), and the Mangbetu-Azande (Hamitic) make up about 45% of the population	
Per capita GDP (2017) ⁴⁷⁶	1477.309	USD per capita	
Per capita GDP Growth rate (2017) ⁴⁷⁷	2.8	%	
Population growth rate (2016) ⁴⁷⁸	2.42	%	
Age composition of population (2016 est.) ⁴⁷⁹	0-14 years: 42.2% (male 17,300,707/female 17,024,082) 15-24 years: 21.44% (male 8,747,038/female 8,694,000) 25-54 years: 30.13% (male 12,227,971/female 12,273,304) 55-64 years: 3.58% (male 1,374,050/female 1,535,973) 65 years and over: 2.65% (male 910,456/female 1,243,469)		
Population % between 15-54 years ⁴⁸⁰	51.57	%	
Unemployment rate (both sex, age15+) (2016) ⁴⁸¹	3.6	%	

⁴⁷⁰ Oanda <https://www.oanda.com/lang/ja/currency/converter/> (31st July 2017)

⁴⁷¹ CIA (Central Intelligence Agency) "The World Factbook"

⁴⁷² Ibid.

⁴⁷³ Ibid.

⁴⁷⁴ Ibid.

⁴⁷⁵ Ibid.

⁴⁷⁶ IMF

⁴⁷⁷ Ibid.

⁴⁷⁸ CIA (Central Intelligence Agency) "The World Factbook"

⁴⁷⁹ Ibid.

⁴⁸⁰ Ibid.

⁴⁸¹ ILO STAT (<http://bit.ly/2oIwFux>)

FDI Inflow (2015) ⁴⁸²	-508	Million USD
Internet penetration (% of Individuals using the Internet) (2015) ⁴⁸³	3.80	%
Mobile penetration (Mobile-cellular telephone subscriptions) (2015) ⁴⁸⁴	52.99	%
Consumer Price Index growth (1960-2016) ⁴⁸⁵	2.55	

Information on the country's rice sector

Level of rice demand

In the Democratic Republic of Congo (DRC), rice ranks sixth after cassava, corn, sugar cane plantain and groundnut in regard to consumption of staples.⁴⁸⁶ Domestic consumption was estimated at 7kg of white rice per person annually. However, it reaches 9.4 kg in Orientale Province, 19.5 kg in the Kinshasa City Province and 17.5 kg in Sankuru District (Kasaï Oriental Province) and in Maniema Province.⁴⁸⁷ With Kinshasa's demand alone accounted for 33% of total supply, consumption has increased significantly in importance in this highly urbanized province.⁴⁸⁸

The importance of rice for the economy and food security

Rice is a significant food security crop in the DRC because rice is a staple food for several populations. However, the trade gap in rice is happening because national production does not cover country-wide rice requirements. Rice imports have been increasing over the years but there is not enough political will to reduce them, despite the fact that the country has a national strategy to develop the rice sector.

Donors' interest in rice development

Many government agriculture projects have been drawn up and implemented with donor funds, and rice has been included as one of the key crops. This has had a positive impact on improving the production, productivity and consumption of rice.

Positioning of rice development and NRDS within priority policies

In almost all agricultural policy documents, rice is regarded as a commodity of major importance. Such policy documents include Document de Stratégie de Réduction de la Pauvreté (DSRP),

⁴⁸² Worldbank World Development Indicators, 27/4/2017 update

⁴⁸³ ITU Country ICT Data (until 2015)

⁴⁸⁴ Ibid.

⁴⁸⁵ AFDB Socio Economic Database

⁴⁸⁶ Questionnaire for INERA, Aug 25, 2017.

⁴⁸⁷ CARD and the Ministry of Agriculture and Rural Development of the DRC, National Rice Development Strategy, December 2013.

⁴⁸⁸ Ibid.

Document de Stratégie de Croissance et de Réduction de la Pauvreté (DSCR), and the National Agricultural Investment Program 2013-2020 (PNIA) which was developed under CAADP.

Authorization status of NRDS

The NRDS was validated in 2013, and the seed policy was validated in 2016. Many projects that have been implemented had taken into account certain components of the aforementioned documents.

In the DRC, the CARD development partners are integrating the NRDS into their projects. At the same time, the Rice Task Force is on the ground encouraging rice producers to take ownership of the said strategy.

However, the implementation of the aforementioned projects has been feeble, because no project that were centered specifically on rice cultivation and having emerged from the NRDS has been developed yet. But the Ministry of Agriculture is becoming increasingly aware of the situation, and the Ministry believes that a project that is 100% centered on rice cultivation will render its efforts successful both in terms of the NRDS and the seed policy.

Existence of champions such as high-ranking ministry officials who support NRDS

In 2013-2017, rice has gained importance to DRC. The last former general secretary had pushed the rice sector to boost. The commitment by the Minister of Agriculture to support the various processes of the NRDS has contributed to the promotion of rice cultivation within the country.

Government structure for NRDS implementation

The Director of Studies and Planning, Ministry of Agriculture is in charge of the development and implementation of NRDS. The focal point structure is placed in a stable and good position.

The task force is generally composed by staff from the Ministry and research institutions, NGOs and farmers' associations. In fact, two representatives from the association of farmers were focal points. One of the roles of the task force is to convince the financial partners the necessity of the implementation of rice strategies.

4.18.2. Output

Status of the NRDS process

		Status	Support by CARD
A	A-1 Formulation and launch	Done	<ul style="list-style-type: none"> NRDS was finalized and validated in 2013.
	A-2 Gap analysis & prioritization and concept note formulation	Done	<ul style="list-style-type: none"> The priorities in the concept notes developed for NRDS were: irrigation, field technology dissemination, extension, research development, and post-harvest infrastructure.
	A-3 Lobbying for funding and project formulation	In progress	<ul style="list-style-type: none"> Accompany visits to donors during mission.
	A-4 Implementation	In progress	<ul style="list-style-type: none"> Oversee implementation through visiting CARD Consultant.
B	Rice seed strategy	In progress	<ul style="list-style-type: none"> In 2015, DRC started to develop a seed strategy It was validated with a national approval in 2016. Concept notes were developed.
C	Mechanization strategy	Not started	-

Figure 23: Status of NRDS Process in Democratic Republic of the Congo (DRC)

List of CARD-labeled projects

These CARD-labeled projects are/were implemented in DRC according to the CARD Secretariat.

Table 51: List of CARD-labeled projects in DRC

Name of the Project	Donor	Duration	Modality	Budget	Area of Intervention (Sub-Sector)	Area of Intervention (Geographic)	Outputs/Activities
Study on the Competitiveness of Local Rice. [Support Project for the Rehabilitation and Revival of the Agricultural Sector (PARRSA)]	WB	2010-2015	Grant. Through one component of PARRSA. Project implemented by a Project Management Unit	120 million USD	Quality Improvement, Commercialization	National level, and particularly in the 4 PDSR (Rice Development Centers)	
Agricultural Sector Support Project in North Kivu (PASA-NK).	IFAD	2015-2024	Loan and Grant. Project implemented by a Project Management Unit.	53 million USD	Value chain	Beni, Lubero, Rutshuru, Nyiragongo and Masisi in the province of North Kivu	Development of 4 agricultural sectors including: potato, coffee, maize and rice.
Integrated Program of	WB	Pre-	Loan and Grant.	Approximate	Value chain	Corridor	Development of

Agricultural Growth in the Great Lakes Region [Formulation Stage] - Regional Project (DRC - Burundi) with 3 sectors: Rice, Milk, Peach	evaluation phase	Project implemented by a Project Management Unit.	estimation : 150 million USD for RDC (to be confirmed at Pre-evaluation phase)		Bukavu, Uvira, Fizi et Kalemie (Sud Kivu et plaine Rusizi)	the value chain of the 3 selected sectors: Rice, Milk, and Fish
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Intervention areas

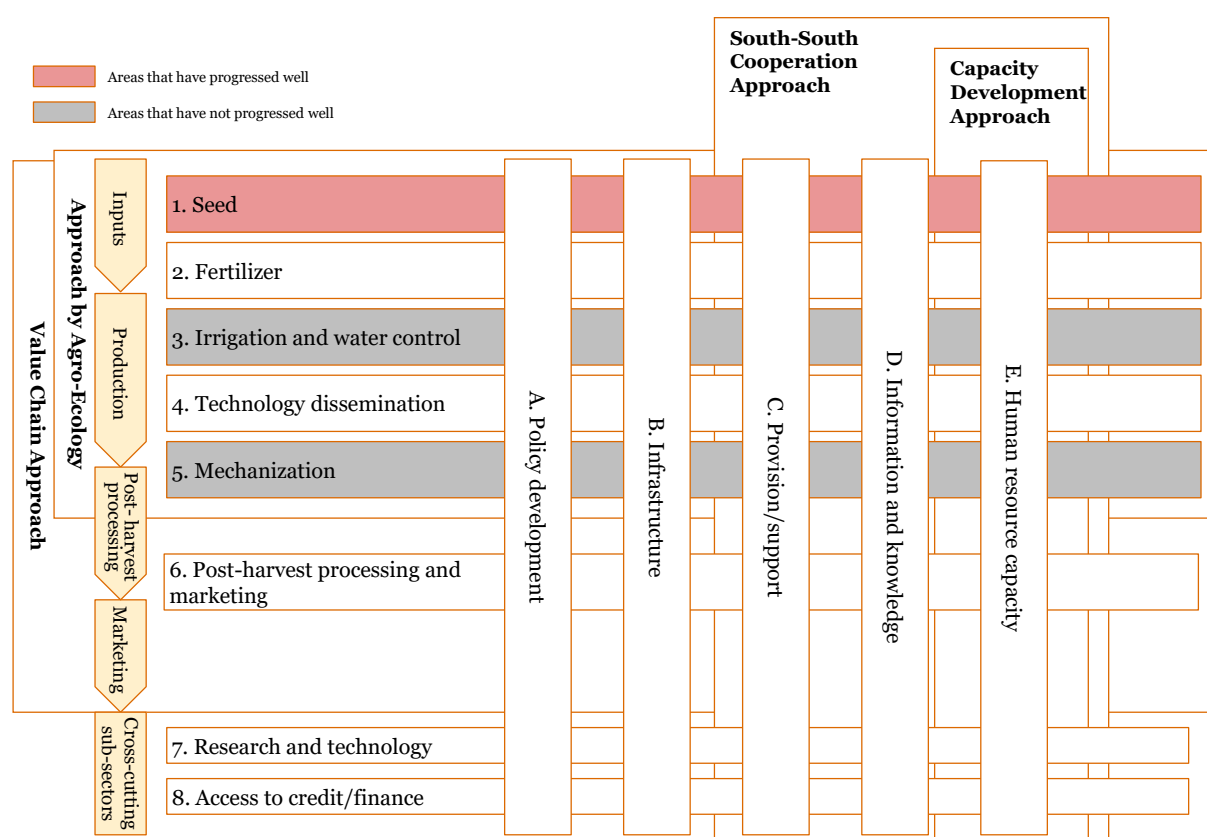


Figure 44 :Intervention Areas in Democratic Republic of the Congo (DRC)

According to the CARD focal point, the production and distribution of *1. Seeds* contributed to the increased production of rice, as can be understood from the fact that projects formulated have included a seed production and distribution component with private sector involvement.

With regard to the action plan for the Rice Sector Development Poles as recommended in the NRDS, its execution is not quite started yet.

5. Mechanization, 3. Hydro-agricultural schemes, and irrigation are the areas that have seen little progress. While the mechanization strategy is not being established yet, there were no activities or funding for the above.

4.18.3. Outcome

Human resource development

The work on capacity building has been carried out in a satisfactory manner. Thanks to the CARD initiative, the country found an opportunity to draw up the NRDS and seed policy. There were opportunities of training and exchanges of experience. All these helped to strengthen the capacity of the rice task force members.

Project formulation and implementation

Contributions to increase in rice sector projects funded by the government and donors

Until now, the DRC government has not yet financed a project in the rice sector.

On the other hand, donors such as JICA, WB, AfDB, IFAD and USAID have funded rice projects in the country, some of which are targeting broader range of agricultural products with a rice component in them.

Contributions to efficient, effective, and strategic project formulation

There is a proper planning of activities especially on varietal development and seed production, control and certification. Government resources are used effectively.

Contribution of the CARD focal point in promoting projects

The focal point together with the rice task force has raised awareness among political authorities on the importance of rice and the country's potential for rice development. Also the involvement of the focal point and the members of the task force was decisive in influencing the integration of rice cultivation development into short and medium-term projects at a technical and financial partner levels, and on a nationwide scale.

Contributions to correlative improvements and timing adjustments between governments and donors

According to the focal point, the Ministry is in the process of raising awareness and mobilizing funds from the various partners to ensure the ownership and integration of priorities identified in the NRDS into the different projects being developed.

4.18.4. Impact

Quantitative impact

Table 52: Production, consumption, and self-sufficiency of rice in DRC

(1000MT)	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Production of rice (paddy) FAO⁴⁸⁹	317	317	318	319	315	307	309	307	306	N/A
Production of rice (paddy) USDA⁴⁹⁰	314	314	321	321	351	319	321	351	300	300
Production of rice (milled) USDA⁴⁹¹	198	198	202	202	198	193	193	189	189	189
Consumption of rice (milled) USDA⁴⁹²	248	298	317	312	333	313	313	319	319	329
Self-sufficiency of rice⁴⁹³	79.8%	66.4%	63.7%	64.7%	59.5%	61.7%	61.7%	59.2%	59.2%	57.4%

Table 53: Production targets of rice in NRDS

(1000MT)	2008	2018
Total⁴⁹⁴	385	1,400

Qualitative impact

Application to other crops

Task force members are discussing whether the same NRDS approach could be transferred to another crop (maize), and asked whether the CARD initiative can support to transfer. This has illustrated that CARD has had a positive influence on other crop sectors.

4.18.5. Success factors and challenges

Success factors

■ Government

The importance of rice for the national economy and/or food security

For the DRC, rice is a staple food and very important. It is also a cash crop for several agricultural households.

Ownership and support from high-level government officials

The commitment by the Minister of Agriculture to support the various processes including improved

⁴⁸⁹ FAO STAT database (<http://www.fao.org/faostat/en/#data/QC>) 10/1/2018 update

⁴⁹⁰ Calculated based on United States Department of Agriculture (USDA) PSD online database "Grains" 8/10/2017 update

⁴⁹¹ USDA PSD online database "Grains" 8/10/2017 update

(<https://apps.fas.usda.gov/psdonline/app/index.html#/app/downloads?tabName=default>)

⁴⁹² Ibid.

⁴⁹³ Calculated based on USDA PSD online database "Grains" 8/10/2017 update

⁴⁹⁴ Supra note 487.

seed production. Also some people mentioned the contribution of the former general secretary who demonstrated the leadership in promoting rice development.

Also the Minister's Cabinet has delegated a member to the rice task force. Discussions and debates that took place were made known to the Minister, who sometimes seeks to find out more through the task force coordinator. The task force remains an attractive forum where exchanges can take place and opinions are expressed.

■CARD Secretariat

Provision of personnel

CARD secretariat has provided support especially through a CARD Consultant with step by step approach which enabled to identify real challenges and what needs to be changed.

■Other

Private-sector involvement

According to the government officials, involvement of private sector in a seed production is one of the reasons for success in production and distribution of improved seeds.

Challenges

■Government

Financial resources

Lack of funding for organizing nationwide meetings has hindered motivating and requesting active participation of task force members.

Number and capacity of government officials

The development of rice cultivation are handled via a structure operating within the Ministry of Agriculture called the “National Rice Program” (PNR). In addition to the limitation of financial resources, this structure does not have the necessary human and material resources for it to be active throughout the country.

■Other


External factors

Due to political instability and changes of constitution, the people of DRC are facing a difficult time, which has also been influencing the work of the taskforce. The weak implementation of the NRDS and the NRSDS is mainly due to weak government involvement, currently more concerned with political issues related to elections and other issues, as well as constant change of officials at a Ministerial level.

4.19 Group 2: Ethiopia

4.19.1. Context/background

Basic Information of the country

Federal Democratic Republic of Ethiopia			
Exchange rate (2017) ⁴⁹⁵	22.6874 ETB=1USD		
Land ⁴⁹⁶	1,104,300 sqkm		
Population (2016) ⁴⁹⁷	102,374,044		
Climate ⁴⁹⁸	Tropical; monsoon with wide topographic-induced variation		
Languages ⁴⁹⁹	Amheric, English, Arabic, Oromo, Somali, Tigrigna, Sidamo, Wolaytta, Gurage, Afar, Hadiyya, Gamo, Gedeo, Opuuo, Kafa		
Ethnic Groups (2014 est.) ⁵⁰⁰		Oromo, Amhara (Amara), Somali (Somalie), Tigray (Tigrinya), Sidama, Gurage, Welaita, Hadiya, Afar (Affar), Gamo, Gedeo, Silte, Kefficho	
Per capita GDP (2017) ⁵⁰¹	845.975	USD per capita	
Per capita GDP Growth rate (2017) ⁵⁰²	7.5	%	
Population growth rate (2016) ⁵⁰³	2.88	%	
Age composition of population (2016 est.) ⁵⁰⁴	0-14 years: 43.71% (male 22,430,798/female 22,316,910) 15-24 years: 20.04% (male 10,182,973/female 10,332,626) 25-54 years: 29.45% (male 14,970,645/female 15,178,999) 55-64 years: 3.89% (male 1,939,635/female 2,047,041) 65 years and over: 2.91% (male 1,338,985/female 1,635,432)		
Population % between 15-54 years ⁵⁰⁵	49.49	%	

⁴⁹⁵ Oanda <https://www.oanda.com/lang/ja/currency/converter/> (31st July 2017)

⁴⁹⁶ CIA (Central Intelligence Agency) "The World Factbook"

⁴⁹⁷ Ibid.

⁴⁹⁸ Ibid.

⁴⁹⁹ Ibid.

⁵⁰⁰ Ibid.

⁵⁰¹ IMF

⁵⁰² Ibid.

⁵⁰³ CIA (Central Intelligence Agency) "The World Factbook"

⁵⁰⁴ Ibid.

⁵⁰⁵ Ibid.

Unemployment rate (both sex, age15+) (2016) ⁵⁰⁶	5.7	%
FDI Inflow (2015) ⁵⁰⁷	2,168	Million USD
Internet penetration (% of Individuals using the Internet) (2015) ⁵⁰⁸	11.60	%
Mobile penetration (Mobile-cellular telephone subscriptions) (2015) ⁵⁰⁹	42.76	%
Consumer Price Index growth (1960-2016) ⁵¹⁰	8.93	

Information on the country's rice sector

Level of rice demand

In Ethiopia, traditionally teff is the most commonly eaten staple crop. Other crops include maize, wheat and sorghum. Rice has now become a substitute to teff, especially in making "injera", primarily because the cost necessary for making injera becomes lower. This has led to increased imports of broken rice mainly from Asian countries such as India, Pakistan and Vietnam.⁵¹¹

The importance of rice for the economy and food security

Rice is considered as one of the major cereal crops for improved production and productivity of the agricultural sector. In 2010, rice was named as a "millennium crop" given its importance in ensuring food security and its potential for teff substitution and import substitution.⁵¹² Rice is considered as a priority crop for commercial investment, which allows better access to land for commercial rice production.⁵¹³

In terms of national economy, the expansion of rice consumption and production is associated with the possibility of producing it in marginal areas mainly on vertisol soil which is abundant in Ethiopia. And it has a relatively high level of productivity as compared to the main staple crop, tef, and the possibility of using in traditional injera-making.

Donors' interest in rice development

Following the development of NRRDSE, a number of fundable projects were developed and shared to potential donors. A few of such projects are funded and are currently under implementation.

⁵⁰⁶ ILO STAT (<http://bit.ly/2oIwFux>)

⁵⁰⁷ Worldbank World Development Indicators, 27/4/2017 update

⁵⁰⁸ ITU Country ICT Data (until 2015)

⁵⁰⁹ Ibid.

⁵¹⁰ AFDB Socio Economic Database

⁵¹¹ Questionnaire former Focal Point for Ethiopia, Aug 8, 2017.

⁵¹² The Federal Democratic Republic of Ethiopia, Ministry of Agriculture and Rural Development, National Rice Research and Development Strategy(NRRDS)— Ethiopia, 2009.

⁵¹³ Ibid.

Positioning of rice development and NRDS within priority policies

The Ethiopian government has in place agricultural development policies and strategies including NRRDSE in line with the overall strategy framework of Agricultural Development Led Industrialization (ADLI) formulated in 1991. ADLI, which has been the Government's overarching policy to date,⁵¹⁴ places a very high priority on accelerating agricultural growth and achieving food security. Agriculture is also a main focus of the government's poverty reduction strategy.⁵¹⁵

Authorization status of NRDS

The NRRDSE has already been developed, approved by the ministry and became a ministerial document. It has been implemented with a number of its targets achieved.

Existence of champions such as high-ranking ministry officials who support NRDS

The governance structure put in place has significantly helped in sustaining the implementation process of the NRDS. Although it is difficult to say specifically which internal government champion is leading rice development, the minister of agriculture has been very supportive about conducting CARD activities in general.

Government structure for NRDS implementation

Ministry of Agriculture and Natural Resources at the federal level and Regional Bureaus of Agriculture at the regional level are responsible for NRDS development and implementation. Currently the Senior Researcher (Plant Pathology) and Crop Research Director at Ethiopian Institute of Agricultural Research (EIAR) is assigned to be a focal point.

As the name of the strategy (National Rice Research and Development Strategy of Ethiopia) indicates, the Ethiopian government has put emphasis on research, thus the task force members are composed of officers from the ministry and research institutions. There is the NRRDSE technical committee that is supposed to be organized quarterly. The committee is actually working and organizes meetings once or twice a year.

⁵¹⁴ Ethiopian Agricultural Transformation Agency "Ethiopian Agriculture and Strategies for Growth," 2017

⁵¹⁵ Ibid.

4.19.2. Output

Status of the NRDS process

		Status	Support by CARD
A	A-1 Formulation and launch	Done	<ul style="list-style-type: none"> Ethiopia joined the initiative in 2008 but finalized in 2010. It was approved by the ministry and became the ministry document.
	A-2 Gap analysis & prioritization and concept note formulation	Done	<ul style="list-style-type: none"> There are 14 concept notes developed from the NRRDSE.
	A-3 Lobbying for funding and project formulation	In progress	<ul style="list-style-type: none"> Out of 14 concept notes, 4 turned into projects. Some of the concept notes were merged into these 4 projects. Assisted in bringing the concept notes. Assisted by endorsing the importance of funding to development partners through the stakeholders' meeting.
	A-4 Implementation	In progress	<ul style="list-style-type: none"> 3 projects were and are under implementation that are contributing to the sector's development. Provided technical support by interacting with the stakeholders, back-stopping and constantly apprising the progress.
		Done	<ul style="list-style-type: none"> Seed strategy was finalized in the beginning of 2017 Developed 6 concept notes. While they are yet to see translation of these concept notes into projects; some of the activities mentioned in these concept notes are presently being addressed through government budget this year. Two workshops were organized. Provided technical assistance by CARD consultant with the development of seed strategy and concept notes.
B	Rice seed strategy		
C	Mechanization strategy	Not started	-

Figure 45 : Status of NRDS Process in Ethiopia

List of CARD-labeled projects

These CARD-labeled projects are/were implemented in Ethiopia according to the CARD Secretariat.

Table 54: List of CARD-labeled projects in Ethiopia

Name of the Project	Donor	Duration	Modality	Budget	Area of Intervention (Sub-Sector)	Area of Intervention (Geographic)	Outputs/Activities
Project for Enhancing Development and Dissemination of Agricultural Innovations through Farmer Research Groups (FRGs)	JICA	2010-2015	Technical Cooperation	630 million JPY	Capacity building, Research	Whole country	(i) Research systems for FRG approach on Ethiopian agricultural research system is strengthened.; (ii) On grain seed production, rice farming, as well as other priority areas, development and improvement of appropriate technologies takes place using FRG approach; (iii) Skills of researchers for technology information preparation is strengthened.
Promoting Crop Diversification and Advanced Technologies in Tifray, Ethiopia-an Opportunity to Improve Famer's Livelihoods and	JICA	2011-2015	Private Sector Partnership	99.431 million JPY	Production, Post-Harvest Processing, Extension	Tigray region	(i) Number of rice growing farmers is increased; (ii) Improved production and milling technologies are introduced; (iii) Farmers' revenue is improved through crop (rice/green gram) diversification

Food Security.							
Project for Functional Enhancement of the National Rice Research and Training Centre (EthioRice)	JICA	2015-2020	Technical Cooperation	827 million JPY	Capacity building, Dissemination	Fogera	(i) Appropriate technologies are identified by the National Rice Research and Training Centre and are disseminated to rice farmers in the country; (ii) Capacity of the National Rice Research and Training Centre (NRRTC) is enhanced ;(iii) Appropriate technologies and information become available for rice industry.

