

Country Name	Technical Cooperation Project on Extension capacity development for rice food security in Africa
Republic of the Philippines	

I. Project Outline

Background	<p>Rice consumption in Sub-Saharan African (SSA) countries had been increasing but production growth had not kept pace with this increase, and rice imports were rising. Under this circumstance, the Coalition for African Rice Development (CARD) initiative was launched in 2008 with the goal of increasing rice self-sufficiency from 14 million tons/year to 28 million tons/year, and efforts were being made in each country to achieve this goal.</p> <p>In order to increase rice self-sufficiency, improvements of rice cultivation and post-harvest processing technologies were essential to promote the production of domestic rice of a quality that could compete with imported rice, and government research and extension institutions played an important role. However, in many of the CARD-supported countries, government agencies had limited knowledge and experience in rice research and extension, and the need for human resource development in this area was recognized.</p>				
Objectives of the Project	<p>By conducting (i) Quality Breeder and Foundation Seed (QBFS) Training, (ii) Specialized Course on Rice Seed Production and Extension Methods (RSPE), and (iii) In-country training workshops to link training participants to rice-related institutions and engage them in the rice production and extension, the project aims at strengthening the rice seed sector in each CARD country, thereby contributing to achieving rice food security.</p> <ol style="list-style-type: none"> Overall Goal: Rice food security is achieved through capacity building for an improved rice seed sector in Africa. Project Purpose: The rice seed sector in each CARD country is strengthened through building the capacities of various stakeholders involved in the development of the sector specifically in the quality-oriented seed value chain and the rice extension professionals. 				
Activities of the project	<ol style="list-style-type: none"> Project site: (i) International Rice Research Institute (IRRI), Philippine Rice Research Institute (PhilRice) (training in the Philippines), (ii) Ghana, Uganda, Madagascar and Cameroon (follow-up in-country training workshops) Main activities: Conduct of (i) QBFS Training, (ii) RSPE training, and (iii) In-country training workshops for linking training participants to institutions and engagement in rice sector. Inputs (to carry out above activities) <table border="0" style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;"> <p>Japanese Side</p> <ol style="list-style-type: none"> Expenses for training in the Philippines, and dispatching IRRI experts to SSA countries </td> <td style="width: 50%; vertical-align: top;"> <p>IRRI/PhilRice side</p> <ol style="list-style-type: none"> PhilRice: computers (used by training participants during training) </td> </tr> </table>			<p>Japanese Side</p> <ol style="list-style-type: none"> Expenses for training in the Philippines, and dispatching IRRI experts to SSA countries 	<p>IRRI/PhilRice side</p> <ol style="list-style-type: none"> PhilRice: computers (used by training participants during training)
<p>Japanese Side</p> <ol style="list-style-type: none"> Expenses for training in the Philippines, and dispatching IRRI experts to SSA countries 	<p>IRRI/PhilRice side</p> <ol style="list-style-type: none"> PhilRice: computers (used by training participants during training) 				
Project Period	(ex-ante) March 2016 – February 2019 [36 months] (actual) March 2016 – May 2019 [39 months] (Extended period: March 2019-May 2019)	Project (Japanese only)	Cost side (ex-ante) 340 million yen, (actual) 220 million yen		
Implementing Agency	IRRI, PhilRice Departments in charge of research and dissemination in the four countries where in-country training workshops were conducted (Ghana, Uganda, Cameroon and Madagascar)				
Cooperation Agency in Japan	-				

II. Result of the Evaluation

<Constraints on Evaluation>

- It was confirmed at the time of ex-post evaluation, IRRI and PhilRice did not have information on the post-completion status of the project. The questionnaires were distributed to ex-trainees in 22 CARD countries at the time of ex-post evaluation; however, responses were collected from only five ex-trainees in Ghana, Madagascar, Uganda, Sierra Leone and Zambia. So, information and its analysis of post-completion status under this ex-post evaluation does not necessarily capture the status in the 22 CARD supported countries.

<Special Perspectives Considered in the Ex-Post Evaluation>

- As for the Sustainability, it was difficult to collect information about general trends in agricultural extension and research institutes in each CARD member country. Therefore, information how the institutional, technical and financial aspects of IRRI to continue supporting CARD member countries are collected and analyzed.

1 Relevance/Coherence

[Relevance]

<Consistency with the Development Policy of CARD supported countries at the Time of Ex-Ante Evaluation >

The project was consistent with the development policy of CARD supported countries at the time of ex-ante evaluation. The CARD supported countries formulated National Rice Development Strategies (NRDS), which were consistent with their respective national agricultural policies, and were promoting rice cultivation in accordance with these strategies. The NRDSs of each country addressed human resource development as an important issue, given the lack of human resources (research, extension, etc.) involved in rice cultivation.

<Consistency with the Development Needs of CARD supported countries at the Time of Ex-Ante Evaluation >

The project was consistent with the development needs of CARD supported countries at the time of ex-ante evaluation. As mentioned above (“Background”), rice production had not kept pace with the increase of rice consumption in SSA countries, and there was a need to increase rice self-sufficiency.

<Appropriateness of Project Design/Approach>

The project provided equal opportunities for women to participate in the trainings. The project also used the lessons learned from the past project such as collaborating with the CARD Secretariat in the selection of training participants and adjusting the training lengths and focusing the training contents to the needs of the training participants.

Generally, no problem attributed to the project design/approach was confirmed.

<Evaluation Result>

In light of the above, the relevance of the project is ③¹.

[Coherence]

<Consistency with Japan’s ODA Policy at the Time of Ex-Ante Evaluation>

The project was consistent with the Japan’s ODA policy at the time of ex-post evaluation. Doubling rice production from 2008 to 2018 through efforts by the CARD was one of the targets under the Fifth Tokyo International Conference on African Development (TICAD V) action plan.

<Collaboration/Coordination with JICA’s other interventions>

The collaboration/coordination between the project and JICA's past support to CARD was planned at the time of ex-ante evaluation and was implemented, with positive effects being confirmed at the time of ex-post evaluation. IRRI introduced to training participants various rice varieties which were being developed at IRRI for different countries. Training participants were granted access to these varieties. In different ways, this has built interactions between training participants and other JICA projects in CARD countries which were doing rice varietal improvement activities. The expected synergy effects are being realized at the time of ex-post evaluation in many ways. For example, the training participant from Zambia has been working with JICA-supported “Market-Oriented Rice Development Project” since 2019 and had been disseminating the knowledge and skills acquired from the project’s training activities.

<Cooperation with other institutions/ Coordination with international framework>

Any cooperation/coordination with other development partners was not clearly planned at the time of ex-ante evaluation or during the project period.

<Evaluation Result>

In light of the above, the coherence of the project is ③.

[Evaluation Result of Relevance/Coherence]

In the light above, the relevance/coherence of the project is ③.

2 Effectiveness/Impact

<Status of Achievement of the Project Purpose at the Time of Project Completion>

At the time of project completion, the Project Purpose was mostly achieved as planned.

More than 90% of those trained were engaged at some level in production and delivery of quality rice seed (Indicator1). Extension professionals participated in the training from 12 countries reported that they organized trainings among farmers, seed producers, seed quality control officers, and colleagues, (Indicator 2). 65% of respondents signified that the new knowledge and skills acquired would enable them to actively participate in the planning/development/implementation of a quality seed production program in their institution/country (Indicator 3). Among the respondents, 71% of the QBFS course participants and 87% of the RSPE participants implemented some part of their action plans (Indicator 4).

<Continuation Status of Project Effects at the Time of Ex-Post Evaluation>

By the time of the ex-post evaluation, the project effects have partially continued. Five ex-trainees from Ghana, Madagascar, Uganda, Sierra Leone and Zambia have continued to be engaged in rice development activities including the production and distribution of quality rice seeds and have been conducting related trainings as part of the action plans. Meanwhile, IRRI and PhilRice have not conducted the same training courses i.e., QBFS and RSPE, or follow-up activities to any of the CARD country since project completion in 2019. Trainings related to rice seed production was however conducted by IRRI for Burundi, Kenya and Mozambique after the project completion. Formal monitoring of the activities of the ex-trainees after project completion was not conducted.

<Status of Achievement of the Overall Goal at the Time of Ex-Post Evaluation>

At the time of ex-post evaluation, the Overall Goal has been partially achieved.