Intervention areas

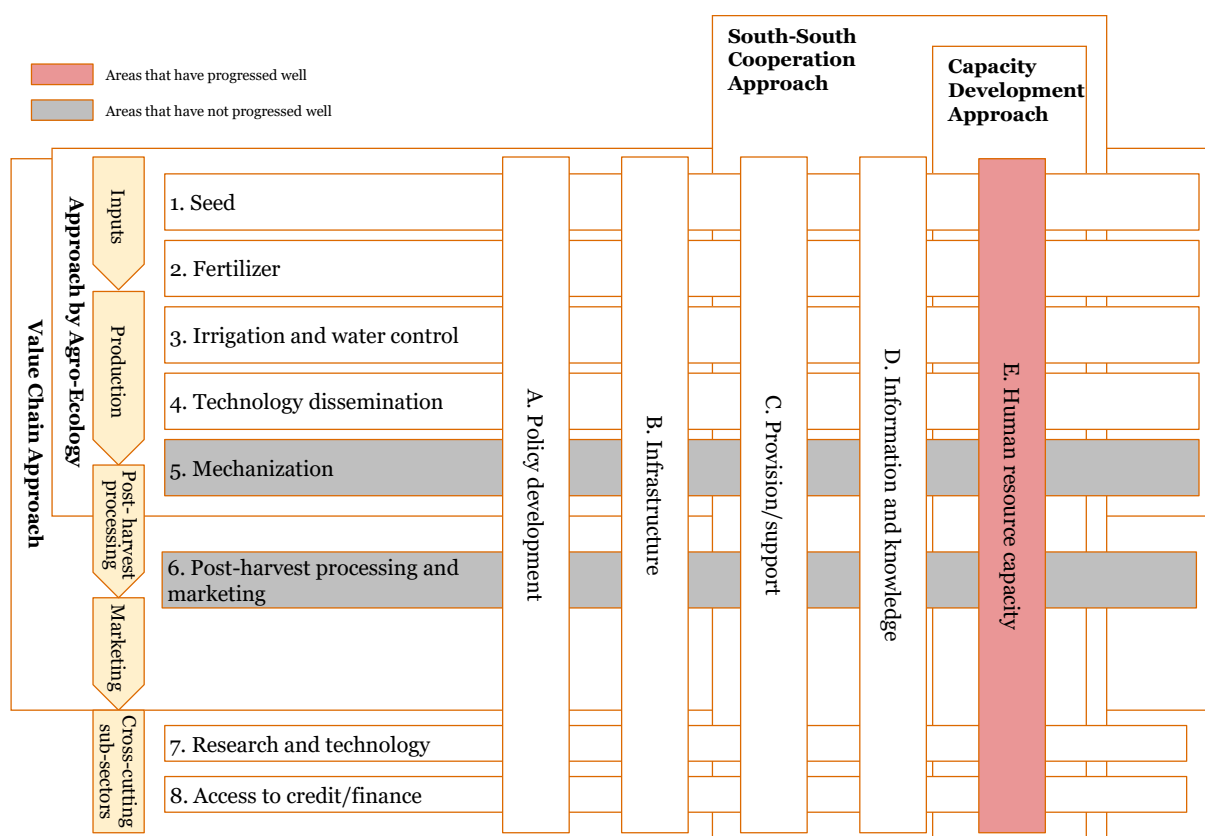


Figure 46: Intervention Areas in Ethiopia

The CARD focal point considers that an area of progress was the strengthening of 7. National rice research capacity. Given the recent introduction of rice in the country, building research capacity both in terms of facilities and human resource was the priority agenda. Now, the country has a rice-specific research and training center funded by the government.

E. Human resource development was also a priority issue identified, and a lot of effort was expended on ensuring human capacity in the country. The national rice research and training center at Fogera was officially opened in October 2017 in the presence of top policy makers (the prime minister or his representative, regional president, donors, and other relevant stakeholders). The research center was

uniquely designed to also provide training for all rice sector actors.

Although Ethiopia emphasized development in research in its strategy, this did not hamper the development of other areas in the rice sector value chain. Their strategy had a positive impact on the sector as a whole. However, 5. Rice mechanization and 6. Value addition to rice cultivation have not progressed well. This is due to the lack of skilled manpower especially in research. Further, the interest of private actors to do business in rice mechanization and value addition is still limited.

4.19.3. Outcome

Human resource development

As mentioned, Ethiopia has been strengthening its national rice research capacity; given the relatively recent introduction of rice in the country, building research capacity both in terms of facilities and human resource was the priority agenda.

Project formulation and implementation

Contributions to increase in rice sector projects funded by the government and donors

In Ethiopia, in conjunction with the development of NRRDSE, rice was recognized as a millennium crop, which was a key factor for understanding its importance. The designed implementation plans at the national and regional levels have played a crucial role in financial and human resource allocation of the government. Also a number of donor projects were and are under implementation that are contributing to the sector's development.

Contributions to efficient, effective, and strategic project formulation

The design of the strategies has helped in (i) establishing stakeholders' linkages and collaboration, (ii) setting priority investment areas, (iii) demonstrating the importance of identified priority issues to policy makers at the regional and federal levels, and (iv) creation of a rice governance structure (national rice R&D steering committee, national technical committee, national rice secretariat, and regional focal persons). This has helped obtain due attention for rice R&D, especially in regard to public investment for rice research and training in the country.

Contribution of the CARD focal point in promoting projects

The establishment of the CARD focal point within the Ministry of Agriculture and Natural Resources has helped in creating linkages between the relevant stakeholders, especially through the national rice secretariat based within the Ministry of Agriculture and Natural Resources.

Contributions to correlative improvements and timing adjustments between governments and donors

The NRDSSE has assisted in aligning the different projects for synergy and collaboration. The

different public and donor funded rice projects were more or less aligned in addressing the challenges of rice sector in the country.

4.19.4. Impact

Quantitative impact

Table 55: Production, consumption, and self-sufficiency of rice in Ethiopia

(1000MT)	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Production of rice (paddy) FAO ⁵¹⁶	71	103	90	89	121	92	132	140	136	N/A
Production of rice (paddy) USDA ⁵¹⁷	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Production of rice (milled) USDA ⁵¹⁸	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Consumption of rice (milled) USDA ⁵¹⁹	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Self-sufficiency of rice ⁵²⁰	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table 56: Production targets of rice in NRDS

(1000MT)	2008	2018
Irrigation fed ⁵²¹	107	1174
Rain fed highland ⁵²²	118	570
Rain fed lowland ⁵²³	273	2214
Total	498	3,959

Qualitative impact

Application to other crops

CARD has played a catalytic role in bringing together policy makers, researchers, development partners, private actors and farmers through the aforementioned activities in an integrated manner, which makes CARD a unique initiative in promoting rice sector development. Indirectly, it has also contributed to the recognition of the need to have specific R&D strategy for other important crops in Ethiopia, with the NRRDSE serving as a model strategy.

⁵¹⁶ FAO STAT database "Crops" (<http://www.fao.org/faostat/en/#data/QC>) 10/1/2018 update

⁵¹⁷ Calculated based on United States Department of Agriculture (USDA) PSD online database "Grains" 8/10/2017 update

⁵¹⁸ USDA PSD online database "Grains" 8/10/2017 update

(<https://apps.fas.usda.gov/psdonline/app/index.html#/app/downloads?tabName=default>)

⁵¹⁹ Ibid.

⁵²⁰ Calculated based on USDA PSD online database "Grains" 8/10/2017 update

⁵²¹ Supra note 512.

⁵²² Ibid.

⁵²³ Ibid.

4.19.5. Success factors and challenges

Success factors

■Government

The importance of rice for the national economy and/or food security

In Ethiopia, linked with the development of NRRDSE, rice was recognized as the millennium crop, which was a key factor for understanding its importance and facilitating implementation.

Challenges

■Government

Government structure for implementation

The decentralization of the government is one of the challenges. The priorities at country level are not necessarily reflected in regional policies. Even if the central government selects a few regions as priority areas for rice cultivations, it happens that the regional strategies of these regions do not necessarily consider rice as important.

Number and capacity of government officials

Overall, there is limited human capacity to implement the different priority interventions identified in the NRRDE. In most cases, regional focal persons lack the required skills.

Continuity of CARD focal point /taskforce/high-ranking officials

The turnover of key government officials is another challenge. Even though the capacity of the officials including those in leadership roles within the Ministry has been improved, once they received training they are moved to other positions.


Other government policies

Public intervention in rice is very large. On the other hand, the Ethiopian government tends to set strict regulations on private sector due to the influence of socialism in the administration. Thus, it is not easy for private companies to start agri-business in Ethiopia, and the lack of commitment from private actors in developing the national rice value chain is an issue.

4.20 Group 2: Gambia

4.20.1. Context/background

Basic Information of the country

Republic of The Gambia			
Exchange rate (2017) ⁵²⁴	44 GMB=1USD		
Land ⁵²⁵	11,295 sqkm		
Population (2016) ⁵²⁶	2,009,648		
Climate ⁵²⁷	Tropical ; hot, rainy season (June to November); cooler, dry season (November to May) ; hot, rainy season (June to November); cooler, dry season (November to May)		
Languages ⁵²⁸	English, Mandinka, Wolof, Fula, other indigenous vernaculars		
Ethnic Groups (2013 est.) ⁵²⁹		Mandinka/Jahanka, Fulani/Tukulur/Lorobo, Wolof, Jola/Karoninka, Serahuleh, Serere, Manjago, Bambara, Creole/Aku Marabout,	
Per capita GDP (2017) ⁵³⁰	490.06	USD per capita	
Per capita GDP Growth rate (2017) ⁵³¹	3	%	
Population growth rate (2016) ⁵³²	2.11	%	
Age composition of population (2016 est.) ⁵³³	0-14 years: 37.88% (male 382,215/female 379,029) 15-24 years: 20.64% (male 204,979/female 209,866) 25-54 years: 33.92% (male 333,875/female 347,779) 55-64 years: 4.14% (male 39,978/female 43,177) 65 years and over: 3.42% (male 32,011/female 36,739)		
Population % between 15-54 years ⁵³⁴	54.56	%	
Unemployment rate (both sex, age15+) (2016) ⁵³⁵	29.7	%	

⁵²⁴ Oanda <https://www.oanda.com/lang/ja/currency/converter/> (31st July 2017)

⁵²⁵ CIA (Central Intelligence Agency) "The World Factbook"

⁵²⁶ Ibid.

⁵²⁷ Ibid.

⁵²⁸ Ibid.

⁵²⁹ Ibid.

⁵³⁰ IMF

⁵³¹ Ibid.

⁵³² CIA (Central Intelligence Agency) "The World Factbook"

⁵³³ Ibid.

⁵³⁴ Ibid.

⁵³⁵ ILO STAT (<http://bit.ly/2oIwFux>)

FDI Inflow (2015) ⁵³⁶	11	Million USD
Internet penetration (% of Individuals using the Internet) (2015) ⁵³⁷	17.12	%
Mobile penetration (Mobile-cellular telephone subscriptions) (2015) ⁵³⁸	137.85	%
Consumer Price Index growth (1960-2016) ⁵³⁹	5.54	

Information on the country's rice sector

Level of rice demand

Rice is a staple crop. Its annual consumption is approximately 100 kg per person.⁵⁴⁰ Rice consumption is 70% of consumption of staples.⁵⁴¹ Apart rice, groundnuts and maize are staples.⁵⁴² According to the estimation by the government, the national rice demand in metric tons will increase from 224,700 tons in 2013 to 273,800 tons in 2024.⁵⁴³

The importance of rice for the economy and food security

The government treats rice very importantly, because Gambia imports millions of US dollars' worth of rice per year.

The country has a long history of rice importation to meet its deficit in rice. The dependency on imports to meet the national rice deficit predisposes the food security situation in Gambia to the vulnerability of volatile global market trends. Decline in national rice production has significantly increased the dependency of rural population on imported rice, thus reducing their savings and net income. Income generated from other farming and off-season farm activities are inevitably used to procure imported rice. Improved rice production and productivity will have positive rural income-effect and scarce foreign exchange saving-effect. All of these will have positive impact on overall national socioeconomic growth.

Donors' interest in rice development

The country has seen increase funding coming from donors such as IFAD, WB, IDB and AfDB on rice related activities.

⁵³⁶ Worldbank World Development Indicators, 27/4/2017 update

⁵³⁷ ITU Country ICT Data (until 2015)

⁵³⁸ Ibid.

⁵³⁹ AfDB Socio Economic Database

⁵⁴⁰ Calculated based on USDA PSD online database "Grains" 8/10/2017 update and CIA (Central Intelligence Agency) "The World Factbook"

⁵⁴¹ Meeting with CARD Consultant, Nov 1, 2017.

⁵⁴² Ibid.

⁵⁴³ Gambia, Ministry of Agriculture, "National Rice Development Strategy(NRDS)" 2014

Positioning of rice development and NRDS within priority policies

Rice is given a high priority in national development agenda and food security policy-related documents including the national Poverty Reduction Strategy Paper 2007-2011 (PRSP II), Program for Accelerated Growth and Employment 2011-2015 (PAGE) , and PAGE II covering the period 2017-2020.

Although NRDS is the baseline document for rice development in Gambia, alignment of NRDS with the Gambia National Agricultural Investment Plan 2011-2015 (GNAIP) and its successor plan, which are major agricultural documents in the country is not clear, nor is the National Development Plan.

Authorization status of NRDS

The NRDS has already been developed, validated and approved, and it is being used to formulate rice projects.

Existence of champions such as high-ranking ministry officials who support NRDS

There were no comments on whether the government has a rice champion. In general, the existence of the focal person, task force members and support from the government have contributed to the progress of NRDS implementation.

Government structure for NRDS implementation

The Director-General of the National Agricultural Research Institute (NARI), the Ministry of Agriculture is in charge of the development and implementation of NRDS. The CARD focal point from the Ministry sensitizes the key actors and participates in the formulation of rice project documents.

National Rice Development Steering Committee was established to provide the ministry, NARI and local governments with opportunities to discuss planning, evaluation and review of NRDS progress.

4.20.2. Output

Status of the NRDS process

		Status	Support by CARD
A	A-1 Formulation and launch	Done	<ul style="list-style-type: none"> The NRDS was developed in 2014.
	A-2 Gap analysis& prioritization and concept note formulation	Not started	<ul style="list-style-type: none"> Gambia did not develop concept notes for the NRDS, but they did so for the RSDS.
	A-3 Lobbying for funding and project formulation	Not started	-
	A-4 Implementation	In progress	<ul style="list-style-type: none"> There were 2 CARD-labelled projects. One project was based on the NRDS.
B	Rice seed strategy	In progress	<ul style="list-style-type: none"> The seed strategy was developed in 2015. Concept notes were developed for RSDS in early 2016. Drafted but not approved yet.
C	Mechanization strategy	Not started	-

Figure 47 : Status of NRDS Process in Gambia

List of CARD-labeled projects

These CARD-labeled projects are/were implemented in Gambia according to the CARD Secretariat.

Table 57: List of CARD-labeled projects in Gambia

Name of the Project	Donor	Duration	Modality	Budget	Area of Intervention (Sub-Sector)	Area of Intervention (Geographic)	Outputs/Activities
Commercial Agriculture and Value Chain Management Project	AfDB	2014-2019	Loan	19.27 million USD	Value chain	Central River Region (CRR), West Coast Region(WCR), North Bank Region(NBR)	2,500ha of land rehabilitated, 40,000 farmers reached (70% women), 500 young entrepreneurs trained, 3 large scale processing plants established, capacity of stakeholders enhanced
Agriculture Value Chain Development Project	AfDB	2016-2020	Loan	8.4 million USD	Value chain	Upper River Region	(i) 500ha of irrigation land developed; (ii) Farming equipment provided (17 power tillers, 30 threshers, 3 warehouses with 100MT capacity); (iii) Beneficiaries trained (20 ToT, 300 for GAP, 300 for crop husbandry, 300 for post-harvest, 18 for farm equipment maintenance); (iv) Inputs provided (NPK 100 tons, Urea 50 tons, Seeds 25 tons); (v) 6 dry floors provided.

Intervention areas

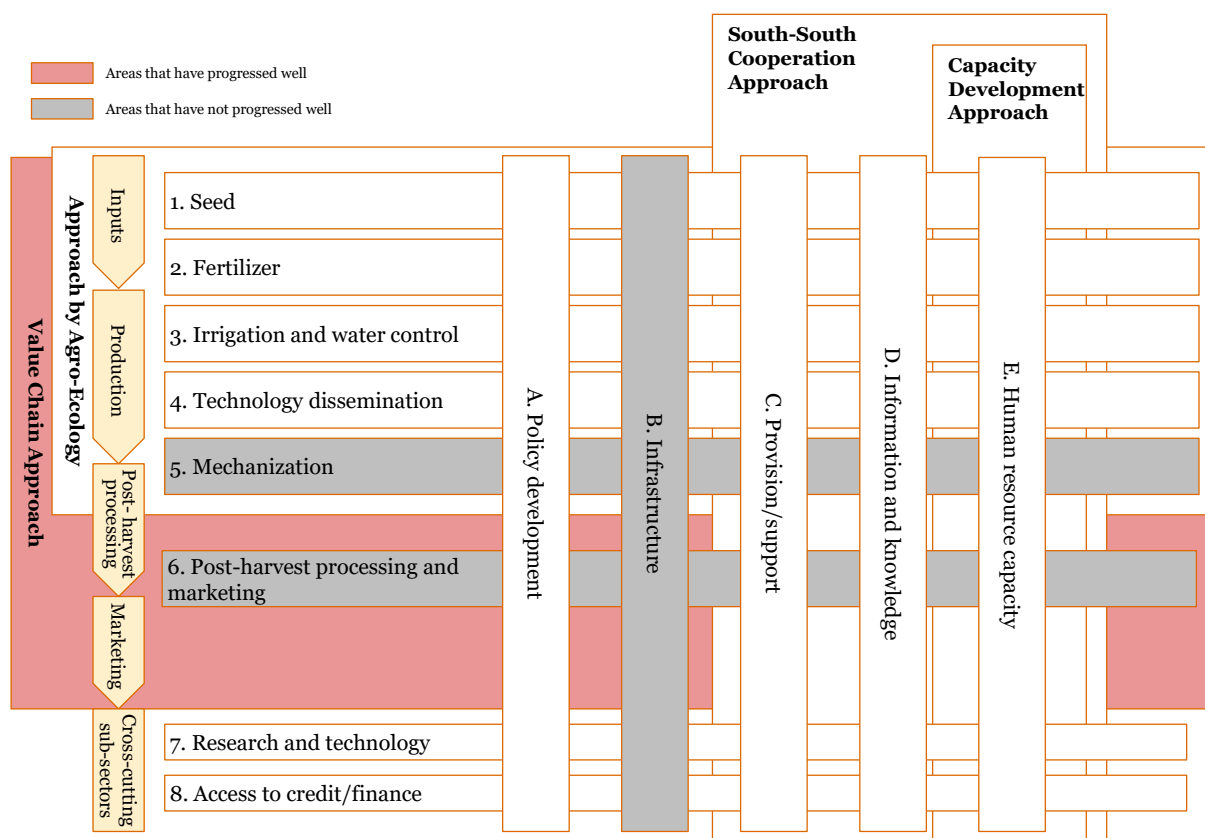


Figure 48 : Intervention Areas in Gambia

On the one hand, the rice *value chain* is a success area for the government, due to the good projects formulated. Also *E. Capacity building* showed good progress as the capacity of researcher on rice value chain was enhanced, and farmers were trained on rice production value chain management techniques.

On the other hand, areas such as *6. Processing and marketing* still remain a major challenge to the development of the rice sector in this country, as the prerequisite *B. infrastructure* for the above mentioned areas is underdeveloped and insufficient. Also, while Gambia is interested, the *5. Mechanization* strategy has yet to be developed.

4.20.3. Outcome

Human resource development

Information exchange and mutual personnel exchanges have been an integral part of CARD's human resource development for the Gambia. For example, an annual workshop in Japan is held for relevant officials and other stakeholders from the Anglophone and Francophone countries of Africa, so that the

participants can share the best practices of the respective countries.

Project formulation and implementation

Contributions to increase in rice sector projects funded by the government and donors

The Gambian government is currently collaborating with development partners in funding numerous projects such as Nema, AVCDP and FASDEP on land for rice production.

Contributions to efficient, effective, and strategic project formulation

The NRDS served as a reference tool for better implementation of rice projects. It helped guide the government in using government resources judiciously for the effective implementation of projects.

Contribution of the CARD focal point in promoting projects

The existence of the focal person and task force members has contributed to sanitizing the key actors and having them participate in the formulation of rice project documents.

Contributions to correlative improvements and timing adjustments between governments and donors

No concrete examples were mentioned. However, as all projects and government development strategies on rice were created based on the NRDS, it is expected that good correlation and timing adjustment are promoted.

4.20.4. Impact

Quantitative impact

Table 58: Production, consumption, and self-sufficiency of rice in Gambia

(1000MT)	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Production of rice (paddy) FAO⁵⁴⁴	38	79	100	51	54	70	47	50	60	N/A
Production of rice (paddy) USDA⁵⁴⁵	38	78	102	51	54	71	15	54	49	55
Production of rice (milled) USDA⁵⁴⁶	25	51	66	33	35	46	31	45	32	36
Consumption of rice (milled) USDA⁵⁴⁷	115	116	171	180	188	190	185	195	195	200
Self-sufficiency of rice⁵⁴⁸	21.7%	44.0%	38.6%	18.3%	18.6%	24.2%	16.8%	23.1%	16.4%	18.0%

⁵⁴⁴ FAO STAT database "Crops" (<http://www.fao.org/faostat/en/#data/QC>) 10/1/2018 update

⁵⁴⁵ Calculated based on United States Department of Agriculture (USDA) PSD online database "Grains" 8/10/2017 update

⁵⁴⁶ USDA PSD online database "Grains" 8/10/2017 update

(<https://apps.fas.usda.gov/psdonline/app/index.html#/app/downloads?tabName=default>)

⁵⁴⁷ Ibid.

⁵⁴⁸ Calculated based on USDA PSD online database "Grains" 8/10/2017 update

Table 59: Production targets of rice in NRDS

(1000MT)	2008	2018
Total ⁵⁴⁹	N/A	N/A

4.20.5. Success factors and challenges

Success factors

■Government

Authority of the NRDS

According to government officials, the NRDS document was always regarded as very important in the Gambia, and it has served as a baseline document for rice development whereby it promoted government intervention in the sector.

Challenges

■Government

Financial resources

CARD activities by the Gambian government is limited due to the lack of funding. This funding issue has limited the interaction with other countries, and the government has missed opportunities to exchange experience among member countries

Bureaucracy

Bureaucracy has delayed the approval process of the NRDS documents.

■Other

ICT infrastructure for communication


The lack of ICT technology and infrastructure has led to difficulty in communication via email and other electronic means.

⁵⁴⁹ Supra note 543.

4.21 Group 2: Liberia

4.21.1. Context/background

Basic Information of the country

Republic of Liberia			
Exchange rate (2017) ⁵⁵⁰	90 LRD=1USD		
Land ⁵⁵¹	111,369 sqkm		
Population (2016) ⁵⁵²	4,299,944		
Climate ⁵⁵³	Tropical ; hot, humid; dry winters with hot days and cool to cold nights; wet, cloudy summers with frequent heavy showers		
Languages ⁵⁵⁴	English, some 20 ethnic group languages few of which can be written or used in correspondence		
Ethnic Groups (2008 est.) ⁵⁵⁵		Kpelle, Bassa, Grebo, Gio, Mano, Kru, Lorma, Kissi, Gola	
Per capita GDP (2017) ⁵⁵⁶	491.653	USD per capita	
Per capita GDP Growth rate (2017) ⁵⁵⁷	3	%	
Population growth rate (2016) ⁵⁵⁸	2.44	%	
Age composition of population (2016 est.) ⁵⁵⁹	0-14 years: 42.3% (male 917,354/female 901,627) 15-24 years: 18.9% (male 400,013/female 412,869) 25-54 years: 31.32% (male 669,630/female 677,321) 55-64 years: 4.3% (male 89,264/female 95,519) 65 years and over: 3.17% (male 66,658/female 69,689)		
Population % between 15-54 years ⁵⁶⁰	52.22	%	
Unemployment rate (both sex, age15+) (2016) ⁵⁶¹	6.9	%	
FDI Inflow (2015) ⁵⁶²	3	Million USD	

⁵⁵⁰ Oanda <https://www.oanda.com/lang/ja/currency/converter/> (31st July 2017)

⁵⁵¹ CIA (Central Intelligence Agency) "The World Factbook"

⁵⁵² Ibid.

⁵⁵³ Ibid.

⁵⁵⁴ Ibid.

⁵⁵⁵ Ibid.

⁵⁵⁶ IMF

⁵⁵⁷ Ibid.

⁵⁵⁸ CIA (Central Intelligence Agency) "The World Factbook"

⁵⁵⁹ Ibid.

⁵⁶⁰ Ibid.

⁵⁶¹ ILO STAT (<http://bit.ly/2oIwFux>)

⁵⁶² Worldbank World Development Indicators, 27/4/2017 update

Internet penetration (% of Individuals using the Internet) (2015) ⁵⁶³	4.56	%
Mobile penetration (Mobile-cellular telephone subscriptions) (2015) ⁵⁶⁴	25.87	%
Consumer Price Index growth (1960-2016) ⁵⁶⁵	4.02	

Information on the country's rice sector

Level of rice demand

Rice is a staple crop, and its annual consumption is approximately 133 kg per person which is the highest in all of Africa.⁵⁶⁶ Apart from rice, maize, soybeans and groundnuts are major staples in the country.⁵⁶⁷

The importance of rice for the economy and food security

Rice is given high priority because the demand for rice exceeds local production by a large margin; in 2016 Liberia spent about 88.7 million USD on the import of long grain rice and rice was the third most imported commodity in value after PMS (Petrol) and AGO (Diesel).⁵⁶⁸ The gap between demand and local production is met through the importation of rice from countries such as China, Thailand and the US.⁵⁶⁹ The large importation of rice puts pressure on country's trade balance and foreign currency earnings. Given the social and political significance of rice in Liberia, there is a strong need to increase domestic rice production.⁵⁷⁰

Donors' interest in rice development

For Liberia, concept notes have not been turned into donor projects. However, according to the CARD focal point, many potential donors have expressed interest when CARD Consultants conveyed to them about ensuring that Liberia move from concept notes to practical project implementation. Unfortunately they have not been able to get to the next level.

Positioning of rice development and NRDS within priority policies

According to the CARD focal point, rice is given a low priority in the country's economic policy-related documents, but it is given high priority in the country's food security-related documents. The NRDS was inspired by goals and objectives in Liberia's Food and Agriculture Policy Statement

⁵⁶³ ITU Country ICT Data (until 2015)

⁵⁶⁴ Ibid.

⁵⁶⁵ AFDB Socio Economic Database

⁵⁶⁶ Ministry of Agriculture, National Rice Development Strategy(NRDS) – Monrovia, Liberia, 2012.

⁵⁶⁷ Interview with CARD Consultant, Nov 1, 2017.

⁵⁶⁸ Ministry of Commerce & Industry, "Annual Trade Bulletin," 2016

⁵⁶⁹ Supra note 566.

⁵⁷⁰ Ibid.

developed in 2008 and is consistent with the CAADP.

Authorization status of NRDS

Liberia's NRDS has been developed and approved by the ministry in 2012. Although NRDS is a baseline document for rice development in Liberia, very little has been done in terms of implementation of the NRDS as anticipated.