In terms of country data on rice production, yield and rice net trade (Indicator 1), except for Liberia, Cote d’Ivoire and Gambia, all other CARD countries have recorded increased rice production in 2020 and 2021. In terms of rice yield, most CARD countries have recorded increases in 2020 and 2021 but 8 countries have recorded reduction in yields in the same years. In terms of net rice trade, all CARD countries recorded dependency on imported rice except Tanzania which registered rice self-sufficiency in 2020. 14 of the 22 CARD countries recorded increased rice consumption in 2020 and 2021. There is no representative data obtained for total caloric consumption (Indicator 2) at the time of ex-post evaluation. And IRRI is unaware of the contributions of ex-trainees to the achievements of the project’s Overall Goal indicators. But through the feedback of ex-trainees from Ghana, Madagascar, Sierra Leone, Uganda and Zambia, this evaluation presumes that the project had indeed contributed to the changes mentioned as ex-trainees continue to be engaged in quality rice seed production and rice farming extension as well as rice development advocacy. This presumption was supported by PhilRice when its visiting staff met an ex-trainee from Cote d’Ivoire in early 2023 who provided similar information.

<Other Impacts at the Time of Ex-Post Evaluation>

Positive impacts on gender and empowerment were observed in local organizations and communities resulting from the trainings conducted by ex-trainees in Sierra Leone, Uganda and Zambia. Farmers do their own planning, budgeting and resource-finding including establishment of a village savings program resulting from empowering trainings conducted by an ex-trainee from Uganda (farmers’ cooperatives, leadership and women empowerment were topics included in the QBFS and RSPE training courses conducted by IRRI and PhilRice through the project). Though not quantified, increase in household incomes resulting from rice sales is common feedback from

¹ ④ : very high, ③ : high, ② : moderately low, ① : low

ex-trainees of Sierra Leone, Uganda and Zambia

No negative impacts on environment have been observed.

<Evaluation Result>

In light of the above, the effectiveness/impact of the project is ②.

Achievement of Project Purpose and Overall Goal

Aim	Indicators	Results	Source
(Project Purpose) The rice seed sector in each CARD country is strengthened through building the capacities of various stakeholders involved in the development of the sector specifically in the quality-oriented seed value chain and the rice extension professionals.	Indicator 1 70% of the stakeholders trained are able to engage in the production and distribution of quality rice seeds (from breeder to foundation to certified seeds) in their places of jurisdiction.	Status of the Achievement (Status of the Continuation): mostly achieved as planned (unverifiable) (Project Completion) Participants attending the activities engaged in various roles across the rice seed value chain. Based on the information available, more than ninety percent (90%) of those trained were engaged at some level in production and delivery of quality rice seed. (Ex-Post Evaluation) - The ex-trainee from Sierra Leone had been training farmers on superior rice cultivation practices and enhance rice seed quality, as well as training laboratory seed analysts on laboratory seed testing procedures. - The ex-trainee from Madagascar is continuing to work as a seed inspector, not only regulating the supply of seeds, but also training of seed rice producers and farmers. - The ex-trainee from Ghana was made a focal person for the rice sector support program in his district and was able to train farmers that are chosen to produce certified seeds under their projects.	JICA documents, response from ex-trainees
	Indicator 2 In each country, the trained rice extension professionals have provided trainings to farmers on the value of and how to grow quality rice seeds.	Status of the Achievement (Status of the Continuation): mostly achieved as planned (unverifiable) (Project Completion) Among the thirty-five (35) RSPE survey respondents, 24 participants in twelve (12) countries reported organizing trainings among farmers, seed producers, seed quality control officers, and colleagues. (Ex-Post Evaluation) The ex-trainee from Uganda is continuously conducting training and advisory activities on best agronomic practices, integrated pest management, seed bed preparation, climate change mitigation and formation of farmers' cooperatives, among others.	JICA documents, response from ex-trainees
	Indicator 3 70% of the rice extension professionals trained are able to contribute to the planning and/or implementation of national extension programs using the skills acquired from the training.	Status of the Achievement (Status of the Continuation): mostly achieved as planned (unverifiable) (Project Completion) In several questions related to knowledge and skills about rice production, more than ninety percent (90%) of respondents agree that they are better equipped to address rice seed production problems and to promote quality seed among farmers as a result of the RSPE training. Thirty-four (34) out of thirty-five (35) respondents indicated that the training enhanced their knowledge and skills. Sixty-five percent (65%) signified that the new knowledge and skills acquired would enable them to actively participate in the planning/development/implementation of a quality seed production program in their institution/country. (Ex-Post Evaluation) - The ex-trainee from Zambia is continuously contributing to the planning and implementation of national extension programs while working with the Ministry of Agriculture, and while participating in the ongoing implementation of the JICA-supported "Market-Oriented Rice Development Project". - The ex-trainee from Ghana also provided inputs to the development of an extension manual for field officers in their country.	JICA documents, response from ex-trainees
	Indicator 4 70% of institutional activities based on action plans written by the participants are implemented in	Status of the Achievement (Status of the Continuation) unverifiable (unverifiable) (Project Completion) No data obtained on the institutional activities.	JICA documents, response from ex-trainees