Existence of champions such as high-ranking ministry officials who support NRDS

The NRDS was not fully supported by the entire Ministry. The various taskforces also did not have the capacity to function due to reasons such as the lack of human resources – only a few committed staff members were available to see through the process.

Government structure for NRDS implementation

The focal point is the Executive Director of the Ministry of Agriculture who is in charge of the development and implementation of NRDS in Liberia.

Task force members comprise officials who belong to the Ministry of Agriculture, some from research institutes, and one from an NGO. There is no implementation mechanism established by the government, and basically all meetings related to CARD are funded by the CARD Secretariat.

4.21.2. Output

Status of the NRDS process

		Status	Support by CARD
A	A-1 Formulation and launch	In progress	<ul style="list-style-type: none"> The NRDS was developed in 2012, but not approved or launched, and very little has been done in terms of implementation of the NRDS as anticipated.
	A-2 Gap analysis& prioritization and concept note formulation	Done	<ul style="list-style-type: none"> 5 concept notes were developed.
	A-3 Lobbying for funding and project formulation	Not started	<ul style="list-style-type: none"> Liberia most of the NRDS concept notes were never turn in to full proposal.
	A-4 Implementation	Not started	-
B	Rice seed strategy	In progress	<ul style="list-style-type: none"> Developed a draft seed strategy in 2016. Developed concept notes. Drafted but not approved yet.
C	Mechanization strategy	Not started	-

Figure 49 : Status of NRDS Process in Liberia

List of CARD-labeled projects

No CARD-labelled projects have been implemented in Liberia according to the CARD Secretariat.

Intervention areas

Although the projects were not implemented, the CARD focal point said that 1. Rice seed development has progressed well. The CARD initiative has spurred rice seed development in Liberia which ultimately led to the enactment of the Seed Act and the establishment of the Seed Board.

7. Research had sprung up around rice seed multiplication through the Ministry's research station, CARI and AfricaRice.

However, 5. Mechanization has been very slow, and there is currently no policy on mechanization in the country. Another area where not much work has been done is 2.fertilizer, according to the focal point.

4.21.3. Outcome

Human resource development

The training of agronomist in rice development research in the country has been a success. As a result, there are now personnel working on rice development issues in Liberia, such as through AfricaRice.

Project formulation and implementation

Contributions to increase in rice sector projects funded by the government and donors

None of the concept notes became a full proposal for project implementation. Although there were indeed projects that have been carried out, it is hard to gauge whether there has been an increase in government-funded projects due to limited time monitoring. It seems that NRDS has not yet contributed to increasing the projects.

Contributions to efficient, effective, and strategic project formulation

N/A (CARD-labeled projects were not formulated)

Contribution of the CARD focal point in promoting projects

Implementing structure for NRDS in Liberia has not been coherent and functional as unit. The focal point said that he has been lobbying by himself for rice projects.

Contributions to correlative improvements and timing adjustments between governments and donors

N/A (CARD-labeled projects were not formulated)

4.21.4. Impact

Quantitative impact

Table 60: Production, consumption, and self-sufficiency of rice in Liberia

(1000MT)	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Production of rice (paddy) FAO⁵⁷¹	295	293	296	290	291	270	237	286	309	N/A
Production of rice (paddy) USDA⁵⁷²	287	294	297	290	298	270	237	251	270	270
Production of rice (milled) USDA⁵⁷³	181	185	187	184	183	170	149	186	170	170
Consumption of	331	385	402	384	455	460	450	420	420	430

⁵⁷¹ FAO STAT database "Crops" (<http://www.fao.org/faostat/en/#data/QC>) 10/1/2018 update

⁵⁷² Calculated based on United States Department of Agriculture (USDA) PSD online database "Grains" 8/10/2017 update

⁵⁷³ USDA PSD online database "Grains" 8/10/2017 update (<https://apps.fas.usda.gov/psdonline/app/index.html#/app/downloads?tabName=default>)

rice (milled) USDA ⁵⁷⁴										
Self-sufficiency of rice ⁵⁷⁵	54.7%	48.1%	46.5%	47.9%	40.2%	37.0%	33.1%	44.3%	40.5%	39.5%

Table 61: Production targets of rice in NRDS

(1000MT)	2008	2018
Total ⁵⁷⁶	199	879

4.21.5. Success factors and challenges

Success factors

Authority of the NRDS

CARD Consultant mentioned as a success factor that at least NRDS worked as a baseline document.

Challenges

■Government

Ownership and support from high-level government officials

There was very limited commitment from the Liberian government on the NRD. Also, despite the good development of seed policy in Liberia and the fact that CARD has given the Liberian government assistance in drafting a seed strategy, the government has not responded. As a result, Liberia's seed strategy development has been slow.

Financial resources

The lack of funding at the national level to finance the planned activities has been a major challenge for the development of NRDS projects, among others.

Bureaucracy

Because of bureaucratic red tape, the approval process of the strategy documents have been slow, even though no one in the Liberian government has disagreed with the necessity of such documents.

■Other

ICT infrastructure for communication

The lack of sufficient ICT infrastructure such as computers and stable internet access has hampered smooth communication between the CARD Secretariat and the focal point.

⁵⁷⁴ Ibid.


⁵⁷⁵ Calculated based on USDA PSD online database "Grains" 8/10/2017 update

⁵⁷⁶ Supra note 566569.

4.22 Group 2 Rwanda

4.22.1. Context/Background

Basic country information

Republic of Rwanda			
Exchange rate (2017) ⁵⁷⁷	811.150 RWF = 1USD		
Land ⁵⁷⁸	26,338		
Population (2016) ⁵⁷⁹	12,988,423		
Climate ⁵⁸⁰	Temperate; two rainy seasons (February to April, November to January); mild in mountains with frost and snow possible		
Languages ⁵⁸¹ (2002 est.)	Kinyarwanda (official), French (official), English (official), Swahili (or Kiswahili, used in commercial centers), other, unspecified		
Ethnic groups (2014 est.) ⁵⁸²		Hutu (Bantu) 84%, Tutsi (Hamitic) 15%, Twa (Pygmy) 1%	
Per capita GDP (2017) ⁵⁸³		754.194	USD per capita
Per capita GDP Growth rate (2017) ⁵⁸⁴		6.1	%
Population growth rate (2016) ⁵⁸⁵		2.53	%
Age composition of population (2016 est.) ⁵⁸⁶		0-14 years: 41.53% (male 2,719,248/female 2,674,688) 15-24 years: 18.87% (male 1,226,141/female 1,225,009) 25-54 years: 32.93% (male 2,142,936/female 2,134,064) 55-64 years: 4.09% (male 249,447/female 282,225) 65 years and over: 2.58% (male 138,834/female 195,831)	
Population % between 15-54 years ⁵⁸⁷		51.8	%
Unemployment rate (both sexes; aged 15+) (2016) ⁵⁸⁸		2.4	%
FDI inflow (2015) ⁵⁸⁹		323	Million USD

⁵⁷⁷Oanda, <https://www.oanda.com/lang/ja/currency/converter/> (31st July 2017)

⁵⁷⁸CIA (Central Intelligence Agency), "The World Factbook"

⁵⁷⁹Ibid.

⁵⁸⁰Ibid.

⁵⁸¹Ibid.

⁵⁸²Ibid.

⁵⁸³IMF

⁵⁸⁴Ibid.

⁵⁸⁵CIA (Central Intelligence Agency) "The World Factbook"

⁵⁸⁶Ibid.

⁵⁸⁷Ibid.

⁵⁸⁸ILO STAT (<http://bit.ly/2oIwFux>)

⁵⁸⁹Worldbank World Development Indicators, 27/4/2017 update

Internet penetration (percentage of individuals using the Internet) (2015) ⁵⁹⁰	18	%
Mobile penetration (mobile-cellular telephone subscriptions) (2015) ⁵⁹¹	70.48	%
Consumer Price Index growth (1960-2016) ⁵⁹²	3.05	

Information on the country's rice sector

Level of rice demand

Rice started becoming popular in the 2000s and is now replacing traditional staple crops such as maize and beans, especially in the cities. The people of Rwanda consume a lot of imported rice, indicating a strong demand for rice. Per capita consumption in 2008 was 6.1 kg/year but is increasing, and is expected to reach 15.6 kg/year in 2018.⁵⁹³

The importance of rice for the economy and the food security

Rice is an important crop that is contributing to both food security and the national economy, and is therefore a priority for the government. Also, rice is seen as an income-generating crop and is becoming increasingly attractive for farmers.

Donors' interest in rice development

Compared to the time when the NRDS was formulated, donor interest in the development of the rice sector has declined. While they have invested adequately in rice, especially in infrastructure projects—most of which have recently ended or will be completed soon—some donors are shifting attention to other crops.

Positioning of rice development and NRDS within priority policies

The rice strategy was referred to in the Strategic Plan for the Transformation of Agriculture in Rwanda, Phase 3 (2012-2017) (PSTA III), with which it is in alignment. Pillar 3 of the Strategic Plan is the value chain, which covers all the areas of production including seed farm organizations and technologies. Rice is a priority and will therefore require special focus. Strategic Plans are understood to be implementation frameworks for the CAADP agenda.

Authorization status of NRDS

Donors tend to determine areas and priorities for intervention based on the topics identified in the

⁵⁹⁰ITU Country ICT Data (until 2015)

⁵⁹¹Ibid.

⁵⁹²AFDB Socio Economic Database

⁵⁹³Ministry of Agriculture And Animal Resources, "National Rice Development Strategy (2011-2018)", August 2013

Strategic Plan. Once they decide to focus on rice, the NRDS can be regarded as the master strategy, as donor groups and stakeholders have validated the document and the Ministry of Agriculture and Animal Resources (MINAGRI) has given official approval. In addition, NRDS is clearly mentioned in PSTA III.

Existence of champions such as high-ranking ministry officials who support NRDS

The then-Minister of Agriculture took the lead when Rwanda joined CARD in 2011. She was very passionate about marshland development and confident about the potential it offered the country. Some projects including Rural Community Support Project (RCSP) of KOICA were formulated as a result of her leadership.

Government structure for NRDS implementation

The CARD focal point is the Director General of Agriculture Development of MINAGRI. The NRDS taskforce members consist of the Director General of Agriculture Development of MINAGRI and an officer from the department, as well as 3 officers from the Rwanda Agricultural Board (RAB) rice program who comprise the head and other staff of the program.

Previously there was a platform for stakeholders in the rice sector for NRDS development that was organized by CARD, but this forum has not been very active since the NRDS was approved. The CARD Secretariat suggested the establishment of a Rice Steering Committee at the end of 2014 and the government agreed.

In addition to the forum set up specifically for CARD/NRDS, there are coordination meetings for the agricultural sector as a whole.

- 1) Sectoral meetings: the Agriculture Working Group is a forum held annually in which all donors participate and which is based on the Strategic Plan. Under the Working Group are sub-sector groups for discussing specific crop issues.
- 2) Seasonal meetings: a joint sector review is organized twice a year where stakeholders—including MINAGRI, the Ministry of Trade, Industry and EAC Affairs, rice millers, and farmers—discuss planning and post-harvest evaluation.

4.22.2. Output

Status of the NRDS process

		Status	Support by CARD
A	A-1 Formulation and launch	Done	<ul style="list-style-type: none"> Workshops was organized. The CARD consultant was sent to help the government/task force in drafting, identifying potential areas for rice, and developing concept notes.
	A-2 Gap analysis& prioritization and concept note formulation	Done	
	A-3 Lobbying for funding and project formulation	In progress	Assisted in bringing concept notes.
	A-4 Implementation	In progress	<ul style="list-style-type: none"> CARD consultant is sent for specific tasks as needed. Workshop was scheduled in 2017 but postponed.
B	Rice seed strategy	In progress	<ul style="list-style-type: none"> Provided technical assistance during the development of seed roadmap . The consultant will be sent to assist in the concept notes development.
C	Mechanization strategy	In progress	<ul style="list-style-type: none"> Support was provided for mechanization policy development.

Figure 5010 : Status of NRDS Process in Rwanda

List of CARD-labeled projects

These CARD-labelled projects are/were implemented in Rwanda according to the CARD Secretariat.

Table 62: List of CARD-labeled projects in Rwanda

Name of the Project	Donor	Duration	Modality	Budget	Area of Intervention (Sub-Sector)	Area of Intervention (Geographic)	Outputs/Activities
Project for Increasing Crop Production with Quality Extension Services in the Eastern Province	JICA	2010-2013	Technical cooperation	620 million Yen	Production, Extension	Ngoma	(i) The rice cultivation techniques of farmer organizations are improved; (ii) The management capacity of farmer organization is improved; (iii) Local government officers, agronomists and other players/supporters engaged in agricultural extension provide quality services.
Development of Irrigation Scheme in Ngoma District	JICA	2014-2017	Grant	1.549 billion Yen	Irrigation, Infrastructure	Ngoma	Rehabilitation of (i) hillside (120 Ha) irrigation and (ii) marshland (35 Ha) irrigation in Ngoma district
Rural	KOIC	2014-	Grant	12.5	Extension of	Southern and	(i) Marshland area to be used for rice

Community Support Project (RCSP)	A	2018		million USD	rice cultivation area, Production	Eastern provinces	cultivation will be increased by 700 Ha; (ii) The rice cultivation capacity of farmers will be improved
Smallholder Market-oriented Agriculture Project (SMAP)	JICA	2014-2019	Technical Cooperation	8 million USD	Production, Extension	Southern (3 districts) and Eastern (4 districts) provinces	(i) Improve market orientation of rice growers; (ii) Enhance extension services
the Project for Rehabilitation of Irrigation Facilities in Rwamagana District	JICA	2017-2022	Grant	2.077 billion Yen	Irrigation, Infrastructure	Rwamagana District	Improve the agricultural productivity in Rwamagana District, Eastern Province by irrigation infrastructure rehabilitation.

Intervention areas

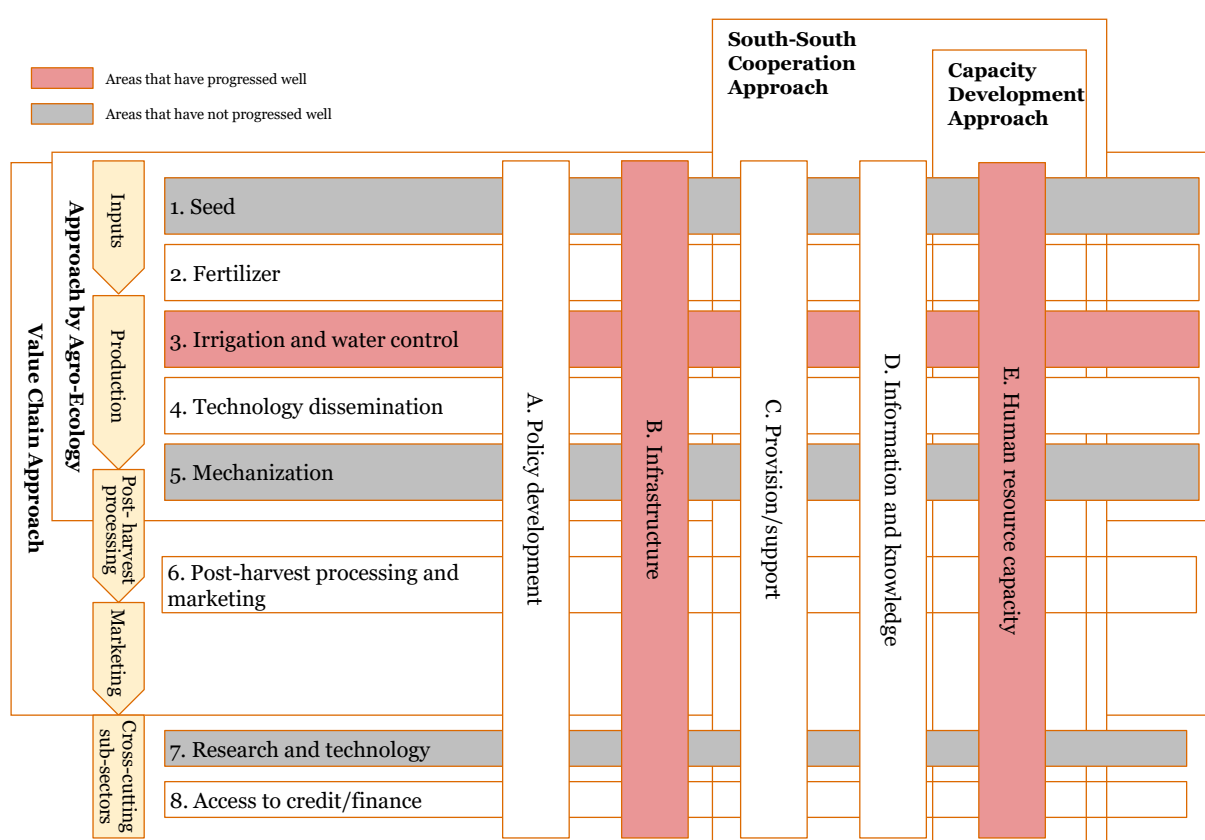


Figure 51 : Intervention Areas in Rwanda

According to the focal point, the government has achieved some progress in marshland development, which has been their main focus in past years. For marshland development, Rwanda invested in the area of 3. Irrigation and water control by building B. Irrigation infrastructures and E. Deploying irrigation engineers to help farmers with water distribution. Such interventions (RSSP1 and 2) rehabilitated 6,440 ha of marshlands areas for rice cultivation, that are now producing 77,280 tons of

paddy rice per year.⁵⁹⁴

1. Production of quality seed and *7. Research* of new local brands are the areas that require more interventions and improvements. Sufficient amounts of good quality seeds are not available due to the absence of an efficient public seed production and distribution system. The research capacity of Rwanda is not high enough to enable the creation of new seeds by local brands. The government has no choice but to introduce seeds from Asia (e.g. China), which are resistant to temperature but not necessarily preferred by the local population.

Despite efforts to accelerate *5. Mechanization* (production-level), the government officials consider its progress to have been slow up until now because farmers are still following traditional rice cultivation practices.

4.22.3. Outcome

Human resource development

CARD provided training opportunities to Rwandan rice researchers and research technicians as well as extension officers to improve skills in the rice value chain. This training was conducted in partnership with IRRI and JICA. One example of good capacity development experience is that Rwandan scientists learned about seed production and breeding technologies from the Philippines through this training.

Project formulation and implementation

Contributions to increase in rice sector projects funded by the government and donors

MINAGRI understands that government funding as well as donor funding increased with regard to marshland development. At the same time, not all of the projects were started after the launch of the NRDS, and so they consider NRDS to have been partially, but not solely, responsible for the increase in rice projects.

In relation to donor interest, according to the CARD focal point, it was originally only a few development partners who were driving rice development in the country. They believe that the NRDS contributed to attracting more donors and supported their understanding of the situation regarding rice.

⁵⁹⁴ Ministry of Agriculture and Animal Resources, "LWH-RSSP," <http://www.lwh-rssp.minagri.gov.rw/rssp/>

Contributions to efficient, effective, and strategic project formulation

NRDS facilitated the articulation of the government's desires and compiled them into a document in an actionable manner. People believe that thanks to the existence of the NRDS, donors were able to identify where the government really needs external support. Hence better planning, coordination among stakeholders, and efficient allocation of budget were possible. However, in terms of the formulation and implementation of projects, little activity has been observed since about 3 years ago.

Contribution of the CARD focal point to the promotion of projects

Initially, a taskforce was formed and some concept notes were transformed into projects in collaboration with the CARD Secretariat. Some respondents said that there was a stronger commitment from the government at that time. Nowadays, marketing of concept notes is not always possible for the CARD focal point, who oversees a diverse range of crops without a coordinator who can focus exclusively on rice.

Contributions to correlative improvements and timing adjustments between governments and donors

No concrete examples were mentioned.

4.22.4. Impact

Quantitative impact

Table 63: Production, consumption, and self-sufficiency of rice in Rwanda

(1000MT)	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Production of rice (paddy) FAO ⁵⁹⁵	82	81	67	81	84	94	73	97	111	N/A
Production of rice (paddy) USDA ⁵⁹⁶	82	82	68	82	85	89	N/A	N/A	N/A	N/A
Production of rice (milled) USDA ⁵⁹⁷	53	53	44	53	55	58	N/A	N/A	N/A	N/A
Consumption of rice (milled) USDA ⁵⁹⁸	78	73	79	93	115	98	N/A	N/A	N/A	N/A
Self-sufficiency of rice ⁵⁹⁹	67.9%	72.6%	55.7%	57.0%	47.8%	59.2%	N/A	N/A	N/A	N/A

⁵⁹⁵ FAO STAT database "Crops" (<http://www.fao.org/faostat/en/#data/QC>) 10/1/2018 update

⁵⁹⁶ Calculated based on United States Department of Agriculture (USDA) PSD online database "Grains" 8/10/2017 update

⁵⁹⁷ USDA PSD online database "Grains" 8/10/2017 update, for milling rate 2013.

(<https://apps.fas.usda.gov/psdonline/app/index.html#/app/downloads?tabName=default>)

⁵⁹⁸ Ibid.

⁵⁹⁹ Calculated based on USDA PSD online database "Grains" 8/10/2017 update

Table 64: Production targets for rice in the NRDS

(1000 MT)	2008	2018
Irrigated⁶⁰⁰	66	369
Rain-fed upland⁶⁰¹	-	-
Rain-fed lowland⁶⁰²	-	5
Total	66	374

4.22.5. Success factors and challenges

Success factors

■Government

The importance of rice for the national economy and/or food security

Rice is a priority crops in Rwanda as a commodity that contributes to food security and the economy, which has resulted in investment by the government and donors in marshland development

Ownership and support from high-level government officials

The Minister of Agriculture took the lead in formulating projects for marshland development, and the area of irrigated marshland has doubled since the 2000s.

■Other

Other government policies

The government subsidizes fertilizers. In addition, at the end of each rice season, the government invites representatives of farmers and processors to a meeting organized to discuss and fix the price of paddy rice. Such subsidies and meetings (and fair prices decided during these meetings) consequently motivate farmers to continue cultivating rice in the following season.

Challenges

■Government

Authority/level of CARD focal point

A high-ranking official who is responsible for multiple crops inevitably devotes little time to one crop (rice). Also, when the government was invited to the CARD General Meeting, there were difficulties in deciding who in the Ministry and RAB should be participating.

Continuity of CARD focal point/taskforce/high-ranking officials

The NRDS is not necessarily well-shared within the government due to changes in human resources, including the Minister of Agriculture. There was little time available for a handover briefing for the

⁶⁰⁰ Supra note 593.

⁶⁰¹ Ibid.

⁶⁰² Ibid.

new CARD focal point.

Number and capacity of government officials

Full implementation of the NRDS has been limited due to the lack of sufficient personnel within MINAGRI, especially under the CARD focal point as well as related institutions such as the Rwanda Agriculture Board.

Government structure for implementation

A Rice Steering Committee has not yet been established to mobilize resources, facilitate coordination, and follow-up on NRDS implementation.

Financial resources

Not all the activities described in the NRDS are implemented due to financial constraints within MINAGRI.

■CARD Secretariat

Provision of personnel

Dispatching CARD Consultants was helpful, but having permanent staff in the country or more frequent visits would have been better for increasing the visibility of CARD.

Financial resources

CARD should be extended with a larger budget with which to operate.

Number and capacity of human resources

Due to the limited number of staff under the CARD Secretariat, the time allocated for each process was not sufficient to carry out the planned work.

■SC members and Partner Organizations

Incentive to participate

The involvement and ownership of development partners in Rwanda was not especially high. Some donors are shifting to other crops as they believe they have invested sufficiently in rice and now should look at other crops, too.

Number and capacity of human resources

Communication between headquarters and country offices is a big challenge.

■Other

Indicators and baseline data

Once NRDS is established, the major activity of the CARD Secretariat is to organize workshops. However, the current system does not provide baseline data for understanding the outcomes/impacts of such workshops. For instance, records of the number of participants at workshops as well as monitoring the level of participants' understanding of the topics discussed would be helpful in demonstrating the contribution made by CARD.


Awareness of CARD

The awareness and visibility of CARD in the country, particularly by donors, is extremely limited. CARD/NRDS is not discussed in key meetings such as agricultural working groups where relevant government agencies and donors gather regularly.

4.23 Group 2: Togo

4.23.1. Context/background

Basic Information of the country

Togolese Republic			
Exchange rate (2017) ⁶⁰³	601.999 XOF=1USD		
Land ⁶⁰⁴	56,785 sqkm		
Population (2016) ⁶⁰⁵	7,756,937		
Climate ⁶⁰⁶	Tropical; hot, humid in south; semiarid in north		
Languages ⁶⁰⁷	French, Ewe and Mina (the two major African languages in the south), Kabye (sometimes spelled Kabiye) and Dagomba (the two major African languages in the north)		
Ethnic Groups (2014 est.) ⁶⁰⁸		African (37 tribes; largest and most important are Ewe, Mina, and Kabre), European and Syrian-Lebanese	
Per capita GDP (2017) ⁶⁰⁹		590.312	USD per capita
Per capita GDP Growth rate (2017) ⁶¹⁰		5	%
Population growth rate (2016) ⁶¹¹		2.66	%
Age composition of population (2016 est.) ⁶¹²	0-14 years: 40.44% (male 1,573,363/female 1,563,267) 15-24 years: 19.34% (male 749,002/female 751,571) 25-54 years: 32.58% (male 1,255,524/female 1,271,804) 55-64 years: 4.27% (male 156,249/female 175,089) 65 years and over: 3.37% (male 112,845/female 148,223)		
Population % between 15-54 years ⁶¹³		51.92	%
Unemployment rate (both sex, age15+) (2016) ⁶¹⁴		6.8	%
FDI Inflow (2015) ⁶¹⁵		258	Million USD

⁶⁰³ Oanda <https://www.oanda.com/lang/ja/currency/converter/> (31st July 2017)

⁶⁰⁴ CIA (Central Intelligence Agency) "The World Factbook"

⁶⁰⁵ Ibid.

⁶⁰⁶ Ibid.

⁶⁰⁷ Ibid.

⁶⁰⁸ Ibid.

⁶⁰⁹ IMF

⁶¹⁰ Ibid.

⁶¹¹ CIA (Central Intelligence Agency) "The World Factbook"

⁶¹² Ibid.

⁶¹³ Ibid.

⁶¹⁴ ILO STAT (<http://bit.ly/2oIwFux>)

⁶¹⁵ Worldbank World Development Indicators, 27/4/2017 update

Internet penetration (% of Individuals using the Internet) (2015) ⁶¹⁶	7.12	%
Mobile penetration (Mobile-cellular telephone subscriptions) (2015) ⁶¹⁷	67.71	%
Consumer Price Index growth (1960-2016) ⁶¹⁸	2.22	

Information on the country's rice sector

Level of rice demand

In Togo, rice consumption ranks third after maize and sorghum, and it is widely consumed in both the rural and urban areas. The increase in consumption per capita of this commodity in Togo is growing strongly, with an average rate of population increase of 2.4% per annum.⁶¹⁹ The national annual per capita consumption of white rice averages 15 kg, representing 90,000 tons for a population of 6 million inhabitants.⁶²⁰

The importance of rice for the economy and food security

Rice has gained importance in Togo, although in some sense, it is not a high ranked crop in the ministry. Yet, it remains as one of the main crops in the national strategy, and the rice sector has been identified to be among the promising sectors chosen to revive Togolese agriculture. The development of rice production in Togo is a three-pronged issue: sovereignty and food security, the reduction of the volume of imports, and economic and social growth.

According to available statistics, local rice production can supply barely half of the country's needs, and the deficit is being made up by imports. These imports rose from 36,270 tons in 2000 to 73,976 tons in 2008, an increase of 103%. In terms of value, the cost of the imports during the same period rose from 2.048 billion FCFA to 4.166 billion FCFA.⁶²¹

Donors' interest in rice development

Although many projects have been initiated and financed after the finalization of NRDS in 2010 including those of IFAD, WB, the West African Development Bank (BOAD) and the Arab Bank for Economic Development in Africa (BADEA), due to the instability of the government, the donors/financial partners cut relations with Togo for some years prior to 2015. The government seems to have been able to rebuild trust with financial partners through implementing the National

⁶¹⁶ ITU Country ICT Data (until 2015)

⁶¹⁷ Ibid.

⁶¹⁸ AFDB Socio Economic Database

⁶¹⁹ Republic of Togo, Ministry of Agriculture, Livestock and Fisheries (MAEP), "National Rice Development Strategy

⁶²⁰ Ibid.

⁶²¹ Ibid.

Agriculture and Food Security Investment Program (PNIASA).

Positioning of rice development and NRDS within priority policies

The National Agricultural Investment and Food Security Plan (PNIASA) which was rooted in the ECOWAP/CAADP indicates that the Togolese government has been placing the emphasis on growth market crops such as maize, rice, sorghum, cassava, yam, and beans.⁶²² . The NRDS has been aligned with CAADP, and the PNIASA reflects the contents of NRDS. As the second phase of the CAADP document, the PNIASAN (National Agriculture and Food Security Investment Program) was created as a framework for intervention in the agricultural sector up to 2026. According to the government officials, the NRDS is being implemented through the PNIASAN projects.

Authorization status of NRDS

NRDS finalized and validated in November 2010. The country's seed strategy was nationally validated by the secretary general in 2016.

Existence of champions such as high-ranking ministry officials who support NRDS

The implementation of projects to support the rice sector in Togo is linked to the political will of the Togolese government. However, the government does not have a rice champion due to several changes of the government and focal points.

Government structure for NRDS implementation

An officer at the Direction des semences agricoles et plants, the Ministry of Agriculture, Livestock and Hydraulics is the focal point and is in charge of the development and implementation of NRDS.

The current focal point is originally a seed focal point. Generally, NRDS and seed focal points are different; however, due to the unstable structure of focal points, the seed focal point is currently playing both roles.

As alluded to, the institutional framework on NRDS development is one of the main challenges. This is caused mainly due to the government having changed the focal points and the NRDS task force in particular many times. Contrary to the seed task force's admirable performance, NRDS task force is not functional and dynamic.

⁶²² Republique Togolaise, Le ministère de l'agriculture, de l'élevage et de la pêche, "le Programme national d'investissement agricole et de sécurité alimentaire (PNIASA)"

4.23.2. Output

Status of the NRDS process

		Status	Support by CARD
A	A-1 Formulation and launch	Done	<ul style="list-style-type: none"> NRDS finalized and validated in November 2010.
	A-2 Gap analysis & prioritization and concept note formulation	In progress	<ul style="list-style-type: none"> The government has started to draft concept notes after the validation and prioritized projects.
	A-3 Lobbying for funding and project formulation	Done	<ul style="list-style-type: none"> Some projects have been initiated and financed. Assisted in bringing concept notes. Visited financial partners with the task force.
	A-4 Implementation	In progress	<ul style="list-style-type: none"> There are 11 CARD-labeled projects. The government is increasing the number of rice sector projects with other funding schemes. CARD consultant is sent for specific tasks as needed. Monitor implementation.
B	Rice seed strategy	In progress	<ul style="list-style-type: none"> Seed strategy national validation by the secretary general in 2016. Started to draft concept notes after the validation and prioritized projects, and they are not approved yet. Provided technical assistance in development of seed strategy. Consultant will be sent to assist with concept notes development.
C	Mechanization strategy	Not started	-

Figure 52 : Status of NRDS Process in Togo

List of CARD-labeled projects

These CARD-labelled projects are/were implemented in Togo according to the CARD Secretariat.

Table 65: List of CARD-labeled projects in Togo

Name of the Project	Donor	Duration	Modality	Budget	Area of Intervention (Sub-Sector)	Area of Intervention (Geographic)	Outputs/Activities
Development Project of the Lower Mono Valley (PBVM)	BADEA, Banque Ouest Africaine de Développement (BOAD), IMF, Togo	2006-2016	Loan	1.5 billion FCFA	Irrigation, Infrastructure, Mechanization, Post-harvest Processing	Prefecture of Bas-Mono	Rehabilitation of 89 ha, and development of 496.5 ha of irrigated perimeter. Supply of agricultural equipment and machinery: cultivators, combine harvester, construction of storage warehouse, and development of access roads
Agricultural Land Improvement and Rehabilitation Project of the Mission-Tové (PARTAM)	BOAD, Togo	2006-2017	Loan	9.76 billion FCFA	Irrigation, Infrastructure, Mechanization, Post-harvest Processing, Access to Credit	Prefecture of Zio	Development of 600 ha of irrigated perimeter. Supply of farm machinery: farm tractors, combine harvester, sorting machine, construction of a storage shop, and development of access roads
Kara Region Rice Perimeter	Arab Bank for Economic	2011-2016	Loan	2.95 billion	Irrigation, Infrastructure,	Region of Kara	Development of 448 ha shallows on 8 sites. /Opening of 9, 25 km access

Development Project (PDPR-K)	Development in Africa (BADEA), Togo			FCFA	Extension, Mechanization, Post-harvest Processing		roads. Construction of 3 stores and 8 drying areas. Acquisition of 4 tractors with accessories, 4 hullers, 5 threshing machines, and 11 power tillers with accessories
Project of Support to Agricultural Development in Togo (PADAT)	IFAD, Global Agriculture and Food Security Program (GAFSP), FEM	2011-2016	Loan, Grant	38.3 billion FCFA	Irrigation, Infrastructure, Mechanization, Post-harvest Processing	Whole country	53,500 kits of fertilizers and seeds distributed. 613 training center for farmers with the building capacity of 2,912 OP. /Distribution of 100 hullers, 700 gins, 250 rawers / presses and 150 threshing machines for rice. /Construction of stores, equipment shelters, hangars, and micro irrigation kits. /Reforestation of 846 hectares.
Indian Project for Acquisition of Agricultural Equipment	India, Togo	2012-2015	Loan	6.5 billion FCFA	Mechanization	Whole country	172 tractors purchased. 5 excavators purchased. 5 hydraulic excavators and other agricultural equipment purchased.
Agricultural Productivity Program in West Africa (PAPAO-Togo)	IDA/WB	2012-2016	Grant	8.12 billion FCFA	Irrigation, Infrastructure, Productivity Improvement, Extension,	Whole country	Testing and providing of improved technologies. Creation of 3 ESOP seeds. Distribution of quality rice seed to cover 111050 ha. /Strengthening the skills of the participants (training of researchers and technicians)
PASA (Agricultural Sector Support Program)	IDA/WB	2012-2017	Loan	25.87 billion FCFA	Post-harvest Processing	Whole country	Support for the creation of 10 new Service Firms in the POs (ESOP-Riz)
Rural Development Project of the Djagblé Plain (PDRD)	BADEA, BID, GdT	2013-2016	Loan	9.6 billion FCFA	Irrigation, Infrastructure, Extension, Mechanization, Post-harvest Processing	Djagblé Plain	Rehabilitation of 89 ha, and development of 496.5 ha of irrigated perimeter. Supply of agricultural machinery and equipment: farmers, threshing machine, construction of storage warehouse, development of access roads, and building capacity of 2000 workers.
Promotion and Dissemination of the Intensive Rice Farming System (Sri) in Agricultural Production Systems in Togo	Worldbank, Togo	2014-2016	Grant	187 000 Euros	Extension	Whole country	Training in the production of rice using the SRI technique. /Installation of the SRI plots on 832.5 ha distributed throughout the national territory.
Agricultural Land Planning Project of the Oti Plain (PATA-Oti)	BADEA, OPEC Fund for International Development (OFID), GdT	2016-2019	Loan	10.75 billion FCFA	Infrastructure, Mechanization, Marketing	Prefectures of the Oti	Development of 776 ha managed irrigated areas, and 71000 ha lowlands developed for rainfed cultivation. Acquisition of 11 tractors. Development of 5.5 km of agricultural tracks.
Project to Support the Structuring and Strengthening of Governance Capacities of the Rice Sector in Togo	UEMOA, Togo	Unkown (3 years)	Grant	0.23 billion FCFA	Structuring of rice producers	Whole country	Organization of rice farmers from grass-roots level to the national (federal) level

Intervention areas

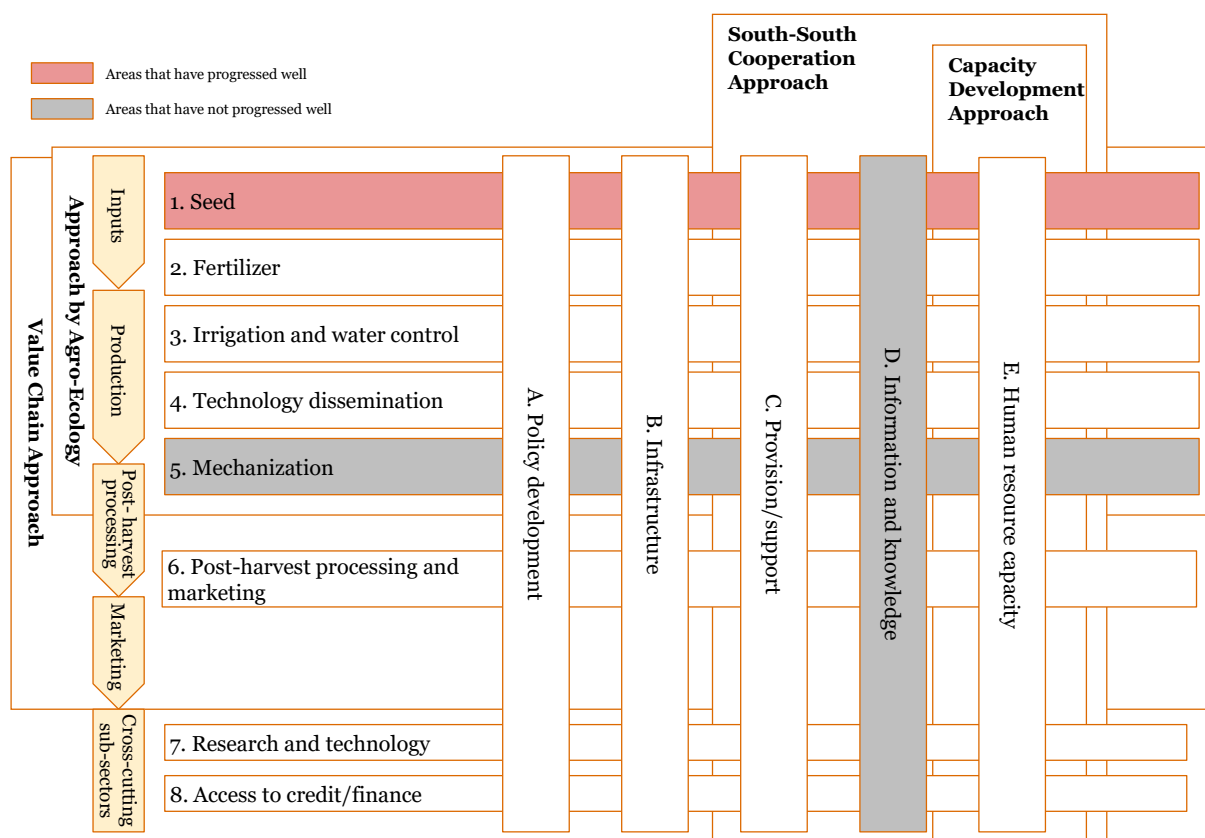


Figure 53 : Intervention Areas in Togo

The focal point considers that the improved fields are 1. Seed production and organization among producers. Producers' centers now belong to a network and all producers use the selected seeds. Seed and Plant Improvement Institute, and its control laboratory have been established, and this allows the seed sector to rejuvenate for a period of time, even when there is a shortage.

However, 5. Mechanization has shown little progress. The number of tractors available in the fields remains insufficient for producers at the time of plowing and harvesting.

There is D. Insufficient information at the sector level, such as information on the availability of seed stock, seed value and others. Very few rice grain producers have access to rice seeds at the right time either because of a lack of information on the availability of stock, or because of a lack of knowledge on the value of the seed whose price is often deemed too high compared to the subsidized price or market price of grain rice.

Another area that was raised by the focal point was that the partnership between seed producers and grain rice producers remains to be strengthened. Very often, seed production does not meet the demand for improved seeds. The stakeholders are not organized enough to develop business relationships.

4.23.3. Outcome

Human resource development

Through its consultants, the CARD initiative's technical support has strengthened government efforts in building the capacity of researchers. Following the preparation of the concept notes, these project documents are submitted to Togo's technical and financial partners. If there is funding for these projects, researchers will work with farmers to develop the rice sector in Togo.

Project formulation and implementation

Contributions to increase in rice sector projects funded by the government and donors

In regard to Togo, there were already initiatives on rice development but the CARD initiative's involvement has reinforced this existing initiative by drawing up and updating the NRDS. The government is also increasing the number of rice sector projects base on NRDS with other funding schemes (e.g. the Project to Support Agricultural Development in Togo implemented in collaboration with the West African Economic and Monetary Union (UEMOA)).

Further, drawing up the NRDS has significantly contributed to an increase of donor-funded projects as this strategy introduced a new development model for the rice sector, making the sector more attractive and more profitable.

Contributions to efficient, effective, and strategic project formulation

Projects are now well-planned, and they endorse the notion of management which is focused on results.

Contribution of the CARD focal point in promoting projects

The increase in the number of projects related to rice is mainly due to the priority given by the government to the rice sector. The focal point has contacted technical and financial partners to discuss funding the projects that were the outcome of the concept notes on rice seed.

Contributions to correlative improvements and timing adjustments between governments and donors

There were not concrete evidence suggesting improved correlation and timing, although the

government seed the improved synergies through the PNIASA and PNIASAN.

4.23.4. Impact

Quantitative impact

Table 66: Production, consumption, and self-sufficiency of rice in Togo

(1000MT)	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Production of rice (paddy) FAO⁶²³	86	121	110	112	161	260	148	141	137	N/A
Production of rice (paddy) USDA⁶²⁴	86	120	111	112	162	154	146	154	123	123
Production of rice (milled) USDA⁶²⁵	56	78	72	73	105	63	95	77	80	80
Consumption of rice (milled) USDA⁶²⁶	136	168	172	168	215	163	185	227	230	230
Self-sufficiency of rice⁶²⁷	41.2%	46.4%	41.9%	43.5%	48.8%	38.7%	51.4%	33.9%	34.8%	34.8%

Table 67: Production targets of rice in NRDS

(1000MT)	2008	2018
Irrigation fed⁶²⁸	26	70
Rain fed highland⁶²⁹	9	23
Rain fed lowland⁶³⁰	51	140
Total	86	233

Qualitative impact

Establishment of other partner collaborations

Support from the CARD initiative also paved the road for the establishment of collaborations with other partners such as the Food and Agriculture Organization (FAO) and the United Nations Development Program (UNDP) in Togo, to whom the project proposals that were the outcome of the concept notes on rice seed were submitted for funding.

⁶²³ FAO STAT database "Crops" (<http://www.fao.org/faostat/en/#data/QC>) 10/1/2018 update

⁶²⁴ Calculated based on United States Department of Agriculture (USDA) PSD online database "Grains" 8/10/2017 update

⁶²⁵ USDA PSD online database "Grains" 8/10/2017 update

(<https://apps.fas.usda.gov/psdonline/app/index.html#/app/downloads?tabName=default>)

⁶²⁶ Ibid.

⁶²⁷ Calculated based on USDA PSD online database "Grains" 8/10/2017 update

⁶²⁸ Supra note 619.

⁶²⁹ Ibid.

⁶³⁰ Ibid.

4.23.5. Success factors and challenges

Success factors

■Government

Authority/level of CARD focal point

NRDS has been aligned with CAADP, and the PNIASA/ PNIASAN is based on the content of NRDS. Any project that is funded by development partners should receive an approval from the general secretary who is a strategic coordinator of PNIASA/ PNIASAN. This is a well-structured process, and it has contributed to the implementation of projects under the PNIASA/ PNIASAN which led to the implementation of NRDS.

Challenges

■Government

Government structure for implementation

The institutional framework is one of the main challenges that needs to be addressed. This is due mainly by the instability of the government causing many changes of focal points especially for the NRDS task force - contrary to the Seed Task force's admirable function, NRDS task force is not dynamic and functioning well.

Ownership and support from high-level government officials

The CARD in Togo should be more national government-driven. As this initiative is a major tool for the Togo government to develop the rice sector, it should not be regarded as a "JICA project".


Incentives for rice development promotion

There is lack of financial incentives for taskforce members to promote implementation. The task force's motivation is largely affected by provision of a budget or subsidies for their activities. For example, whether the task force receives a fee for coffee break at monthly meetings has a large impact on their motivation to develop and implement the NRDS, among others.

4.24 Group 2: Zambia

4.24.1. Context/Background

Basic country information

Republic of Zambia			
Exchange rate (2017) ⁶³¹	8.82580 ZMW = 1USD		
Land ⁶³²	752,618		
Population (2016) ⁶³³	15,510,711		
Climate ⁶³⁴	Tropical		
Languages ⁶³⁵	English (official) 1.7%, Bembe 33.4%, Nyanja 14.7%, Tonga 11.4%, Lozi 5.5%, Chewa 4.5%, Nsenga 2.9%, Tumbuka 2.5%, Lunda (North Western) 1.9%, Kaonde 1.8%, Lala 1.8%, Lamba 1.8%, Luvale 1.5%, Mambwe 1.3%, Namwanga 1.2%, Lenje 1.1%, Bisa 1%, other 9.7%, unspecified 0.2%		
Ethnic groups (2012 est.) ⁶³⁶		African 99.4% (predominantly Shona; Ndebele is the second largest ethnic group), other 0.4%, unspecified 0.2%	
Per capita GDP (2017) ⁶³⁷	1342.215	USD per capita	
Per capita GDP Growth rate (2017) ⁶³⁸	3.5	%	
Population growth rate (2016) ⁶³⁹	2.94	%	
Age composition of population (2016 est.) ⁶⁴⁰	0-14 years: 46.08% (male 3,590,466/female 3,556,756) 15-24 years: 20% (male 1,550,183/female 1,552,706) 25-54 years: 28.65% (male 2,239,661/female 2,204,823) 55-64 years: 2.91% (male 211,039/female 240,156) 65 years and over: 2.35% (male 158,827/female 206,094)		
Population % between 15-54 years ⁶⁴¹	48.65	%	

⁶³¹ Oanda, <https://www.oanda.com/lang/ja/currency/converter/> (31st July 2017)

⁶³² CIA (Central Intelligence Agency), "The World Factbook"

⁶³³ Ibid.

⁶³⁴ Ibid.

⁶³⁵ Ibid.

⁶³⁶ Ibid.

⁶³⁷ IMF

⁶³⁸ Ibid.

⁶³⁹ CIA (Central Intelligence Agency) "The World Factbook"

⁶⁴⁰ Ibid.

⁶⁴¹ Ibid.

Unemployment rate (both sexes, aged 15+) (2016) ⁶⁴²	7.4	%
FDI inflow (2015) ⁶⁴³	1583	Million USD
Internet penetration (percentage of individuals using the Internet) (2015) ⁶⁴⁴	21	%
Mobile penetration (mobile-cellular telephone subscriptions) (2015) ⁶⁴⁵	74.47	%
Consumer Price Index growth (1960-2016) ⁶⁴⁶	8.9	

Information on the country's rice sector

Level of rice demand

Rice is becoming an important staple food in Zambia, as evidenced by its increased consumption both in terms of total volume as well as on a per capita basis. In the 10 years between 2005/6 and 2014/15, the total consumption of rice increased from 24,673 MT to 59,728 MT, and per capita consumption increased from 2.15kg to 4.11kg.⁶⁴⁷ With the increase in population and per capita consumption anticipated, it is expected that rice consumption will continue to grow in the coming years.⁶⁴⁸

The importance of rice for the economy and food security

Although rice production has also increased within the same period - from 13,964 MT in 2005/6 to 25,514 MT in 2014/2015, it has not kept pace with consumption growth, and the deficit was met by imports, mainly from Asia.⁶⁴⁹ Currently rice is the only crop with a deficit, and this deficit has been increasing each year, putting increasing strain on the trade balance, and food security.

Increased rice production is also regarded as a contributing factor in enhancing the living standards of farm households. Over 70% of the population depends on agriculture for their livelihoods and 67% of the labor force is engaged in agriculture.⁶⁵⁰ In a country that has mainly been producing maize, rice is important for crop diversification and sustainable agriculture.

Donors' interest in rice development

Although rice is still a relatively new crop in Zambia, donors such as JICA, FAO, the WB, the AfDB, and IFAD have rice projects or projects with rice components, indicating their interest in rice

⁶⁴²ILO STAT (<http://bit.ly/2oIwFux>)

⁶⁴³Worldbank World Development Indicators, 27/4/2017 update

⁶⁴⁴ITU Country ICT Data (until 2015)

⁶⁴⁵Ibid.

⁶⁴⁶AfDB Socio Economic Database

⁶⁴⁷The Ministry of Agriculture, "Second National Rice Development Strategy 2016-2020", July 2016

⁶⁴⁸Ibid.

⁶⁴⁹Ibid.

⁶⁵⁰Ibid.

development in the country.

Positioning of rice development and NRDS within priority policies

The Ministry of Agriculture (MA) has recognized rice as a strategic commodity that contributes to food security and the reduction of import bills, in addition to contributing to improvements in income and employment for rural communities. This recognition has led to rice being identified as one of the 9 crops supported by the Farmer Input Support Program (FISP) along with maize, sorghum, groundnuts, soy beans, sunflower, cotton, and orange maize. Rice is also recognized as a crop targeted by the Food Reserve Agency.

The NRDS is aligned with the government's National Agriculture Investment Plan (NAIP) under the CAADP.

Authorization status of NRDS

The NRDS was revised and approved by both the Minister of Agriculture and the Permanent Secretary in July 2016. A wide range of stakeholders were invited to the validation meeting. Furthermore, about 500 copies were distributed to other ministries, and agriculture-related officials in every region and sub-region of Zambia were given copies. Copies were also quickly shared with members of parliament to ensure awareness and recognition.

Existence of champions such as high-ranking ministry officials who support NRDS

Zambia understandably does not yet have a "rice champion" as rice is a relatively new crop in the country. However, the Permanent Secretary is very receptive to CARD support and through sensitization, increased support is expected and future champions will be nurtured.

Government structure for NRDS implementation

The Deputy Director, Crop Production Branch, Department of Agriculture is appointed as the CARD focal point and headed the taskforce for NRDS development.

The Zambia Consortium for Accelerated Rice Development (ZCARD) was established in order to oversee the implementation of the NRDS, ensuring stakeholder coordination and lobbying for resources. Members include both public and private sector players appointed by the Permanent Secretary of the MA. The Permanent Secretary initially chaired ZCARD, but the role was later delegated to the Director of the Department of Agriculture due to the Permanent Secretary's busy schedule. The Agricultural Consultative Forum (ACF), an NGO, functions as the ZCARD Secretariat.

4.24.2. Output

Status of the NRDS process

		Status		Support by CARD
A	A-1 Formulation and launch	Done	<ul style="list-style-type: none"> The first NRDS was developed and approved by the MA in 2011. It was then revised and approved by the MA, and validated by stakeholders in 2016. 	<ul style="list-style-type: none"> Technical staff (mainly CARD consultants) were dispatched to Zambia, a technical framework (including NRDS templates) was provided, examples of NRDS from other countries were shared, and forums for focused discussion were provided through working weeks.
	A-2 Gap analysis & prioritization and concept note formulation	Done	<ul style="list-style-type: none"> Concept notes were developed and revised alongside the NRDS (concept notes for NRDS II (8 in total) addresses areas which were not addressed by the first set of concept notes). 	
	A-3 Lobbying for funding and project formulation	In progress	<ul style="list-style-type: none"> NRDS II was shared with various potential donors and partners at the validation meeting. The next step is to refine some of the concept notes and to make specific proposals to potential donors. 	<ul style="list-style-type: none"> Plans to accompany donor visits with ZCARD representatives. CARD consultant is maintaining frequent contact with donors to sensitize them and collect information to enable strategic fund matching.
	A-4 Implementation	In progress	<ul style="list-style-type: none"> There are 3 CARD-labeled projects in Zambia. The limited implementation of NRDS I was due to the non-existence of an implementation framework. With NRDS II, an implementation framework has been put into place. 	<ul style="list-style-type: none"> Oversees implementation through visiting CARD consultant.
B	Rice seed strategy	In progress	<ul style="list-style-type: none"> Currently in the process of development and is near completion. 	<ul style="list-style-type: none"> Provided technical assistance and forums for focused discussion.
C	Mechanization strategy	Not started	-	-

Figure 54 : Status of NRDS Process in Zambia

List of CARD-labeled projects

These CARD-labelled projects are/were implemented in Zambia according to the CARD Secretariat.

Table 68: List of CARD-labeled projects in Zambia

Name of the Project	Donor	Duration	Modality	Budget	Area of Intervention (Sub-Sector)	Area of Intervention (Geographic)	Outputs/Activities
Food Crop Diversification Support Project Focusing on Rice Production (FoDis-R)	JICA	2012-2015	Technical cooperation	210 million Yen	Research, extension, seed, stakeholder linkages, marketing	Eastern Lusaka, Southern, Western, Northern, and Muchinga provinces	(i) Strengthen ZARI research capabilities in rice cultivation and rice-seed breeding; (ii) Utilize the findings and recommendations of research on extension work in targeted areas; (iii) Improve the link between research and extension at MACO (Ministry of Agriculture and Co-operatives) and at the field level
Technical Cooperation Project on Community-based Smallholder Irrigation (T-COBSI)	JICA	2013-2017	Technical Cooperation	212 million Yen	Irrigation, Capacity building	Whole country	(i) Through hands-on experience, practical skills in design, construction, operation, and maintenance of simple and permanent irrigation facilities for smallholder irrigation schemes are transferred to Technical Staff from TSB (ii) Through hands-on experience, practical skills in

							construction, operation, and maintenance of simple and permanent irrigation weirs for smallholder irrigation weirs are transferred to MoA extension officers. (iii) Knowledge and skills of farmers in irrigated farming and operation and maintenance of simple and upgraded permanent irrigation schemes are improved.
Rice Dissemination Project	JICA	2015-2019	Technical Cooperation	367 million Yen	Capacity Building (Research), Extension, Production packages, Collaboration with Stakeholders	Northern, Luapula, Muchinga, Western, Eastern, Copper-belt and Lusaka provinces	(i) Effective technical packages for rice cultivation are formulated (ii) Capacity to conduct extension activities is strengthened (iii).Capacity to implement research activities are strengthened (iv) Collaboration among the stakeholders in rice subsector and their involvement are strengthened

Intervention areas

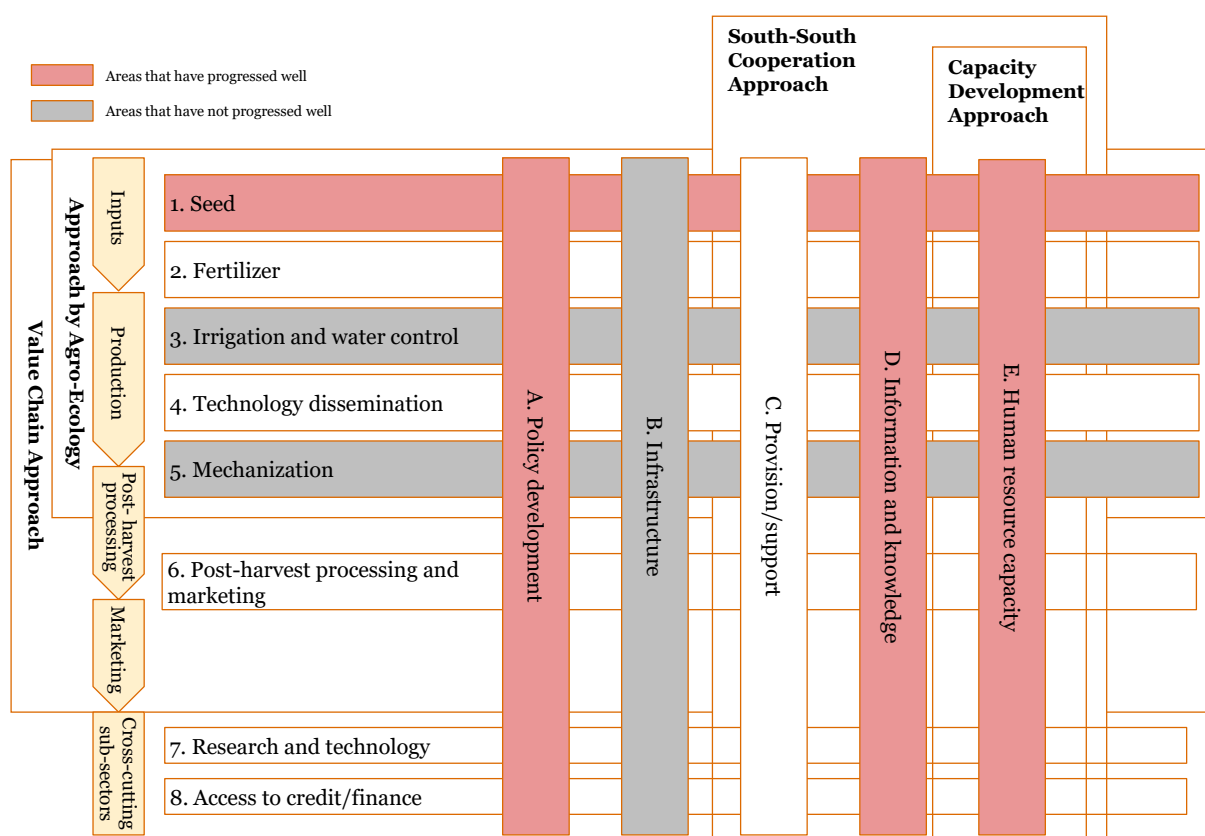


Figure 5511 : Intervention Areas in Zambia

According to the focal point, the *1. Seed* sector has shown good progress. *A. Policy development* is progressing, with the rice seed sub-sector strategy being articulated to stakeholders, during which there has been *D. Information and knowledge sharing*. The FoDis-R and Rice Dissemination Project have both provided technical assistance in the rice seed sector, and *H. Human resource capacity* is

expected to be enhanced.

The focal point mentioned that the 3. Irrigation/water control and 5. Mechanization sub-sectors remain weak. Although there has been some intervention and interest from a potential donor in these areas, the private sector remains reluctant to buy-in as these are capital-intensive areas and are hence regarded as costly.

4.24.3. Outcome

Human resource development

For policy makers, a number of training sessions targeting taskforce members have been organized in Japan and third party countries. The provision of technical advice and information-sharing at these forums have contributed to the policy-making capabilities of participants as well as to boosting their morale.

An opinion was shared that the NRDS elaboration process prompted information and experience sharing between member countries, which contributed to knowledge and skill enhancement regarding rice development for policy makers.

Project formulation and implementation

Contributions to increase in rice sector projects funded by the government and donors

An advisor to the Department of Agriculture at the MA mentioned that from around 2015, the rice component started to appear in WB, AfDB, IFAD, and FAO projects in Zambia. Although not all of these are CARD-labeled projects, these could be considered as the indirect outcome of the CARD initiative.

In addition, as one of the budget lines for crops under the government's crop diversification strategy, a new budget-line for rice was introduced this year. The government has committed about 30,000 USD to rice development in the 2017 budget, giving hope for increased funding on the part of the government.

Contributions to efficient, effective, and strategic project formulation

NRDS now functions as the point of reference for the MA in developing rice-related projects. For one donor project which will be ending soon, its second phase is being planned within the framework of NRDS II, in line with the strategic priorities of the Zambian government.

Contribution of the CARD focal point to the promotion of projects

In Zambia, the current CARD focal point is Deputy Director, Crop Production Branch, Department of Agriculture, who is in charge of crop production. Some respondents expressed the view that the CARD focal point's position and leaderships skills equip him with the required leverage to lobby for an increase in rice projects both within the government and among donors.

Contributions to correlative improvements and timing adjustments between governments and donors

There were neither anecdotes nor concrete evidence suggesting improved correlation and timing between the government and donors at this point. However, the newly established ZCARD is expected to play this role, and all rice projects now report to ZCARD. If ZCARD operates well, these improvements may be realized in the future.

4.24.4. Impact

Quantitative impact

Table 69: Production, consumption, and self-sufficiency of rice in Zambia

(1000MT)	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Production of rice (paddy) FAO ⁶⁵¹	24	42	52	49	45	45	50	26	27	N/A
Production of rice (paddy) USDA ⁶⁵²	24	41	53	48	45	45	N/A	N/A	N/A	N/A
Production of rice (milled) USDA ⁶⁵³	16	27	35	32	30	30	N/A	N/A	N/A	N/A
Consumption of rice (milled) USDA ⁶⁵⁴	26	32	40	37	40	40	N/A	N/A	N/A	N/A
Self-sufficiency of rice ⁶⁵⁵	61.5%	84.4%	87.5%	86.5%	75.0%	75.0%	N/A	N/A	N/A	N/A

Table 70: Production targets for rice in the NRDS

(1000 MT)	2008	2018
Irrigated ⁶⁵⁶	8	32
Rain-fed upland ⁶⁵⁷	37	63
Rain-fed lowland ⁶⁵⁸	3	32
Total	48	127

⁶⁵¹ FAO STAT database "Crops" (<http://www.fao.org/faostat/en/#data/QC>) 10/1/2018 update

⁶⁵² Calculated based on United States Department of Agriculture (USDA) PSD online database "Grains" 8/10/2017 update

⁶⁵³ USDA PSD online database "Grains" 8/10/2017 update, for milling rate 2013.

(<https://apps.fas.usda.gov/psdonline/app/index.html#/app/downloads?tabName=default>)

⁶⁵⁴ Ibid.

⁶⁵⁵ Calculated based on USDA PSD online database "Grains" 8/10/2017 update

⁶⁵⁶ Supra note 647.

⁶⁵⁷ Ibid.

⁶⁵⁸ Ibid.

Qualitative impact

Increased sensitization of the government, donors, and other stakeholders

Some respondents mentioned that although CARD was not the sole reason, it was one of the factors behind the gradual increase in government ownership and commitment towards rice development. The MA has been using the NRDS for policy lobbying, pitching rice as an important crop in terms of food security and a profitable cash crops at the high-level. Furthermore, although JICA experts have encouraged it, the decision to develop a revised NRDS emanated from the MA itself.

In addition, private sector participation in countrywide discussions on rice development was facilitated through the NRDS development and implementation process.

Donors now collectively have 10 projects that include rice components.

Receptiveness to crop specific approaches

According to the Advisor to the Department of Agriculture at the MA, the MA is very receptive to crop-specific approaches as a result of their CARD experience. This is beneficial for efforts to support the country's crop diversification strategy as CARD-like support for other crops is very much welcomed (the Advisor participates in and supports a CARD-like function for cassava).

4.24.5. Success factors and challenges

Success factors

■Government

The importance of rice for the national economy and/or food security

According to a co-chair of the taskforce, by the time the NRDS was revised, the importance of the rice sector had become more apparent, with increasing demands and lagging production. Hence higher commitment was observed on the part of taskforce members to ensure the success of NRDS II formulation and implementation.

Authority/level of CARD focal point

Some of the stakeholders mentioned that the appointment of Deputy Director, Crop Production Branch, Department of Agriculture as the CARD focal point was appropriate for ensuring a successful CARD promotion. As the Deputy Director, he is adequately equipped with the authority necessary to influence other departments within the MA; the former FP was a principal and had difficulties exercising influence over and coordinating stakeholders. Additionally, several stakeholders have commented that this particular individual is very capable and has a strong political desire to develop

the rice sector in Zambia, which are important qualities for securing budget resources for the sector.

Government structure for implementation

The Permanent Secretary of the Ministry of Agriculture initially chaired ZCARD, but the role was later delegated to the Director of the Department of Agriculture. According to a SC local office staff member, this was an important change because with the Permanent Secretary, meetings would suddenly be canceled and the initiative was seen as a strictly “government initiative”, discouraging stakeholders (especially the private sector) from participation.

Furthermore, the ACF now functions as the ZCARD Secretariat. According to the co-chair of the taskforce, the ACF has a history of coordinating agricultural activities as an NGO and has both the experience and capacity to mobilize stakeholders, and is therefore suited to carrying out the day-to-day work in NRDS implementation.

■SC members and Partner Organizations

JICA’s support

The Advisor to the Department of Agriculture who was dispatched by JICA played a major role in promoting CARD within the MA. CARD promotion is explicitly mentioned in the current advisor’s TOR, and although there is no clear guidance on how advice and support should be provided, both the current and the former advisors were members of the taskforce and were involved in the discussions for drafting the revised NRDS. In fact, this advisor and other technical project advisors, also dispatched by JICA, encouraged the revision of the NRDS.

After the revised NRDS was adopted, the current advisor became a member of ZCARD. His support also extends to the ZCARD Secretariat, namely the ACF, allowing him to provide oversight internally and externally. Furthermore, he facilitated support for ACF operating costs through mobilizing funds accumulated by the MA through a Japanese grant project.

■Other

Availability of reliable statistics and evaluation of progress

Zambia allocates a budget every year to statistics, even on rice, and for government levels even below the district level, which would help to objectively showcase the achievements of CARD at a later stage of implementation.

Challenges

■Government

Financial resources

MA has limited financial resources for implementing the NRDS by themselves. The concept notes developed with the revised NRDS budgets 21 million USD for implementing the strategy, of which 10 million USD is already committed with ongoing projects and the rest is being sought.

Number and capacity of government officials

According to some stakeholders, the MA has insufficient human resource capacity. To begin with, there is a lack of rice specialists in the country, and there are insufficient higher education institutions offering classes on rice. It took time for capacity development within the MA, as most of the officers had never studied rice. This was also the case for researchers and extension workers.

Furthermore, the CARD focal point, although commended for his leadership skills, has been tasked with multiple job duties as Deputy Director of the Crop Production Branch and has limited support staff, though this situation is expected to improve slightly as some staff are expected to come back from prolonged leave). Additionally, his leave from office for about 2 years during the CARD initiative meant that progress was very limited during this period.

The co-chair of the taskforce also pointed to the MA's capacity constraints regarding donor coordination and project management, which pose challenges for implementation.

Authority of the NRDS

There are currently 10 rice-related projects in Zambia, but only two are CARD-labeled projects. The MA has not yet been successful in fully institutionalizing the NRDS as the point of reference for rice development projects in Zambia.

Ownership and support from high-level government officials

Some stakeholders commented that commitment from high-level officials is a work in progress. This is understandable given that maize has been the country's main staple crop and rice is a relatively new addition, but it is a challenge for the implementation of NRDS.

Number and capacity of government officials

There was a period when the personal circumstances of the focal point, according to one stakeholder, contributed to a loss of leadership, which was one of the reasons for the limited implementation of

NRDS I.

■CARD Secretariat

Communication

There was lack of communication between country-level SC members and Partner Organizations. Whether this was due to strategy deficiencies or failure to implement the strategy could not be gauged from discussions with stakeholders at the country-level.

Authority

Without a financial mechanism, the CARD Secretariat lacks a powerful means of influencing donor coordination at the country-level.

■SC members and Partner Organizations

Awareness of CARD

There is a lack of knowledge regarding CARD among some of the SC local offices, as CARD's follow-up was predominantly carried out at a high level. One SC local office staff member did not even know of CARD's existence, even when they were operating rice-related projects.

Communication between SC member representative and SC local office

A general disconnect between the HQ-level SC member participating in the SC and the SC local office was observed.

■Other

Distribution of roles among the CARD Secretariat, JICA, and other SC members

Although JICA is formally only one of the SC members, it seems that a few SC members saw the benefit of a partnership with Japan through the CARD Initiative as opposed to it being seen as a wider coalition of donors and institutions.

However, some donors look upon CARD as being controlled by JICA. Even if donors implement projects under the CARD initiative, there is a risk that the government might mistake them as being a contribution of Japan. Also, from the donors' perspective, Japan can implement their projects independently while exerting sufficient influence on the government. Therefore, other donors do not necessarily consider CARD to be attractive.

5. Output, outcome, and impact at the initiative level

5.1 Output

5.1.1. Overview of CARD promotion at the initiative level

Information exchange among CARD member countries and SC members has been facilitated at all the General Meetings, SC meetings, and other events that CARD has organized. Information exchange includes sharing of good practices and success factor analysis for mutual learning by member countries. The support provided by the CARD Secretariat in relation to information sharing is primarily intended for country CARD focal points, taskforce members, and other stakeholders in the rice sector. Opportunities for networking and connecting with various stakeholders in the rice sector are also provided through these CARD meetings.

In addition, some technical materials (e.g., manuals, technical guidelines) and analytical work produced by SC members are shared on the CARD website. The CARD Secretariat has also been facilitating information exchange among countries and SC members through e-mail correspondence.

5.1.2. Status of the NRDS process

Policy development:

- The NRDSs have been developed in 23 countries
- 21 countries have either approved or are developing rice seeds strategies
- 5 countries have developed or are finalizing the mechanization strategies with support from CARD.

Concept notes development: Concept notes were developed in 20 countries.

CARD-labeled projects formulation: In 21 countries it is recognized that at least one CARD-labeled project has been formulated.

Monitoring of the implementation: Evaluation reports have been drafted in 11 countries.

Table 71: Status of NRDS process

Country	NRDS			Rice Seeds	Mechanization	NRDS concept note	No. of CARD-labeled projects	Evaluation
	Status	Year of creation	Period covered					
¹ Cameroon	Approved	2009	2008-2018	Drafted	Drafted	Created	6	Being conducted

2 nd Group	Ghana	Drafted*	2009	-2020	Drafted		Created	13	
	Guinea	Approved	2009	2008-2018	Approved		Created	7	Being conducted
	Kenya	Approved	2009/2014	2008-2018	Approved		Created	4	Being conducted
	Madagascar	Approved	2009/2016	2008-2018 2016-2020	Approved	Approved	Created	13	Being conducted
	Mali	Approved	2009	2008-2018	Drafted		Created	18	Being conducted
	Mozambique	Approved	2011/2016	2008-2018 2016-2027	Drafted		Created	4	
	Nigeria	Approved	2009	2007-2018	Drafted		Created	20	Being conducted
	Senegal	Approved	2009/2012/2014	-2017	Drafted	Drafted	Created	14	Being conducted
	Sierra Leone	Approved	2009	2008-2018	Drafted		-	3	
	Tanzania	Approved	2009	2008-2018	Drafted		Created	15	Being conducted
	Uganda	Approved	2012	2008-2018	Drafted		Created	7	Being conducted
	Benin	Approved	2011	2008-2018	Drafted		Created	7	Being conducted
	Burkina Faso	Approved	2011	2008-2018	Drafted	Drafted	Created	9	
	CAR	Approved	2012	2008-2025	-		-	N/A	
	Cote d'Ivoire	Approved	2012	2012-2020	Drafted	Approved	Created	12	Being conducted
	DRC	Approved	2013	2008-2018	Drafted		Created	3	
	Ethiopia	Approved	2010	2009-2019	Approved		Created	3	
	Gambia	Approved	2014	2015-2024	Drafted		-	2	
	Liberia	Approved	2012	2008-2018	Drafted		Created	N/A	
	Rwanda	Approved	2011/2013	2011-2018	Drafted		Created	5	
	Togo	Approved	2010	2008-2018	Drafted		Created	11	
	Zambia	Approved	2011/2016	2016-2020	-		Created	3	

* The list was created based on the information as of June 2017 (August 2017 for CARD labeled projects) which was shared by the CARD Secretariat. Ghana's revised version is currently undergoing approval process.

5.1.3. CARD-labeled projects

Below is a list of CARD-labeled projects implemented at the regional level.

Table 72: List of CARD-labeled projects at the regional level

Country	Name of Project	Donor	Implementing Agency	Duration	Modality	Budget	Area of Intervention (Sub-Sector)	Outputs/ Activities
Ghana, Ethiopia and	Development of Improved	Japanese government	JIRCAS	2008-2012	Research/Technology	4 million USD	Research	Small scale irrigation infrastructure and

other several countries	Infrastructure and Technology for Rice Production in Africa				gy development			cultivation technologies were developed and demonstrated.
Benin, Burkina Faso, Côte d'Ivoire, The Gambia, Ghana, Guinea, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone and Togo	West Africa Agricultural Productivity Program (WAAPP)	WB	Each government/ECO WAS	2008-	Loan/Grant	45million USD×2	Extension, Research	-Innovate, generate, disseminate and adopt improved technologies -Create enabling conditions for regional cooperation -Build human and institutional capacity across the sub-region -Create youth employment, engage women and adapt to climate change.
Ethiopia, Tanzania, Kenya, Uganda	Eastern Africa Agricultural Productivity Project (EAAPP)	WB	Each government	2009-2015	Loan/Grant	90million USD	Extension, Research	(i) To enhance regional specialization in agricultural research; (ii) enhance collaboration in agriculture training and dissemination; and (iii) facilitate increased sharing of agricultural information, knowledge and technology across Recipients' boundaries
Ghana, Benin, Senegal and other several countries	Development of Rice Production Technologies in Africa	JIRCAS	JIRCAS	2011-2016	Research /Technology development	5 million USD (except human resource)	Research	Breeding materials were selected and developed. Cultivation technologies (fertilization weeding etc.) were verified.
Benin, Burkina Faso, Ethiopia, Guinea, Madagascar, Nigeria, Senegal, Sierra Leone, Uganda	Improving Food Security Information in Africa	Japanese government	AfricaRice	2013-2016	Technical cooperation	1.0 million USD	Capacity building	To improve the availability and reliability of agricultural statistics such as rice production in support of the objectives of the CARD initiative.
Ghana and other six countries	Improvement of Micro Reservoir Technologies	Japanese government	JIRCAS	2013-2017	Research /Technology development	2.3 million USD	Capacity building	Micro reservoir technologies (supplemental irrigation) were developed and demonstrated.
Senegal, Nigeria, Ghana, Uganda, Kenya, Cote d'Ivoire, Madagascar, Benin, Ethiopia	Strengthening Agricultural Statistics and Food Security Information in CARD Countries through South-South Cooperation	Japanese government	FAO	2013-2018	Technical cooperation	2.5 million USD	Research	To improve capacity of CARD countries for timely collection and provision of reliable statistics on rice planted area and/or yield, particularly at field level, drawing from statistical methods currently implemented in ASEAN countries and taking advantage of FAO's SSC scheme in synergy with the statistical project in progress carried out by the Africa Rice Centre (IAEC1-5623-JAPN25).
Malawi, Mozambique,	Agricultural Productivity	WB	Government	2013-2020	Loan/Grant	90million USD	Capacity building	-Improve technology generation and

Zambia	Program for Southern Africa (APPSA)						dissemination within and among participating countries in southern Africa by building capacity within national R&D systems and enhancing regional collaboration.
27 SSA countries	Emergency Initiative for Rice in Africa	Japanese government	AfricaRice	2014-		Extension, Research	To boost rice production through improved farmer access to quality seeds and reduced post-harvest losses, thereby reducing rice imports and averting the need for costly food relief actions.

5.1.4. General Meetings

No.	Date	City	Key discussion points
1	Oct. 30 – Nov. 1, 2008	Nairobi, Kenya	<p>1. Objectives</p> <ul style="list-style-type: none"> -To discuss the management and operational guidelines (MOG) of CARD -To present the members of the SC -To present the candidate country groupings -To discuss the formulation of NRDS -To reach agreement on the work plan for 2009 for CARD Secretariat <p>2. Decisions</p> <ul style="list-style-type: none"> -The General Meeting adopted the proposed final draft of the MOG -The CARD Secretariat was established with 3 members; the office located in AGRA Kenya -The initial SC members were confirmed - Some financial institutions expressed strong interest to actively engage in CARD activities -List of candidate countries for 1st Group and 2nd Group was proposed, and it was officially accepted - The first draft of NRDS template was revised by a few SC members -The Work Plan for 2009 was adopted as proposed -Dr. Ngongi (President of AGRA) was appointed as the Director of the Secretariat for at least in the immediate term -The need for financial or in-kind contributions from CARD members to facilitate the operation of the CARD Secretariat was acknowledged
2	Jun. 3-4, 2009	Tokyo, Japan	<p>1. Objectives of the meeting</p> <ul style="list-style-type: none"> -To present NRDS by 12 countries from the 1st Group -To discuss possible support from the donors on the implementation of the NRDS -To discuss possible support from the South-South Cooperation for the development of rice sector <p>2. Decisions</p> <ul style="list-style-type: none"> - New members joined as SC members -The agreement on the required actions were:

			<ul style="list-style-type: none"> ■ To facilitate country level coordination among the stakeholders for the purpose of NRDS implementation ■ To facilitate effective coordination between the donors while leveraging on the comparative advantages of each donor. ■ To accelerate South-South cooperation
3	May 17-20, 2010	Arusha, Tanzania	<p>1. Objective</p> <ul style="list-style-type: none"> -To update on the progress regarding CARD activities/NRDS process for the 1st Group countries -To update on the progress regarding of donor support for the rice development and coordination -To share the status quo of rice production in the 2nd Group countries and initiation of CARD support -To discuss the high level development policies, such as PRSP and CAADP <p>2. Decisions</p> <ul style="list-style-type: none"> - NRDS taskforces for the 2nd Group countries were officially appointed -NRDS development support and other CARD activities would take place after the 3rd General Meeting -A new member joined as a SC member -The agreement on the required actions were: <ul style="list-style-type: none"> ■ To continue the expansion of South-South Cooperation ■ To continue policy development for the rice development and prioritization of sector in each country ■ To strengthen the integration of NRDS into each country's high policy as the next agenda
4	Nov. 7-11, 2011	Kampala, Uganda	<p>1. Objectives</p> <ul style="list-style-type: none"> -To update on the progress of the CARD activities/NRDS process for the member countries -To update on the progress of rice development in the member countries -To discuss the South-South Cooperation and donor support <p>2. Decisions</p> <ul style="list-style-type: none"> -Human resource development for researchers and extension officers remained an important factor for the development of the rice sector -The agreement on the required actions were: <ul style="list-style-type: none"> ■ To actively hold dialogues with the private sector ■ To discuss how to further facilitate South-South cooperation among the donors and South-South cooperation countries ■ To focus on strengthening the prioritization of sectors/issues in order to allocate government and donor budgets
5	Feb. 4-6, 2013	Dakar, Senegal	<p>1. Objectives</p> <ul style="list-style-type: none"> -To update on the progress of the production volume of rice -To share up-to-date outcomes of CARD

			<p>-To highlight the importance of contributions from both the government and the private sector</p> <p>-To discuss and conduct the exchange of information between the donors, South-South cooperation countries, and the private sector</p> <p>2. Decisions</p> <p>-The importance of the private sector's role was especially emphasized</p> <p>-The agreement on the required actions were:</p> <ul style="list-style-type: none"> ■ To establish a monitoring system for each member country's progress ■ To strengthen coordination with other initiatives ■ To attract investments from the government and partners in order to execute projects which address high priority issues <p>-The agreement on the required actions for the government were:</p> <ul style="list-style-type: none"> ■ To develop infrastructure such as road and irrigation systems ■ To strengthen financial services which are accessible to farmers ■ To develop policy on the private sector investment ■ To develop human resources and technical support
6	Nov. 17-19, 2015	Accra, Ghana	<p>1.Objectives</p> <p>- To update on the progress of the production volume of rice</p> <p>-To update on the progress of the CARD activities/NRDS process for the member countries</p> <p>- To notify the current results of the interim review of the CARD initiative</p> <p>- To discuss the sustainability of the CARD initiative beyond 2018</p> <p>2. Decisions</p> <p>- Expansion of production area with sustainable means was confirmed as a future priority issue</p> <p>-The agreement on the required actions for promotion of mechanization and good quality seed production were:</p> <ul style="list-style-type: none"> ■ To exchange information and experiences between African countries and South-South Corporation countries ■ To promote the private sector's investment for the improvement of the production environment and the development of the entire value chain <p>-The agreement on the required actions for the government to promote private sector investment were:</p> <ul style="list-style-type: none"> ■ To develop road and water irrigation infrastructure ■ To strengthen accessible financial services for farmers ■ To develop mid-long term private sector investment policy ■ To develop technology services and human resources <p>-The agreement on the evaluation process were:</p> <ul style="list-style-type: none"> ■ To thoroughly evaluate the final achievements of CARD to determine the necessary activities and target crops for the next phase of CARD (beyond 2018) ■ To conduct further and deeper discussion on the next phase of CARD among the SC members

			<ul style="list-style-type: none"> ■ To conclude a final international agreement on the direction of CARD at the next 7th CARD General meeting and TICADVII in 2019
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5.1.5. Steering Committee (SC)

No.	Date	City	Key discussion points
1	Oct. 2, 2008	Nairobi, Kenya	<p>1. Objectives</p> <ul style="list-style-type: none"> -To discuss the management and operational guidelines (MOG) of CARD <p>2. Decisions</p> <ul style="list-style-type: none"> - The SC approved the CARD Secretariat office which is located in AGRA Kenya -The list of candidate countries for 1st Group and 2nd Group was discussed and confirmed -Dr. Ngongi (President of AGRA) was appointed as the Director of the Secretariat
2	Jun. 2, 2009	Tokyo, Japan	<p>1. Objectives</p> <ul style="list-style-type: none"> - To agree on the agenda for the 2nd General Meeting - To discuss and agree on the technical comments as SC members for the draft NRDS of the 1st Group Countries. <p>2. Decisions</p> <ul style="list-style-type: none"> -New member (WB, AfDB, IFAD) joined as SC members (formally approved as members in the 2nd General Meeting)
3	Nov. 25-26, 2009	Accra, Ghana	<p>1. Objectives</p> <ul style="list-style-type: none"> - To update on the progress of the CARD initiative - To notify the newly added countries for the 2nd Group Countries - To update on the progress on the rice related projects by the SC and the donors - To notify the CARD Secretariat's 2010 Action Plan <p>2. Decisions</p> <ul style="list-style-type: none"> - Some countries were officially approved as 2nd Group Countries - The SC approved the CARD Secretariat 2010 Action plan -The Action plan entailed: <ul style="list-style-type: none"> ■ Monitoring support of CARD/NRDS processes for the 1st Group Countries ■ Development support for the NRDS process ■ Execution of IFAD projects ■ Research work ■ Information update on the webpage ■ Convention of the CARD general meeting and SC meeting -The agreement on the required actions were: <ul style="list-style-type: none"> ■ To have the Africa Rice Center and not JICA manage the progress of

			<p>CARD/NRDS process for the Central African Republic, Côte d'Ivoire, the Gambia and Togo. (AGRA would take part for Togo)</p> <ul style="list-style-type: none"> ■ To start having the CARD Secretariat provide technical assistance to the 2nd Group Countries. ■ To hold the orientation of CARD and preparation session of NRDS for the 2nd Group ■ To hold the workshop for NRDS development for the 2nd group after the 3rd General Meeting
4	May 18, 2010	Arusha, Tanzania	<p>Objectives</p> <ul style="list-style-type: none"> - To discuss how SC members would coordinate as a result of the 3rd General Meeting
5	Feb. 23-24, 2011	Freetown, Sierra Leone	<p>1. Objectives</p> <ul style="list-style-type: none"> - To update on the progress of the CARD initiative - To update on the progress of SC members - To update on the progress of South- South Cooperation - To update on the progress of rice statistics - To notify the 2011 CARD Secretariat Action Plan <p>2. Decisions</p> <ul style="list-style-type: none"> - CARD Secretariat would be the focal point of South-South Cooperation facilitation with the support of a few SC members - A new member was officially approved to participate in the CARD initiative with facilitation by the CARD Secretariat -The agreement on the required actions were: <ul style="list-style-type: none"> ■ To have the CARD Secretariat provide information on the activities of SC to NRDS task forces ■ To have the CARD Secretariat conduct a study on good practices for the value chain ■ To involve the private sector more ■ To examine the roles of private sector by the SC members and present their views at the 3rd General Meeting ■ To have the CARD SC Offices report information on their projects, country strategy papers and other relevant information to taskforces in order to execute CARD related projects
6	Nov. 7-11, 2011	Kampala, Uganda	<p>Objectives</p> <ul style="list-style-type: none"> - To discuss and agree on the comments to the Co-chairs' draft summary of the 4th General Meeting - To share the contents of each SC member's presentation given during the 4th General Meeting
7	Nov. 8-9, 2012	Yaoundé, Cameroon	<p>1.Objectives</p> <ul style="list-style-type: none"> - To update on the progress of the CARD initiative - To update on the progress of SC members - To share the country presentations <p>2. Decisions</p> <ul style="list-style-type: none"> - Consensus on the direction of the CARD initiative was reconfirmed and

			<p>the agreement on the required actions were</p> <ul style="list-style-type: none"> ■ To create synergies with limited resources ■ To develop the capacity of the government ■ To improve the environment for accelerating private sector investment <p>-The agreement on the required actions were:</p> <ul style="list-style-type: none"> ■ To strengthen the linkages between CARD and CAADP/national high policy in the sector ■ To gather information on the private sector investment
8	Feb. 4-6, 2013	Dakar, Senegal	<p>1. Objectives</p> <ul style="list-style-type: none"> - To synthesize the progress made by SC members for the 5th General Meeting - To reach a general consensus on the key messages to be conveyed during the 5th General Meeting (Progress and Outlook) - To agree on the schedule of future CARD meetings <p>2. Decisions</p> <ul style="list-style-type: none"> -An agreement between IFAD and AfricaRice was concluded for the South-South Cooperation (SSC) platform with a specific focus on Agriculture Mechanization -The agreement on the required actions were: <ul style="list-style-type: none"> ■ To revise presentation formats on the CARD Secretariat's SC activities ■ To develop a result monitoring matrix for each of the member countries, not only for the SC ■ To be open for discussions with US Government/USAID
9	Jun. 3, 2013	Tokyo/Yokohama, Japan	<p>1. Objectives</p> <ul style="list-style-type: none"> - To agree on the process of PPP pilot in seed sector development - To discuss the management of the CARD initiative in the next 5 years - To update the SC members on CARD related activities <p>2. Decisions</p> <ul style="list-style-type: none"> -Selection criteria for co-chairs from the member countries were agreed upon -The agreement on the required actions were: <ul style="list-style-type: none"> ■ To proceed with the process as proposed in the Concept Note by the CARD Secretariat ■ To share information on existing and forthcoming related initiatives on rice seed sector development for stocktaking by the SC members
10	Oct. 26, 2014	Bangkok, Thailand	<p>1. Objectives</p> <ul style="list-style-type: none"> - To update on the progress of CARD activities since the last SC meeting - To discuss and agree on the way forward for future CARD activities <p>2. Decisions</p>

			<p>- The meeting endorsed the plan for the scaling up of the rice seed pilot as well as the one for the follow up of the mechanization pilot</p> <p>-The agreement on the required actions were:</p> <ul style="list-style-type: none"> ■ To focus on CARD's progress against the set target in both overall rice production and productivity at the 6th General meeting (GM6) ■ To include a significant number of presentations by member countries for the program of GM6 (e.g. NRDS implementation status, seed pilot initiative) ■ To include more presentations on the SC members' activities at GM6 ■ To assist the proposed country level coordination – draft the concept note by the CARD Secretariat ■ Conduct a mid-term review on CARD, and the result should be presented at GM6 <p>-The agreement on the evaluation process was on the following:</p> <ul style="list-style-type: none"> ■ To conduct the mid-term evaluation by an external evaluator with an African perspective ■ To assess the CARD Secretariat activities and the CARD SC members ■ To review the modality of the CARD initiative ■ To assess the implementation and management mechanisms, the methodology and partnerships. ■ To assess a set of quantitative and qualitative indicators, figures and narratives to assure comprehensiveness, as not all of CARD's contributions to rice sector development could be quantitatively evaluated ■ To draft the TOR for the mid-term review by AfricaRice, and have SC members finalize by the end of 2014, especially with the contribution by FAO. ■ To explore the possibility of mobilizing their financial resources for the mid-term review process among SC members with financial resources
11	Nov. 17, 2015	Accra, Ghana	<p>1. Objectives</p> <p>- To reach a general consensus on the key messages/ discussion points to be covered during the 6th General Meeting</p> <p>- To agree on the schedule of future CARD meetings</p> <p>2. Decisions</p> <p>-The agreement on the required actions were:</p> <ul style="list-style-type: none"> ■ To primarily pursue productivity increase as a measure for its rice production growth ■ To expand production areas in order to achieve the overall goals of CARD, which should be pursued in a balanced way ■ Assist the member countries to achieve the abovementioned points by the implementation of the right set of policies and strong political will ■ To suggest the GM 6 that CARD continues to support member countries to enhance implementation of rice and related strategies ■ To conduct a brainstorming session on the final evaluation and the

			future of CARD after 2018 at GM6
12	Aug. 29, 2016	Nairobi, Kenya	<p>1.Objectives</p> <ul style="list-style-type: none"> - To update on the progress of the CARD initiative - To update on the progress of SC members - To discuss the final evaluation of the CARD initiative and post-CARD direction <p>2. Decisions</p> <ul style="list-style-type: none"> -The agreement on the required actions was on the following: <ul style="list-style-type: none"> ■ To have JICA cover the cost of the final CARD evaluation ■ To have a Japanese consultant firm conduct the evaluation in joint partnership of a local consultant ■ To decide on the TOR among the SC members ■ To continue the focus on the rice sector for the next phase, and use the CARD initiative frame work for other crops

5.1.6. Workshops and seminars

Type of Workshop	Date	City	Content
Video conference seminar	Sep. 19, Oct. 19, Nov. 16, 2012	-	South-South Cooperation Video Seminar: The seminar was organized to share the experiences and knowledge of CARD South-South Cooperation countries in the key areas (Seminar 1: Seed distribution, Seminar 2: Quality assurance, Seminar 3: Water user association) to promote rice production and utilize the gained insights as a reference in the implementation of NRDS.
	Apr. 23-24, 2014	-	Quality Assurance in Rice Seed Production: The seminar was organized to form common understanding about the seed production/multiplication system as well as to deepen the understanding of participants regarding issues of seed quality and technically sound solutions.
Regional workshop	Feb. 2-5, 2009	Cotonou, Benin	NRDS Support Workshop for 1st group countries: Participants from African governments as well as resource persons from FARA and AGRA discussed key issues for enhanced rice production through review of all draft NRDS.
	Jul. 5-9, 2010	Cotonou, Benin	NRDS Support Workshop for 2nd group countries Participants from African governments as well as resource persons from Africa Rice Center, FARA, IFAD, IRRI, JICA, ReKASS/IITA, conducted a review of the preliminary draft NRDS.
	Feb. 28-Mar. 2 & Oct. 22-24, 2012	Nairobi, Kenya	<p>1st Agricultural Mechanization Workshop: Support was given to participating countries to discuss about stakeholders, enabling environments and policy tools of mechanization, and to create roadmaps.</p> <p>2nd Agricultural Mechanization Workshop: The progress since the first workshop was reviewed and the way forward was discussed.</p>
	Sep. 18-19, 2012	Dakar, Senegal	JICA West Africa Regional Seminar on Rice Development: West African rice producing countries were invited to discuss the progress to date and exchange experience on various cases of rice-based development.

	Feb. 4-6, 2014	Nairobi, Kenya	Scaling up Best Practices and Improved Rice Seed Sector: The progress made in; i) the analytical work under the IFAD funded project for scaling successful models of intervention in CARD countries, and ii) the development of “Seed Road Map” in the CARD Pilot Initiative for Improved Rice Seed Sector was shared.
Pre-conference seminar	May 17, 2010	Arusha, Tanzania	(Before the 3rd General Meeting) “Current Achievement and Emerging Challenges in CARD” (a satellite seminar organized by JIRCAS). The sessions had discussions on the achievement and challenges in production expansion and technology development.
	Nov. 7, 2011	Kampala, Uganda	(Before the 4 th General Meeting) Sessions on mechanization, public-sector involvement in agribusiness, and capacity building were held.
	Feb. 4, Feb	Dakar, Senegal	(Before the 5 th General Meeting) Sessions on rice value chain, private sector involvement, and transformation of industrial clusters, mechanization, and research were held.
	Nov. 17, 2015	Accra, Ghana	(Before the 6 th General Meeting) Sessions on private sector involvement, private investment, production and marketing, and Public Private Partnership were held.
Side event	May 3-4, 2012	Nairobi, Kenya	“Contribution of the Coalition for African Rice Development for the implementation of CAADP” at the 8th CAADP Partnership Platform: Further alignment between the NRDS of participating countries with their National Agriculture and Food Security Investment Plans, collaboration with regional economic communities, and private sector support were emphasized.
	Jun. 3, 2013	Yokohama, Japan	“An Innovative Attempt toward Food Security and Agricultural Development in Africa” at TICAD V: Participants presented the achievements of the CARD initiative, reviewed issues and challenges and guiding principles of the next five years. In addition, they acknowledged the existence of various levels of private-sector players that are active in Africa and can play significant roles for Africa’s economic development through agriculture, and understood that the need for creating enabling environment in order to facilitate local activities of various private-sector players.
	Oct. 29, 2014	Bangkok, Thailand	“An Innovative Attempt toward Rice Sector Development in Africa” at the International Rice Congress: In the event 1) CARD as an innovative initiative for rice sector development in Africa and 2) the CARD partnership with prominent research institutions were presented. The effort made by the CARD initiative, multi donor commodity plus value chain approach in rice were highly appreciated by the audience.
	Aug. 25, 2016	Nairobi, Kenya	“Progress of CARD and the Future of Rice Sector Development in Africa” at TICAD VI: The event was organized to present and review general achievements of CARD and country-level achievements in rice sector development in a few CARD countries. Moreover, future direction for Rice Sector Development in Africa was presented and discussed.
Tsukuba seminar	Aug. 28-Sep. 30, 2011	Tsukuba, Japan	Workshop on Planning, Implementation and Monitoring of NRDS for SSA: The participants developed "Common Needs Matrix". After the

			workshop, the participants brought back the matrix to utilize it as a reference for policy dialogue and strategic planning of program/projects through their NRDS process.
	Aug. 26- Sep. 29, 2012	Tsukuba, Japan	Workshop on Planning, Implementation and Monitoring of NRDS for SSA: The participants revised "Common Needs Matrix" developed in the workshop in 2011. After the workshop, these matrices are combined and distributed to 23 CARD countries to be utilized as a reference for policy dialogue and strategic planning of program/projects through their NRDS process.
	Aug. 25- Sep. 6, 2013	Tsukuba, Japan	Promotion of African Rice Development through Strengthening Coordination between CARD and CAADP for Sub-Saharan Countries: The seminar was organized to develop a common understanding among the participants that CARD is in charge of a part of rice sector under the framework of CAADP and that the CARD initiative contributed to the implementation of CAADP process, to make a common guideline as well as country-specific action plans on how to strengthen alignment between CAADP and CARD and to learn about Japanese agricultural policy in the rice sector as well as observe rice cultivation sites in Japan.
	Jul. 28- Aug. 8, 2014	Tsukuba, Japan	Promotion of African Rice Development through Strengthening Coordination between CARD and CAADP for Sub-Saharan Countries: The seminar was organized to learn about the CARD process and the necessity in strengthening its alignment with CAADP, to review and improve Country Action Plans formulated in the first year of the program, and to learn about the Japanese experience in agricultural policies through lectures and field visits.
	Aug. 17- Sep. 4, 2015	Tsukuba, Japan	Promotion of African Rice Development through Strengthening Coordination between CARD and CAADP for Sub-Saharan Countries: The seminar was organized to learn about the CARD process and the necessity to strengthen its alignment with CAADP, to prepare Country Action Plans, and to learn about the Japanese experience in agricultural policies through lectures and field visits.
	Sep. 24- Oct. 21, 2016	Tsukuba, Japan	Promotion of African Rice Development for Sub-Saharan Countries: The technical capacity of the participating organization has been improved for the implementation of the National Rice Development Strategy (NRDS) as well as policy planning, implementation, management and operation of rice marketing infrastructure.

5.2 Outcome

Learning from experiences of member countries

Learning from the experience of member countries was made possible primarily through (1) CARD meetings (General Meetings, SC meetings, and other seminars), and (2) individual exposure visits.

(1) CARD meetings

Knowledge sharing sessions at the initiative level were organized as part of the CARD meetings. Such sessions have provided opportunities to follow and understand the level of implementation of other member countries as well as to recognize similar difficulties/challenges, which promoted mutual learning among the member countries. In addition, public officials from the various CARD member countries have continued to network to solve common problems even after the conferences or seminars.

Similarly, detailed information about the rice sectors in each member country have deepened the understanding of the needs at the country level by SC members. This was helpful for some of the organizations which do not have local offices in member countries, as such information is not always easy to obtain through their own networks.

(2) Exposure visits

There are countries that are leaders in the implementation of rice projects. These countries can share lessons-learned and know-how to those who are not active in such project implementation. Several rice specialists have moved from one country to another with the objective of sharing experience.

The following are examples of exposure visits conducted by member countries (not exhaustive). Opportunities for cooperation were mainly in research and seed production, and also mechanization. Also these visits have contributed to the application of effective government structure

Experiences shared with	from	Details
Cameroon	Nigeria Uganda DRC	<ul style="list-style-type: none">• Cameroon had the opportunity to conduct two exchange visits in Uganda and Nigeria. Such field trips have made it possible to learn from the experiences of the host country.• The Cameroon government brought back prototypes of a manual threshing machine from a trip to Uganda that a local craftsman manufactured. They have experimented in using the machine in a project.• Some members of the DRC Rice Task Force have shared their experiences with Cameroon in the area of varietal selection. This has enabled the DRC to carry out a similar project.

Ghana	Nigeria	The Nigerian experience of agricultural transformation has helped Ghana to adopt some strategies during the revision of our NRDS document.
Ethiopia	Tanzania Uganda	<p>There were opportunities to share experiences especially with Tanzania and Uganda.</p> <ul style="list-style-type: none"> • Technology sharing from Tanzania led to the introduction of machine prototypes. • A number of researchers visited the research center in Uganda, and a national rice research and training center in Ethiopia was designed based on the Ugandan rice research center. • Experience-sharing with Uganda regarding rice mechanization has helped determine how to address rice mechanization in Ethiopia.
Kenya	Uganda	<ul style="list-style-type: none"> • Officials of Kenya visited Uganda to benchmark the success of NRDS development.
Madagascar	Uganda	<ul style="list-style-type: none"> • The Permanent Secretary for the Ministry of Agriculture in Madagascar went to Uganda to learn about the implementation structure of NRDS within the Ministry.
Mali	Cote d'Ivoire Senegal	<ul style="list-style-type: none"> • Ivorian taskforce members were invited by the Ministry of Agriculture in Mali for the Mali government to learn how to develop seed strategies. This was facilitated under the WAAPP Project. WB first supported Cote d'Ivoire and then expanded the same kind of methodology to Mali. • In Mali, there is an ongoing study to define the appropriate mechanism to coordinate the implementation of the NRDS. This is already the case in some countries including Senegal and Cote d'Ivoire, and Mali is trying to learn from such countries. • Also reflections are underway to establish better connection between the production and the processing of paddy rice, and improve the quality of rice as leveraging learning from Senegal's experience.
Mozambique	Uganda, Madagascar, Rwanda, Senegal	Mozambique has developed its national action plans/strategies based on the experience of Uganda, Madagascar, Rwanda, and Senegal.

Capacity building (Learning from SC members)

Capacity building for member countries was provided (1) during the NRDS process, (2) through CARD meetings and (3) via the CARD website.

(1) Technical backstopping during the NRDS process

Technical backstopping for member countries was provided by most of the SC members as well as coordinators and consultants of the Secretariat in the formulation of strategies by, for instance, providing comments on the NRDS draft for each country.

At the country level, in some countries, the SC members played an instrumental role in creating platforms for stakeholders to discuss the contents of strategies.

(2) Presentations at CARD meetings

SC members delivered presentations during CARD meetings. Several SC members organized separate training/workshops or remote-learning seminars, such as the training in Tsukuba, Japan which was sponsored by JICA and targeted CARD member countries by providing experts and trainers. The provision of technical advice and information-sharing at these forums has contributed to the improvement of policy-making capabilities of participants.

(3) Information sharing through CARD websites

Some SC members provided technical information and documents for the CARD website that member countries can refer to.

South-South Cooperation

South-South Cooperation has been promoted through (1) CARD meetings, and (2) specific training organized or conducted by SSC countries.

(1) CARD meetings

Agriculture officials from SSC countries such as Vietnam and Thailand were invited to the CARD Secretariat-hosted meetings to share their experience with member countries. Government officials of the member countries learned primarily about the rice varieties produced in SSC countries which had a positive influence on seed development in the member countries.

(2) Training organized by SSC countries

Third country training programs were provided by the Philippines (in particular, by JICA and IRRI in partnership with PhilRice), Thailand and Egypt in the areas of seed production, extension, mechanization and irrigation. Exchange visits to Brazil and Thailand were conducted as well.

Such training contributed to the improvement of rice productivity, since those who participated in the training applied what they had learned to their own countries. Such improvement was accelerated by the Action Plan which was developed during the training as well as the follow up visits by the officials of SSC countries.

Other countries such as Vietnam have contributed to CARD by implementing a rice development project with CARD member countries, while others were involved by participating in General Meetings. Such SSC opportunities have also enhanced the communication among participants after the training was over, and Social Networking Service (SNS) managed by the training organizations was often used for information exchange among ex-participants.

Positive influence on SSC countries

For SSC countries, strengthening South-South cooperation under the CARD Initiative is considered to be important for the following reasons:

1. They are able to strengthen their partnership with multiple African countries at the same time.
2. They are able to collect information on the rice production situation in each African country through discussions and reports presented during the training.
3. The training contributes to the capacity building of the member countries' officials as well as the SSC countries' officials.

Partnership among SC members

Information obtained from other CARD SC members served as inputs for their planning and decision-making in regard to the funding of future projects in member countries. The technical institutions (FAO, IRRI, AfricaRice, and JIRCAS) were able to share their experiences, expertise and knowledge of the African rice sector with the other SC members. Financial organizations such as WB and IFAD were also able to share their experiences and expertise in the development of rice policies, project and sourcing for funding.

In addition to (1) the improved partnerships among CARD SC members in general and (2) project formulation by multiple SC members were promoted by CARD.

(1) Improved partnership

Below are some of the improved partnership cases identified. (Not exhaustive)

- Partnership among research institutions (JIRCAS, AfricaRice, and IRRI) was strengthened
- IRRI was not in contact with AGRA or AfDB before CARD. New interactions were established.
- The relationship between IRRI and FAO was strengthened.
- A partnership between IRRI and JICA was developed.
- Partnership was enhanced on mechanization between FARA and AfricaRice.

(2) Project formulation

The SC members, especially development banks such as the WB and AfDB, provided extensive support to governments to fund their agricultural and rural development projects with rice as a major commodity. This led to the acceleration of the implementation of strategies and concept notes for member countries. The projects developed in reference to NRDS or as a result of CARD's CARD's

fund matching activities at the regional level are listed in the 5.1.3 CARD-labeled projects.

Below are the examples of projects formulated by multiple SC members. (Not exhaustive)

- An electronic platform for rice mechanization in Africa was created. The IFAD Grant was planned, managed, and utilized by AfricaRice, IRRI, and FARA, focusing on South-South Cooperation. The platform allows over hundred researchers and private sector to exchange their views and ideas on mechanization in Africa. Also study tours to Thailand and Brazil were conducted.
- Another example is the training in the Philippines as mentioned earlier, which was provided by JICA and IRRI in collaboration with PhilRice.
- The West Africa Agricultural Productivity Program (WAAPP)-CARD remote learning program is a unique collaboration between CARD and a West Africa-wide program funded by the WB and implemented by the respective countries.
- In partnership with NEPAD, the CARD Secretariat advocates for policies on the integration of the NRDS into the CAADP investment plan at national level through JICA's training scheme.

Public-private partnership

At the country level, the development of the NRDS and sector strategies was the result of extensive discussions among key players, including both public and private sectors. Each government provided at least one opportunity for dialogue between the public and private sectors.

At the initiative level, there were meetings supported by CARD (e.g. TICAD side events, pre-conference seminars at General Meetings) that provided opportunities for information sharing between the public and private sectors such as private companies and associations.

Apart from information sharing at the initiative level, CARD indirectly supported the projects and initiatives that each SC member tried to realize with involvement of stakeholders in the private sector.

Partnerships among projects/initiatives

Prominent stakeholders and representatives from initiatives in the rice sector attended the CARD SC and General Meetings. This helped to harmonize and build partnerships among different initiatives. Coordination and alignment of some initiatives were improved as duplication was avoided. Several stakeholders were connected through CARD, and they worked together.

According to the Secretariat, CARD is in communication at the regional level with; i) Global Rice Science Partnership (GRiSP), ii) Technologies for Africa's Agricultural Transformation (TAAT), (iii) Partnerships for Rice Systems Development in Africa (PARDA), iv) GrowAfrica, v) Regional Offensive for Sustainable Rice Production in West Africa, and vi) Competitive African Rice Initiative (CARI). (Not exhaustive)

The following are the projects and initiative implemented in the field of rice development and those which the CARD may possibly be able to work closely with in the next phase (Not exhaustive). At the same time, it is obvious that any projects and initiatives in rice sector would already have a positive impact on the implementation of the NRDS in member countries.

Name of the project/initiative	Funded/implemented by
Regional Harmonized Seed Regulation Framework (ECOWAS-UEMOA-CILSS)	ECOWAS-UEMOA-CILSS
Sustainable Rice Systems Development in Sub-Saharan Africa	FAO, AfricaRice, NEPAD/AU
Capacity Development and Experience Sharing for Sustainable Value Chain Development in Africa through South-South Cooperation	FAO (and South Korea)
Advisory and analytical work towards the development of efficient & inclusive rice value chains	FAO
Rice Agric-Food System CRP, RICE (formerly, Global Rice Science Partnership, GRiSP)	IRRI, AfricaRice, CIAT, CIRAD, IRD and JIRCAS
Multi-national CGIAR Support to Agricultural Research for Development of Strategic Crops in Africa (SARD-SC), Rice Commodity Value Chain	AfricaRice, AfDB, 11 African countries
Continental Investment Plan on Rice Self-Sufficiency in Africa (CIPRISSA)	AfricaRice, AfDB
West Africa Seed Program (WASP)	CORAF/WECARD, UEMOA, CILS/INSAH, USAID, AfricaRice
West Africa Agricultural Productivity Program (WAAPP)/East Africa Agricultural Productivity Program (EAAPP) - Rice Components Agricultural Productivity Program for Southern Africa (APPSA)	World Bank and eligible African project countries, (Africa Rice)
the African Seed and Biotechnology Programme (ASBP)/Africa Seeds	AU

5.3 Impact

5.3.1. Quantitative impact

Table 73: Harvested area, yield, production, consumption, and self-sufficiency of rice (Sub-Saharan Africa)

(1000 MT)	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Rice harvested area (1000 Ha) FAO ⁶⁵⁹ (a)	8,704	8,271	10,201	9,880	10,937	11,238	11,239	11,460	11,822	N/A
Rice yield (MT/Ha) FAO (b)/(a)	2.30	2.44	2.55	2.52	2.55	2.43	2.38	2.34	2.35	N/A
Production of paddy rice (1000 MT) FAO ⁶⁶⁰ (b)	17,082	17,690	21,155	20,720	22,714	22,467	24,522	25,170	26,141	N/A
Production of paddy rice (1000 MT) USDA ⁶⁶¹	16,363	17,120	20,410	19,497	19,952	20,939	21,794	21,730	22,971	22,504
Production of milled rice (1000 MT) USDA ⁶⁶² (c)	10,512	10,353	12,467	12,562	12,728	13,476	14,075	14,366	14,811	14,514
Consumption of milled rice (1000 MT) USDA ⁶⁶³ (d)	15,900	17,115	19,143	21,096	22,027	23,293	23,843	24,209	24,836	24,916
Self-sufficiency of rice (%) ⁶⁶⁴ (c)/(d)	66.1%	60.5%	65.1%	59.5%	57.8%	57.9%	59.0%	59.3%	59.6%	58.3%

The production of rice in Sub-Saharan Africa has increased steadily over the course of the CARD initiative. Based on FAO STAT that the Initiative seeks statistical guidance for, if the average growth rate is sustained beyond the years for which data is published, paddy rice production is expected to exceed the CARD initiative goal, which was to double the rice harvest from 14 million to 28 million tons in 10 years.⁶⁶⁵

This production growth was achieved through increases in both area and yield, but more so from the increase in harvested area as can be understood from the above table.

Improvement in self-sufficiency rate was barely observed during this period, primarily due to the rate of consumption increase that exceeded that for domestic production.

⁶⁵⁹Calculated based on FAO STAT database "Crops" (<http://www.fao.org/faostat/en/#data/QC>) 10/1/2018 update. Sub-Saharan Africa calculation is based on subtracting figures for Algeria, Egypt, Morocco, and South Africa from "Africa" figure, in line with CARD's methodology.

⁶⁶⁰Calculated based on FAO STAT database "Crops" (<http://www.fao.org/faostat/en/#data/QC>) 10/1/2018 update

⁶⁶¹Calculated based on USDA PSD online database "Grains" 8/10/2017 update

(<https://apps.fas.usda.gov/psdonline/app/index.html#/app/downloads?tabName=default>). Sub-Saharan Africa figure is based on USDA's classification and it is to be noted that figures for Central African Republic and Ethiopia are unavailable during the whole period and for Rwanda and Zambia since 2014/2015.

⁶⁶²Ibid.

⁶⁶³Ibid.

⁶⁶⁴Ibid.

⁶⁶⁵ Average yearly growth rate for paddy rice production is 7.1% between 2007/2008 and 2014/2015. Applying this rate, paddy rice production is estimated to be 27,077 (1000 MT) in 2015/2016, 28,996 (1000 MT) in 2016/2017 and 31,051 (1000 MT) in 2017/2018.

5.3.2. Qualitative impact

Sensitization

Sensitization of member countries

Examples of good practices in one country have stimulated and motivated the CARD focal point and taskforce members in other countries. In some cases, such motivated officials took the initiative in fund matching. This may have resulted in the implementation of some projects, at least indirectly.

CARD was one of the factors behind a gradual increase in government ownership and commitment towards rice development. The steering committee members played an advocacy role to the Governments in order to strengthen political commitment towards the development of the rice sector.

Sensitization of non-member countries

Sudan, Malawi, Burundi, Guinea Bissau, and Angola have developed, or are working on their respective NRDS documents following the examples of other CARD member countries.

Sensitization of other stakeholders

Private sector participation in countrywide discussions on rice development was facilitated through the NRDS development and implementation process.

Branding

Branding of CARD as an initiative

The CARD Secretariat was invited to make presentations about CARD at events targeting a wider range of stakeholders that were put together by several SC members (e.g. the 4th International Rice Congress organized by IRRI in 2014 and the 7th Africa Agriculture Science Week organized by FARA in 2016). This has helped promote CARD and its activities, which would enhance the interests of Africa's public sector at the regional level.

Branding of the CARD SC members

Some of the SC members had opportunities to make presentations on their research results in CARD meetings. Through such opportunities, the name of these organizations were spread widely. Collaboration with CARD has facilitated the organization of such independent workshops by the SC members which had participants from different African countries.

Application to other strategy formulation

CARD's approach to developing NRDS was applied in articulating other strategies as follows.

- In Uganda and Zambia, NRDS guided the government to take a crop-specific approach.
- Madagascar developed a sub-sector strategy on the extension of its own accord.
- The CARD approach was applied in the CAADP investment plan for Madagascar.
- The Ministry of Health in Madagascar decided to adopt the SIEM matrix approach that is used by CARD.
- In Benin, MAEP has started the work with cashew nut. Also, based on the experience of developing rice seed strategy, Benin applied the same methodology to the aqua seed strategy.
- In Ethiopia, NRRDSE served as a model strategy for developing strategies for other important crops
- Task force members of DRC are thinking to apply the same NRDS approach to Maize.

Other

Establishment of institutions

- The establishment of the AfricaRice country office in Madagascar was indirectly influenced by CARD's promotion of the rice sector in that country.
- CARD encouraged the establishment of a new department for rice promotion within the Ministry of Agriculture in Madagascar.

Increased interest in becoming a member of Africa Rice

- The Kenya government has started to think about becoming a member of AfricaRice, as they realized the importance of rice.

Collection of baseline data

- Governments took the opportunity provided by NRDS formulation to collect baseline data.

6. Conclusion

The output, outcome and impact of the CARD Initiative can be classified into those at the country level and at the initiative level.

At the country level, CARD provided support to the member countries for undertaking the following NRDS process.

1. NRDS formulation and launch (and updating): The member countries develop the NRDS and seek government approval.
2. Gap analysis, prioritization, and concept note formulation: By using the NRDS, the countries would identify areas where intervention is necessary through gap analysis and prioritization. Concept notes are formulated for prioritized interventions.
3. Lobbying for funding: The countries would lobby for funding from donors and their own governments.
4. Implementation: The formulated projects are implemented.

In terms of policy development, the NRDS and sector strategy formulation in each country has been promoted largely by virtue of the Initiative's support. In regard to the NRDS, all the countries have been successful in formulating the NRDS and some have even revised it. All of the NRDSs have obtained government approval except for Ghana's revised version, which is currently undergoing the approval process. The rice seed strategy has been drafted in 21 countries, of which 4 have obtained official approval. For the mechanization strategy, the strategy has been developed in 5 countries, of which 2 have officially been approved. There are also other countries that are preparing the mechanization strategy, and mechanization training has been conducted for member countries recently.

In regard to implementation and monitoring, the evaluation team looked at the achievements in terms of the concept notes and CARD-labeled project formulation. The concept notes were created in 20 countries while CARD-labeled projects were formulated and were or are being implemented in 21 countries. There are some countries where concept notes were not developed, and instead CARD-labeled project were created. These projects are included in this report based on the broad definition of a "CARD-labeled project" according to the CARD Secretariat, which is defined as a project that refers to the issues identified in the NRDS. Finally, NRDS evaluation reports are being developed in 11 countries.

At the Initiative level, the outputs can broadly be categorized into 5 categories:

General meeting: 6 meetings were held in 2008, 2009, 2010, 2011, 2013 and 2015 to update progress of CARD.

Steering Committee: 12 meetings were held once or twice a year to discuss and decide on the operation and management of CARD.

Workshops and training: A video conference seminar, a regional workshop, a pre-conference seminar, side events and seminars at Tsukuba were organized by the CARD Initiative.

Website: Technical materials and analytical work produced by SC members were shared on CARD website.

Other: Other achievements include the facilitation of information exchange among stakeholders through e-mail correspondence.

These outputs at the country and initiative levels have created various positive influences (outcomes and impacts) for the stakeholders of CARD as follows:

Takeaways from the experiences of member countries: Through CARD meetings and exposure visits, countries were given opportunities to develop networks and learn from each other's experiences

Capacity building (in terms of learning from SC members): Through the NRDS process, workshops, conferences and CARD websites among others, member countries were provided capacity development opportunities.

South-South Cooperation: Participants were exposed to the experiences of their SSC counterparts through conferences and training or study tours that were organized by SSC countries. Technologies from SSC countries were shared.

Application of CARD's approach in the formulation of other strategies: CARD's approach to developing the NRDS was applied in the strategy formulation for other crops as well as for other sectors. For example, in countries such as Uganda, Zambia and the DRC, the NRDS guided the government to take a crop-specific approach.

Although policy development is a big achievement at the country level, many stakeholders emphasized the necessity of further action and support for policy implementation. At the initiative level, CARD meetings have provided valuable opportunities for participants to exchange information and experiences. However, CARD could have further leveraged on information from CARD SC members as well as the knowledge that member countries acquired through the NRDS process.

7. Analysis

7.1 Factors that promoted or impeded the implementation of NRDS and sector strategies

This section lists the factors that promoted or impeded the implementation of the NRDS and sector strategies. As these factors are important elements behind the success or challenges of the CARD Initiative, they may have to be factored into the decision-making process on promoting development and implementation of NRDS.

These factors have been identified, aggregated and analyzed by the evaluation team as key elements of the implementation of the NRDS in the respective countries as well as of the activities at the regional level.

However, this section does not provide recommendations; rather, it only states the factors behind the NRDS implementation based on analysis through stakeholder interviews and questionnaires. Accordingly, the following list may have factors that would not be part of our policy recommendations due to reasons such the factors being unrealistic, while some of the factors are included in the policy recommendation section further down in the report.

Government

Factors	Description of factors
The importance of rice for the national economy and/or food security	<ul style="list-style-type: none">– A country's government is observed to be more committed to the success of the NRDS when the importance of rice in the said country is apparent with the increasing demand and lagging production of rice.– Likewise, when the government is focused more on other areas such as natural resources and infrastructure, the budget allocation for agriculture would reflect this lower level of prioritization.
Ownership and support from high-level government officials	<ul style="list-style-type: none">– Ownership demonstrated by high-level government officials would not only facilitate work within the ministry, but also influence other related ministries.– Such ownership contributes to enhanced stakeholder involvement and the promotion of strategy implementation.
Assignment of appropriate unit	<ul style="list-style-type: none">– The CARD focal point should be from a ministry with greater government authority and a wide scope of work whereby a value-chain approach to the NRDS can be undertaken, as compared to someone from a research institution.
Authority/level of CARD focal point	<ul style="list-style-type: none">– If the CARD focal point has sufficient authority, the focal point would be in a position to influence other high-ranking ministry officials (especially officials at the minister/prime minister/ president office level). Also the government budget for rice varies depending on the level of focal point.– At the same time, a high-ranking official who is responsible for multiple

	crops can only spare limited attention on rice.
Number and capacity of government officials	– The implementation of the NRDS can be limited by the lack of sufficient personnel and lack of expertise on rice within the ministry, as well as the lack of skills necessary for fund mobilization, donor coordination and project management.
Financial resources	– Without sufficient funding, NRDS activities cannot be fully implemented.
Authority of the NRDS	– When a national master document for the agriculture sector is already in place for the government and donors, it is difficult to institutionalize NRDS as the point of reference for rice development projects.
Action plan for NRDS implementation	– Action plans on NRDS implementation that do not clearly define the roles and responsibilities of every stakeholder may result in inefficiency or lack of action.
Incentives for rice development promotion	– The lack of financial (e.g., funding for monetary allowances for attending workshops) and non-financial (e.g., recognition) incentives for government staff to promote CARD may result in a lack of accountability.
Bureaucracy	– If the government's approval process is too bureaucratic and cumbersome, development partners may not be able to obtain the required approval for new projects.
Government structure for implementation	– A taskforce/rice secretariat responsible for implementation as well as a forum to discuss rice development are necessary for mobilizing resources, facilitating coordination, and following up on NRDS implementation.
Continuity of CARD focal point /taskforce/high-ranking officials	– If someone is new to their current position, the absence of an appropriate hand-over process may result in the new focal point not being aware of previous CARD activities.
Other government policies	– Export ban: Export bans on rice may discourage stakeholders in the rice sector, in particular farmers. – Subsidies: Agricultural inputs subsidies motivate farmers to continue cultivating rice.

CARD Secretariat

Factors	Description of factors
Communication	– Frequent communication directed at SC local offices and Partner Organizations as well as government officials is a key to keeping stakeholders aware of and engaged in CARD.
Provision of personnel	– While deploying consultants from the CARD Secretariat has been helpful, CARD's visibility could be further increased by having more resident staff in the member countries.
Financial resources	– Countries where more budget funds have been allocated for rice development could be given further assistance by CARD due to their promising environment for CARD initiatives.
Number and capacity of human resources	– The amount of time taken to achieve the planned objectives is partially dependent on the number of staff working in the CARD Secretariat.

Authority	<ul style="list-style-type: none"> – An internal financing mechanism in the CARD Secretariat would give it more power to influence donor coordination at the country level. – If the CARD Secretariat is given a higher authority, dialogues would go smoothly at the highest level of management of SC members/Partner Organizations.
Advocacy for government high-officials	<ul style="list-style-type: none"> – When the highest level of government has not yet been adequately sensitized, follow-up communication should be targeted for not only technical staff but also decision makers. In that sense, policy dialogue would be a key factor to assist the member countries with strategy implementation.
Methodology	<ul style="list-style-type: none"> – Having a proper methodology whereby recommendation-making bodies such as task forces are formed and their roles defined, and then developing strategies based on the bodies' recommendations would be a key factor for the success of CARD's initiatives, instead of merely hiring consultants to formulate the strategies for the member countries. – The above factor would also ensure the retention of ownership on CARD-related work among the taskforce members.

SC members and Partner Organizations

Factors	Description of factors
Communication between the SC member representative and SC local office	<ul style="list-style-type: none"> – Communication between the headquarters and local offices of SC members has been essential for raising awareness at the country level.
Awareness of CARD	<ul style="list-style-type: none"> – SC members would need to have institutional knowledge in regard to CARD (e.g., good practices, lessons learnt) as well as its management and structure, including CARD's specific objectives, activities, and roles. – CARD needs to be mentioned in key donor meetings to raise awareness and visibility of CARD in each country, particularly among SC local offices. – Visibility is a key factor to avoid work duplication by other stakeholders.
Incentive to participate	<ul style="list-style-type: none"> – Sufficient incentives must be available for donors to choose rice over other crops or to continue investing in rice after completion of their existing projects. – A success factor may be to clarify to the SC members that the major benefits from working with the CARD Secretariat would be collaboration with other organizations and information sharing between African member countries, and that implementing projects under NRDS in addition to their own strategies would become smoother with the above benefits.
Commitment	<ul style="list-style-type: none"> – The participation of SC and other donor agencies is a key to accelerating rice development at the country level, particularly after the finalization of the NRDS and when starting to implement the NRDS. – The commitment of each SC member is important, as it can trigger tremendous progress in collaboration and project formulation among the SC members and development partners.

	<ul style="list-style-type: none"> – If CARD is not part of the job description of the focal points of SC member countries, they are less motivated to work on CARD. – Further, the active participation of SC members in CARD initiatives would dispel the notion that CARD is primarily JICA-driven, which would then further encourage other SC members and partners to expand their participation.
Roles of SC members	<ul style="list-style-type: none"> – The clarification of the roles of the country offices by the CARD Secretariat or SC headquarters would be key to setting clear expectations and goals.
JICA's support	<ul style="list-style-type: none"> – Local office: In the country where JICA local office takes the initiative in speaking other donors for coordination, CARD has been promoted well which led to the success of the initiative. – Expert: The advisors dispatched by JICA were able to support policy formulation and capacity building of government officials, by virtue of being a member of task force/sectoral meetings.
Inclusion in organization's development assistance strategy/policy	<ul style="list-style-type: none"> – Making the rice agenda a priority among the donors would therefore be a key in the success of the NRDS.
Donor presence and office functions	<ul style="list-style-type: none"> – Having direct donor presence in the member countries would be a factor in the smooth implementation of NRDS.
Success stories from rice projects	<ul style="list-style-type: none"> – The lack of success stories from prior or existing rice projects may have contributed to the lack of momentum in regard to rice production promotion.
Collaboration	<ul style="list-style-type: none"> – A key success factor could be that CARD is receptive to other initiatives that are being implemented in rice sector. – Another success factor would be that CARD could play the role as a paramount coordinator among the donors to mobilize resources based on the NRDS. Such discussions on coordination have been done at regional level during the first phase, so in the next phase CARD can focus on promoting coordination at the country level.

General Meetings and SC

Factors	Description of factors
Frequency	<ul style="list-style-type: none"> – Meeting infrequently with high-level representatives may reduce the SC members' level of commitment. – There is a tradeoff in regard to the frequency of meetings. If CARD organizes meetings more regularly, there will be continuity in the discussions, and the relationships among the stakeholders will be strengthened but at the cost of lower priority of country-level activities. Conversely, when the meetings are infrequent, the CARD Secretariat can concentrate on country-level activities but at the cost of weaker continuity of the meetings and stakeholder relationships.
Timing	<ul style="list-style-type: none"> – When the SC meeting is often held in conjunction with other important meetings and is scheduled at the end of the program, the perceived importance of the meeting as well as the interest and participation of stakeholders would be reduced. Therefore, having more standalone SC meetings would increase the motivation and commitment of the relevant

	<p>stakeholders.</p> <ul style="list-style-type: none"> – Another key factor could be inviting key people to CARD meetings that are held in conjunction with major regional conferences, or at least have CARD activities introduced in such conferences.
Participation/membership	<ul style="list-style-type: none"> – The CARD meetings would be well-run when they include major stakeholders. – Making sure the number of participants in the meetings is not overly large so as to not make decision-making difficult is another key factor. Preparing a good agenda on what to decide in order to ensure that the meeting is well-run and efficient would also be helpful. – A success factor would be having executives with decision-making powers as steering committee participants. – Changes to the organization/country focal point participating in CARD meetings will affect the quality of discussions, because new focal points are not always well aware of the content of previous meetings. – Proactive attitudes among SC members will improve discussions. – The rank or position of the CARD staff corresponding with the respective governments should match those with that of the government officials they are corresponding with in order to ensure smooth discussions.
Authority	<ul style="list-style-type: none"> – The CARD General Meetings would be the best place to make decisions and approve the Work Plans of the CARD Secretariat.
Meeting agenda	<ul style="list-style-type: none"> – Discussions on the progress of the work of SC members, ideas on how they could improve collaboration, and finding synergies are also important in addition to CARD work plans and special projects on seed and mechanization on the meeting agenda. – The time required for discussion among SC members should be taken into account at SC meetings. – CARD can provide opportunities in the SC meeting agenda to have discussions and facilitate them, especially in regard to collaboration.
Logistics	<ul style="list-style-type: none"> – The efficient handling of logistics for meetings and other activities is a key factor. – A successful example of good logistics would be the SC meeting which was very efficient and organized, as everything was on time, documents were well-prepared, and the meeting was organized well in advance.
Venue	<ul style="list-style-type: none"> – The selection of the CARD meetings and conferences is a key factor – a central hub location as the venue would allow CARD to influence stakeholders in the host country.

Other

Factors	Description of factors
Selection of member countries	<ul style="list-style-type: none"> – A key factor would be CARD selecting countries that share similar climatic soil conditions and are not self-sufficient in rice. – The major rice producing and consuming countries need to be included where rice is considered as a strategic crop for the local market and has high potential for export. – CARD can also add countries that do not necessarily produce much rice but have potential in terms of areas suitable for rice cultivation

	<ul style="list-style-type: none"> – However, the promotion of CARD activities in politically unstable countries has been difficult due to the security issues there.
Distribution of roles among the CARD Secretariat, JICA, and other SC members	<ul style="list-style-type: none"> – The role distribution among AGRA, NEPAD, and JICA to ensure CARD engagement with its Supporting Partners should be clarified. – The clear separation of CARD and JICA in terms of their responsibilities is a key factor in order to avoid cases where CARD is looked upon as being controlled by JICA or where government counterparts mistake the achievements of other donors as being a contribution from Japan. The clarification of the responsibility of Process Assistance Organization (PAO) may also contribute to the improved understanding of role distribution.
Indicators and baseline data	<ul style="list-style-type: none"> – Baseline data and better indicators should be established so that stakeholders can understand the outputs, outcomes, and impacts of CARD activities. – In the current phase of CARD's initiatives, there is a lack of the aforementioned indicators, and therefore the evaluation had to be based on the narratives of stakeholders.
Availability of reliable statistics and evaluation of progress	<ul style="list-style-type: none"> – Reliable statistics is a key factor to help in objectively showing the achievements of CARD. – Also, without an adequate evaluation mechanism or framework, stakeholders will not be able to track the progress of the strategies.
Introduction of rice as a new crop	<ul style="list-style-type: none"> – In the countries where rice development and aid are already widespread, the government tends to focus on the existing scheme, committing less attention to CARD. – On the other hand, it tends to be easier to introduce different varieties of rice in countries where rice is new and consumers do not have particular preferences for the taste.
Adaptation to local context	<ul style="list-style-type: none"> – Adapting CARD's initiative to the local needs and requirements is a key success factor. For example, countries like Benin may have a limited number of donors present in the country, and the effective management of many independent projects may be difficult, and therefore the Benin government had requested CARD to develop concept notes for them.
External Factors	<ul style="list-style-type: none"> – Internal conflict and terrorism, and the Ebola virus epidemic have been major challenges affecting CARD's activities.
Private-sector involvement	<ul style="list-style-type: none"> – Investment in the rice sector by the private sector could contribute to accelerating the increase in rice production in a country.
Demarcation of similar initiatives	<ul style="list-style-type: none"> – Clarification of the strength of CARD as compared to other similar initiatives would increase the visibility and understanding of CARD by stakeholders.

7.2 Sustainability and prospects for African rice sector development beyond 2019

7.2.1. Sustainability and prospects at the country level

The progress that has been demonstrated by successful countries showed that a high level of awareness of CARD/NRDS among stakeholders in the country is important.

Our experience shows that it is indeed possible to develop policies in the respective countries as long as the local focal point shares the vision of CARD activities. However, in order to develop meaningful and significant policies, it is very important to select member countries that value rice as one of their important crops and are in need of external support to develop their rice sector.

In order to continue promoting fund matching after the finalization of policy documents, other relevant government officials should be also aware of CARD/NRDS. Accordingly, the assignment of focal points and taskforces is key. In other words, appropriate units have to be assigned to implement the policy, which can cover different areas of the rice value-chain. Further, there must be effective succession planning with regard to the focal points and taskforce members.

If government officials understand the priorities described in NRDS/sector strategies, at the least they are able to identify areas that are in need of donor support and connect donor projects with these priority areas. However, for the purpose of harmonization and collaboration among different projects, other stakeholders—including SC local offices—are expected to be fully aware of CARD/NRDS. Thus, CARD must be in frequent communication with the stakeholders to facilitate its promotion, and government officials should initiate this. When high-level government officials are committed to motivating technical officials to promote CARD to other stakeholders, approaching donors will be smoother. Similarly, institutionalizing regular meetings between government officials, donors, and other stakeholders is an important factor.

Monitoring has not yet been conducted in many countries. For effective monitoring, targets and goals have to be clearly set from the beginning. In addition, baseline data and reliable statistics are necessary for government officials as well as for SC members to explain the impact of each project to other stakeholders.

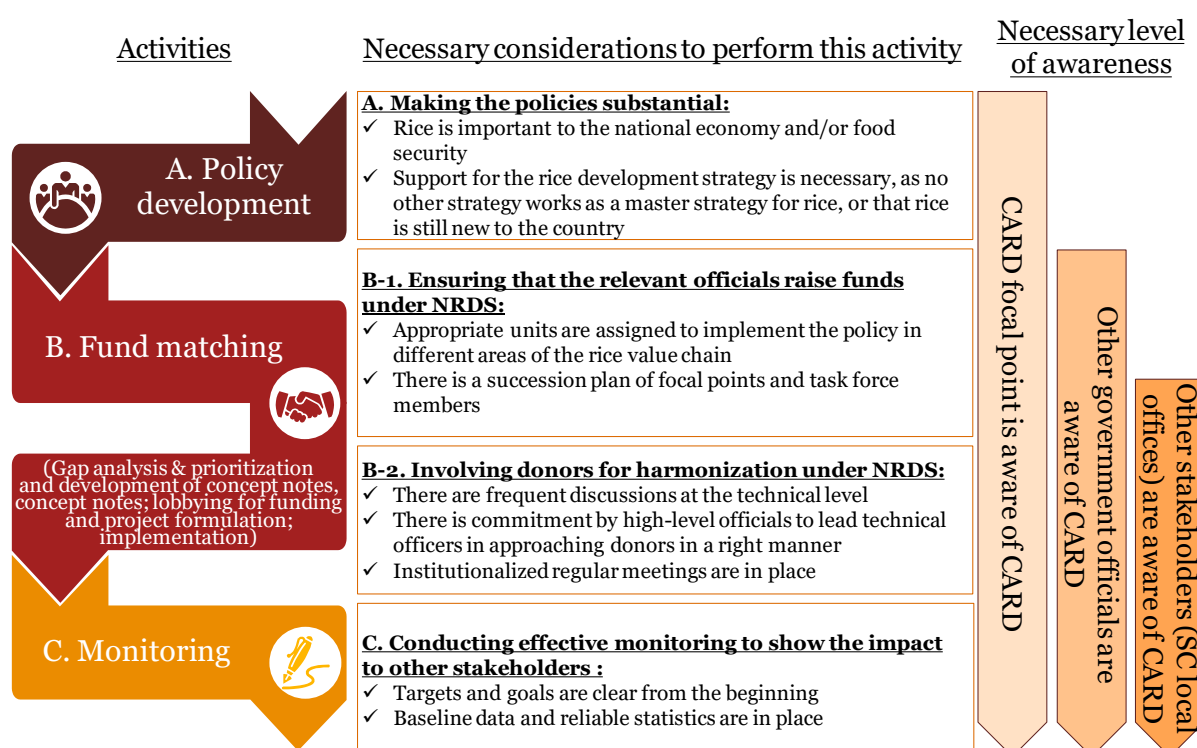


Figure 56 : Sustainability and Prospects at Country Level

7.2.2. Implications for the next phase of the CARD initiative

The most significant issues the CARD initiative is facing in the first phase are:

1. Although CARD started with a clear objective and 4 identified approaches for achieving its objective, the strategy remained weak.
2. Therefore, the strategic prioritization of activities, roles and responsibilities of the stakeholders, infrastructure support, and resource allocation were not optimal. CARD morphed into relying mainly on the Secretariat to implement its strategy. The CARD Secretariat was mandated with an extensive range of activities beyond the human and financial capacity given to it by the CARD SC. As a result, activities were neither strategically selected nor fully implemented by the CARD Secretariat. Rather, it had to utilize limited resources in response to the demands from its counterparts on an ad-hoc basis, which ultimately undermined the potential impact that it could have otherwise delivered.
 - At the country level, policy development is a big achievement. On the other hand, many government officials mentioned the challenges in implementing strategies on their own and requested for continued support in this area.
 - Information sharing was limited to opportunities at events such as conferences and workshops, and in response to specific inquiries. CARD could have taken better advantage of the wealth of information and experience owing to its Pan-African and multi-institutional nature.

For other stakeholders,

- Since roles and responsibilities were not clarified and institutionalized for CARD SC members, their strengths were not sufficiently leveraged and their level of involvement in the Initiative remained somewhat low.
 - While the ownership and commitment of member countries' governments is fundamental to the success of CARD, their leadership was not always displayed that.
3. Except for those who have been directly engaged in with CARD, many people interviewed stated that they did not have a clear idea of what CARD was doing exactly.

CARD was intentionally started without a clear plan for its strategy. It was meant from the onset that it should be gradually refined as the needs of member countries became clear. However, although CARD has come to define its priorities through the years, these have never been clearly discussed nor defined in written form. Furthermore, the roles and responsibilities with regard to these priorities were not clarified. This has hindered the strategic alignment of infrastructure support and financial resources, and has also led to the heavy reliance on the Secretariat to implement the Initiative's

strategy.

The Secretariat had very limited resources in the first place. It has been provided with only 2 coordinators, 4 part-time CARD Consultants, and about 50 million JPY annually. There was an apparent gap between the given resources and its extensive activities in the 23 member countries as follows:

At the country level: The CARD Secretariat supported the NRDS process from policy development to implementation, and sometimes even included monitoring.

At the initiative level: The Secretariat organized General and SC meetings as well as irregular workshops/seminars that aimed to promote partnership, harmonization, knowledge sharing and mutual learning among the stakeholders.

Therefore, the limited resources were thinly distributed across various activities without a strategic focus. Even so, in the first phase, all member countries have achieved policy development and information exchange/partnership at conferences by virtue of the Secretariat's extensive efforts. However, the support of the Secretariat was not enough to enable government counterparts to keep negotiating with relevant donors and formulating multiple projects by themselves in many countries.

For the SC members, the lack of a more operational definition with regard to their roles and responsibilities has hindered them from playing a more effective role. In most cases, their level of involvement at the country level was minimal, and even at the initiative-level their full potential remained unfulfilled. CARD could have taken better advantage of the wealth of expertise and strengths that SC members could bring to this coalition-based Initiative.

Further, given the nature of the Initiative which places emphasis on the ownership and sustainability of CARD activities by member countries beyond the years of the Initiative, government commitment is the key to the success of CARD. However, this was not always observed, limiting the realization of potential impacts that CARD has tried to catalyze.

As a result, CARD's contributions were visible mainly to policy makers (CARD focal points and taskforce members) and some representatives from the SC headquarters who were closely engaged with CARD, while it remained unclear for other stakeholders (such as many of the local offices of SC members and government officials who were not taskforce members). Basically, the aforesaid stakeholders did not have a clear understanding of the CARD initiative, unless the CARD focal point of the government had strong leadership to promote CARD activities. In fact, a good number of

stakeholders mistakenly expected that CARD could finance projects in certain areas of the rice value-chain or find donors on behalf of the governments.

Taking into account the issues raised above, in order for CARD to make further meaningful contributions to African rice development in the future, it is suggested that CARD should take the following steps:

1. Identify the priorities and clarify the scopes based on a clear and competitive strategy, focusing on activities where there is a high level of need and a large magnitude of expected impacts, and which other donors cannot contribute to.
2. Assign roles and responsibilities among stakeholders and align activities, infrastructure support and resources accordingly. And, ensure that each stakeholder fulfills his or her own roles and responsibilities.
3. Finally, it is important to communicate and engage with relevant stakeholders at both country and SC HQ levels in order to create a clear understanding about the vision, strategic priorities, the scopes of work, and targeted impacts of the CARD initiative. This will further enhance cooperation among the relevant government officers and donors.

Regarding “1. Priorities and scopes”, based on the interviews and questionnaires, the evaluation team highly recommends that CARD primarily focuses on implementation support through fund matching, donor coordination and policy dialogue in the next phase, while other activities can be continued at varying levels of effort depending on the situation. With regard to implementation at the country level, CARD can provide support for promoting fund matching with donors, making clear that the eventual goal is for member countries to fully undertake this role by themselves. High-level policy dialogue at both initiative and country levels is also important. Buy-in from the SC members’ HQs will allow them to include rice promotion in their own country strategies, which will make it easier for the government to raise funds from them. Also, agreement with high-level government officers will facilitate budget allocation and financing, inter-agency communication and fast decision making at the country level. (Please refer to the table below for the detailed suggested actions for each activity).

The proposal of the Chapter 8 deals with the structure, “2. Roles and responsibilities among stakeholders”, “3. Communication with relevant stakeholders” and other perspectives to be considered in order to conduct the activities.

Activities	Current issues and expectations	Level of impact ⁶⁶⁶	Measurability ⁶⁶⁷	Irreplacability	Priority	Actions in the second phase ⁶⁶⁸
A) Information and knowledge sharing	<p>■ Among countries</p> <p>(1) Countries with good progress need further information from advanced countries such as Southeast Asia. South-South Cooperation is preferable for those countries.</p> <p>■ Among SC members</p> <p>(2) SC members expect to understand through CARD the activities and achievements of other SC members to avoid duplication of efforts and identify possible partnerships/cooperation, but the time for such discussions is not always sufficient.</p> <p>■ All stakeholders</p> <p>(3) Countries that started NRDS process only recently should be able to learn from those countries that have faced similar problems and have know-how. But they do not know how to get such information. Stakeholders currently rely on trainings and general meetings or by making specific requests to the Secretariat (in which the requester must know the specific information they are looking for) in order to access best practices and lessons learnt.</p> <p>(4) The CARD website has several non-</p>	Indirect but broad impact on stakeholders in rice sector	Difficult to measure (Possible indicators: Number of participants in events, number of opportunities provided, information access)	Some organizations including SC members provide information on rice but not necessarily comprehensive	High-Middle	<p>■ Among countries</p> <p>(1) Increase opportunities for learning from non-member countries (More South-South Cooperation including exposure visits, projects and workshops can be explored.)</p> <p>■ Among SC members</p> <p>(2) Host more workshops and events for knowledge-sharing among SC members, which is also beneficial in maintaining momentum and engagement</p> <p>■ All the stakeholders</p> <p>(3) Create database of best practices and lessons learnt (Consolidate achievements in the first phase and ensure accessibility to all stakeholders among member countries, such as via CARD website. Also exposure visits by government officials to other countries can be systematized.)</p> <p>(4) Restructure website and promote it, based on an analysis of who is actually using the information, what knowledge should be shared and how it should be distributed. CARD should also ensure</p>
Activities at the initiative level						

⁶⁶⁶ "Direct" implies the direct impact on the achievement of the target (e.g. increase in rice production)

⁶⁶⁷ "Measurable" implies that the impacts of actions are measurable.

Also as is mentioned in the interim report, there should be baseline data and better indicators at initiative level that can be traced in order to understand the output, outcomes, and impacts of CARD activities, including thorough evaluation studies. In the first phase, although the goal of doubling rice production was set, it has been challenging to explicitly confirm how much exactly CARD contributed to the achievement of the goal. In this sense, CARD should be able to explain by setting indicators to demonstrate their direct contributions. In this chart, possible indicators are presented for each activity.

⁶⁶⁸ Optional actions are those which require a lot of cost and effort thus could be considered only when CARD has room to think about additional work.

	functioning links, limited obvious updates, and according to some stakeholders, limited technical information (e.g. comprehensive information regarding rice development situation in member countries) that several stakeholders referred to it as lacking dynamism and not encouraging returning visits. In fact, some stakeholders in the member countries did not know about the website. (5) Not all the stakeholders know what is going on around CARD and whom to contact when they have inquiries about CARD. Communication is heavily based on personal connections.					links are working, information is timely uploaded, relevant information (such as technical information from SC members) is available, navigation is user friendly etc. (5) Deliver information about progress of the CARD initiative regularly to stakeholders via email, CARD website, and social media such as Facebook. (The content does not have to be fancy and could be a simple one-pager distributed monthly to remind stakeholders of CARD. -(Optional) Ask CARD focal points to prepare annual NRDS progress reports of their own country and publish them	links are working, information is timely uploaded, relevant information (such as technical information from SC members) is available, navigation is user friendly etc. (5) Deliver information about progress of the CARD initiative regularly to stakeholders via email, CARD website, and social media such as Facebook. (The content does not have to be fancy and could be a simple one-pager distributed monthly to remind stakeholders of CARD. -(Optional) Ask CARD focal points to prepare annual NRDS progress reports of their own country and publish them
B) Policy dialogue and advocacy/harmonization of the rice sector	(1) To facilitate the implementation of NRDS, the following should be considered. <ul style="list-style-type: none"> For donors that have their own funds, such as WB and AfDB, investments in rice projects cannot be prioritized without including it in their country strategies. For implementing donors, such as FAO, they operate based on the project budget. They collect funds either by A) donor coordination to get funds from donors or B) securing funding of tied aid of donor governments for rice projects. 	Indirect but broad impact on stakeholders in rice sector	Difficult to measure (Possible indicators: Number of dialogues conducted)	Irreplaceable (In terms of having the backing of major donors and no other coordination framework specifically for the rice sector)	High	(1) Support the CARD focal points and the governments in ensuring the buy-in and involvement of high-level officials of SC members for rice development to be part of their own strategies and to facilitate project formulation at country level (2) Strengthen lobbying for officers at the minister/prime minister/president office level by leveraging the SC's existing bargaining power in order to <ul style="list-style-type: none"> Gain recognition of NRDS and ensure incorporation of the strategy and concept notes into 	(1) Support the CARD focal points and the governments in ensuring the buy-in and involvement of high-level officials of SC members for rice development to be part of their own strategies and to facilitate project formulation at country level (2) Strengthen lobbying for officers at the minister/prime minister/president office level by leveraging the SC's existing bargaining power in order to <ul style="list-style-type: none"> Gain recognition of NRDS and ensure incorporation of the strategy and concept notes into

		(2) CARD's lobbying at high-level can be strengthened to get officers at the minister/prime minister/president office level to commit more to NRDS. Countries that have great commitment from high-level government officials tend to show good progress. (3) Some regional economic communities develop their agriculture/rice/investment strategies that should be implemented by member countries. Considering this situation, alignment of NRDS with sub-regional and regional policies is essential.					existing policies and investment plans <ul style="list-style-type: none"> - Recommend them to establish a dedicated unit for rice - Raise their awareness of the progress of NRDS - Support the government to consider instituting regulations ex. Regulations for quality, grading, incentives for investment, trade policy etc. (3) Expand policy advocacy to sub-regional and regional levels
C) Policy development	Activities at the country level	<p>(1) As the situation around rice in the country changes, the strategy documents require revision. In some countries their focus has already changed from production to post-harvest even during the first phase.</p> <p>(2) NRDS is sometimes developed without the sufficient involvement of development partners. In order to accelerate the implementation, the development partners should also be the co-owner of the strategy. Also, the SC members' existing expertise can be leveraged (e.g. FAO provides policy development and institutional support for governments).</p> <p>(3) It is difficult for CARD to have a direct influence on project formulation unless NRDS is covered under the umbrella policy (e.g. Tanzania).</p>	Indirect impact primarily on policy makers	Measurable (Possible indicators: Number of countries which developed/revised their strategies)	Support on policy development is provided by others but irreplaceable in terms of rice strategy and NRDS process	Middle	<p>(1) Provide assistance for renewing current strategies, since many of the strategies will end in 2018 in line with the CARD initiative, and the state of rice development in the country is likely to have changed</p> <p>(2) Ensure involvement of development partners (at the very least SC members) in the policy development process</p> <p>(3) Strengthen the incorporation of NRDS in existing policies and investment plans (e.g. National Agriculture Investment Plans developed in the context of CAADP)</p>

D)	Implementation (Fund-matching support; donor coordination)	Direct and broad impact on stakeholders in rice sector	Measurable (Possible indicators: Number of CARD-labeled projects, funding for projects)	Irreplaceable (In terms of emphasizing the ownership of member countries and promoting coordination without its own funding mechanism)	High	
	<p>(1) The mere existence of policies may not lead to implementation. Without an action plan, government officials would not take action.</p> <p>(2) Currently there is no donor coordination mechanism for rice development at the country-level and limited knowledge of CARD among SC local offices. CARD may hold regular meetings involving different stakeholders including government officials and development partners to talk about their intervention after finalizing the NRDS. This would create more awareness about CARD and also promote the sub-projects envisaged in NRDS. In most cases, governments do not have adequate funds for facilitating meetings across the countries.</p> <p>(3) The capacity of CARD focal point to lobby for funding is limited. The CARD focal point does not know how to sell concept notes.</p> <p>(4) Even if CARD focal point can approach the right officers of the development partners, without commitment from the headquarters, project formulation will not be easy. Thus, a dual approach, namely marketing at both HQ and country levels is recommended. The CARD Secretariat can facilitate the sharing of fund matching opportunities at the HQ level among the SC members and promoting influence in local offices.</p> <p>(5) In the countries where the CARD focal point is not in charge of policy planning or project</p>					<p>(1) Support in preparing an action plan for implementation</p> <p>(2) Establish country-level SC committees (This could be done in the form of a sub-group of an existing donor coordination group on agriculture, as depending on the country, there are other strong players in the rice sector who are not represented in CARD SC. This committee could be led by one of the local SC offices and be responsible for raising awareness of CARD/NRDS, coordinating rice interventions, and tracking the achievements of each stakeholder under NRDS process at country level.</p> <p>-(Optional) Provide funding support for taskforce/implementation units in some countries for meetings if there is no budget allocated for the CARD focal point by the national government</p> <p>(3) Support CARD focal point and taskforce in marketing concept notes especially by encouraging them to leverage on existing government-donor channels.</p> <p>(4) Host roundtables for SC members at the initiative level after the concept notes are finalized. (This could be done as part of existing meetings for CARD</p>

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assessment)	<p>provide valuable information for guiding future strategy and action.</p> <p>(2) In some countries, there is lack of linkage between those who develop and those who monitor the implementation of the strategies. Furthermore, the capacity of M&E personnel is limited.</p>	in rice sector	evaluation exercise conducted)	irreplaceable as it is specific to rice	<p>mechanisms such as the one for CAADP if appropriate</p> <p>-(Optional) Conduct research to analyze the reasons for the achievement or non-achievement of the target (This could be done with support from CARD SC members.)</p> <p>(2) Encourage the involvement of M&E unit at the Ministry in the taskforce in order to ensure a comprehensive project management cycle</p> <p>-Training of M&E personnel of the unit</p> <p>-(Optional) Establish M&E unit within the Secretariat to support the government monitoring unit when there is a request</p>
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8. Proposal for the next phase of the CARD initiative⁶⁶⁹

Based on the analysis above, the following structure and perspectives can be considered for application in the CARD initiative in order to operate more effectively in the next phase.

Structure		Actions in the second phase
Secretariat	Function (Activities)	Emphasizing the ownership of member countries, pivoting functions by implementing actions suggested above and giving priority to implementation (fund matching, donor coordination) and policy dialogue . For policy dialogue, we propose the option of the Secretariat to undertake this function or to assign it to SC members.
	Authority	<ul style="list-style-type: none"> • (For the option to assign policy dialogue to the Secretariat): Through advocacy of CARD by high-level staff of SC members, strengthen authority of the Secretariat to ensure effective implementation and policy dialogue in the member countries
	Human resources	<p>Maintain the status quo with options to strengthen human resources by the following means, in order of priority:</p> <ul style="list-style-type: none"> • Allocate personnel for communication • Allocate personnel for monitoring and evaluation • Allocate personnel for knowledge management
	Presence	<p>Establish regional Secretariat offices (ex. In West, East, and Southern Africa)</p> <p>Field research in Kenya showed that physical presence facilitated communication and stakeholders were well informed and engaged with CARD. The proposed regional offices will function as the point of contact for stakeholders in the region and allow for more agility and face-to-face communication, which would facilitate increased engagement, discussions about sensitive issues, and ultimately forge stronger working relationships. Regional Secretariat may be established within SC offices and staffed by either the CARD Consultant or seconded SC staff on a part-time basis.</p>
	Funding	<ul style="list-style-type: none"> • Secure necessary funding to support the above-mentioned activities through contributions from all SC members • Contributions do not necessarily need to be financial but can be through dispatching personnel, allocating resources

⁶⁶⁹ In this section, we highlight the key points to consider for the next phase of the CARD initiative. However, specifics should be decided based on discussions among SC members and member countries.

		for Secretariat office (space, IT infrastructure etc.), funding specific projects that carry out one of the functions of the Secretariat (ex. monitoring and evaluation of NRDS)
SC	Function ⁶⁷⁰	<ul style="list-style-type: none"> Strengthen cooperation among SC members by sharing and institutionalizing roles and responsibilities, based on identified strengths and interest areas, which would include an option to delegate policy dialogue to a few SC members. For example, the FAO's experience and expertise in institutional and policy support and the WB's expertise in policy advocacy can be taken advantage of. Based on the aforementioned agreed-upon items, each SC member will institutionalize the roles and responsibilities of its country-level offices. Re-institutionalize the PAO in each member country, sharing the responsibility among the SC members and publicizing its existence so that it can better carry out its functions. Each SC member is to ensure communication with the respective field offices in order to guarantee increased awareness and fulfillment of expected roles to be played by the local offices. Each SC member is to ensure engagement with the respective organization's decision-makers Each SC member is to ensure the application of important areas identified in the NRDS in their organization's country assistance plan/strategy. Each SC member is to actively share information relevant to rice development in Sub-Saharan Africa. Each SC member is to report on performed actions and outcome with regards to its expected roles and responsibilities every year.
	Authority	Maintain the status quo
	Membership	Consider the participation of member countries as a way to increase their ownership and better capture inputs from the ground. Alternatively, ensure that such inputs from member countries are aggregated and presented at CARD SC meetings by the proposed regional Secretariat offices, and their consideration in the meeting to be transparently communicated to

⁶⁷⁰ This is the elaboration of the interim report "Clarify each stakeholder's roles"

It is recommended that CARD clearly defines the roles of stakeholders that are aligned with its focus activities. In the current phase, there is no clarity regarding the roles of SC members and the CARD Secretariat. In some cases, CARD is looked upon as being controlled by JICA. Even if donors implement projects under the CARD initiative, there is a risk that the government might mistake these efforts as contribution from Japan.

		member countries later on.
Human resources	Ensure participation of executive-level staff alongside technical-level staff in order to ensure the smooth implementation of the above-mentioned expected support for CARD.	
Frequency/timing/style of meetings	<ul style="list-style-type: none"> Host meetings alongside other important events to facilitate participation, especially of executive-level staff The mandate of chairman of SC meeting should be clarified and term of chairmanship should be decided accordingly. 	
Fund	Maintain the status quo	
Function	Maintain the status quo	
Authority	Maintain the status quo	
Human resources	<ul style="list-style-type: none"> For member countries, ensure the participation of the CARD focal point, and depending on his/her level of authority, ensure participation of executive-level or technical-level staff alongside in order to ensure the smooth roll-out of CARD activities. For SC members, maintain the status quo 	
Frequency/timing/style of meetings	Maintain the status quo	
Fund	Maintain the status quo	
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Member countries	Reasoning
<p>In selecting member countries, the following factors should be considered:</p> <ol style="list-style-type: none"> Rice is one of the top strategic crops (e.g. rice is listed as one of the top 3 priority crops in the national agricultural policy) Demonstrated government commitment in promoting the rice sector 	<p>The left factors are recommended based on the success factors and challenges identified in each country. As CARD is a framework that supports the self-help efforts of its member countries, success relies heavily on the commitment and initiative of the host government, and hence, emphasis is placed on criteria that are evidence of such factors. Their consideration will contribute to enhanced ROI and a solid selection of good practices that could be applied to other countries.</p> <p>(1) Our country analysis shows that in the more successful cases, the</p>

<p>(e.g. track-record of national budget allocation for the rice sector, promoting private sector involvement by encouraging investment through incentives, supporting farmer producer organizations (FPOs), cooperatives and other forms of farmer groups operating in rice sector)</p> <p>(3) Demonstrated SC member commitment in supporting the rice sector (e.g. number and amount of projects that cover the rice sector in the candidate country)</p>	<p>government places rice as one of the top priority crops in its national agricultural policies.</p> <p>(2) The actual commitment can be measured through the allocation of resources and incentives for specific activities, dedicated office and/or personnel for the development of the rice sector.</p> <p>(3) As most governments face financial constraints, donor support is integral to the implementation of the strategies. In proposing an increased emphasis on implementation, SC members' commitment level in the country should be gauged.</p>
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Target	Reasoning
Continue to focus on increasing rice production in Sub-Saharan Africa	<p>Given the diversity of the member countries, we believe that the target should be set broadly in order to be relevant and applicable to all. In our discussions with the stakeholders, self-sufficiency has been raised as one of the possible targets, and it indeed aligns with the expressed intent of the African heads of States. It is also true that some member countries have reached a stage where this target has almost been achieved and are shifting their focus to exports.</p> <p>Improving productivity has also been brought to the discussion table. Whereas we see this as an important focus for achieving increased production (and increased farmer income), there is still potential for increased acreage in some countries. Hence we would like to suggest this as one of the key ways to achieve the target as opposed to being the target itself.</p>

Focus areas/approaches	Reasoning
Private sector involvement	<p>Whereas the first phase was successful in bringing private sector actors to the discussion table, further engagement with them is recommended in the second phase in order to facilitate their participation. This becomes increasingly important, as different member countries have made different levels of progress. And, there is a further need to ensure improved post-harvest management (e.g. storage, processing facilities) in order to reduce the wastage of produce and to provide access to markets for the produce. CARD can support this process by helping to identify the needs and expectations of the private sector, facilitating discussions to address them, and through policy dialogue.</p>
Country/region/group-specific approaches	<p>Context, level of progress, regional ties etc. should be considered in delivering support to each country. Member countries may be grouped according to their commonalities and applied approaches that differ according to the categories. Possible groupings can be according to region (e.g. West Africa, Central Africa, East Africa, Southern Africa); RECs; the level of progress in first phase, focus areas (e.g. production or post-harvest and marketing) etc.</p>
Synergy with similar initiatives	<p>Similar initiatives exist (e.g. GIZ-CARI, and CAADP) and synergies should be sought as well as a clear positioning established for CARD. This can be done by initiating formal communication, mutually participating in initiative meetings, and identifying areas where one can support the other. Finally, an MOU can be signed in order to formalize the relationship.</p>
South-South Cooperation	<p>Increased engagement is necessary (knowledge-sharing through study tours, projects, workshops etc.) as mentioned in 7.2.2.</p>