	approximately 6 months.	Course	Response Rate	Summary of Respondents	
		QBFS	35 of 65 trained (54%)	1 implemented all; 2 implemented most; 22 have implemented some; 11 were not able to implement.	
		RSPE	15 of 54 trained (28%)	13 implemented some elements of their action plans upon returning.	
(Ex-Post Evaluation) Action plans produced by ex-trainees are continuously implemented despite financial difficulties. The ex-trainee from Uganda has successfully formed a big rice farmers' cooperative as a result of conducting various trainings embodied in his Action plan. The ex-trainee from Sierra Leone sustained his linkage with other ex-trainees and have conducted trainings included in his Action plan such as training on quality seeds inspection procedures to field technicians, among others					
(Overall Goal) Rice food security is achieved through capacity building for an improved rice seed sector in Africa.	Indicator 1 Country data on rice production, yield, net rice trade	Status of the Achievement: partially achieved (Ex-Post Evaluation) See the attachment.			CARD website
	Indicator 2 Per capita rice and total caloric consumption	Status of the Achievement: unverifiable (Ex-Post Evaluation) See the attachment.			CARD website

3 Efficiency

The project cost was within the plan (the ratio against the plan: 65%) and the project period slightly exceeded the plan (the ratio against the plan: 108%). The project cost was 35% lower than the planned cost. One of the reasons is that some of the planned procurement under the project (i.e. rent-to-own laptops) was not allowed under the government policies of the Philippines. The project period slightly exceeded the plan because a no-cost extension to facilitate payment at the end of the contract period adjusted the project terminal date. As part of the extension, a learning workshop was included utilizing remaining project funds. The purpose was to provide opportunity for reflection and learning from the outputs and to prepare a summary of learning and recommendations.

	Project Cost (Japanese side only, yen)	Project Period (months)
Plan (ex-ante)	340 million	36
Actual	220 million	39
Ratio (%)	65%	108%

Outputs were produced as planned.

In light of the above, the efficiency of the project is ③.

4 Sustainability

<Policy Aspect>

Policy support on capacity development for producing and disseminating quality rice seeds and extension has been firmly established and the likelihood of a continued policy support is high in IRRI and PhilRice, and CARD countries. Policy support has been evident in NRDS plans of African countries and on the organizational mandates of both IRRI and PhilRice.

<Institutional/Organizational Aspect>

The organizational structure has been firmly established as IRRI Education and the Technology Management and Services Division (TMSD) of PhilRice. Both organizations respectively have continued conducting capacity development programs related to production and distribution of quality rice seeds and extension.

The number of human resources needed to promote and disseminate capacity development on quality rice seeds production, distribution and extension has been considered sufficient. The IRRI Education office has had 11 permanent employees while PhilRice's TMSD has had nine (9). Both organizations have had in-house experts who can be mobilized during capacity development activities. In addition, IRRI and PhilRice have pool of external experts, and can hire the services of additional contractual staff for capacity development activities whenever needed.

IRRI is a member of the CARD Steering Committee, represented by the Director of IRRI Africa. Both IRRI and PhilRice regularly participate in the General Meeting (GM) of CARD. IRRI is involved in formulating and reviewing the NRDS of several East and South African countries and is helping in training farmer cooperatives and private companies in seed production.

<Technical Aspect>

Some issues have been observed, but the prospects for improvement and resolution are high. All trainers of QBFS are not anymore connected with IRRI, while most of the trainers of RSPE are not anymore connected with PhilRice. The training courses on QBFS and RSPE are not anymore conducted by IRRI and PhilRice after the project. The contents of these training courses; however, have been integrated as either component, module or session in the existing training courses of IRRI and PhilRice and both IRRI and PhilRice have continuing human resource development programs for their in-house experts and staff, such as allowing their staff to participate in external trainings, seminars, and conferences; and through peer-to-peer coaching and mentoring. As such, the training and education system meant to maintain and advance knowledge and skills of staff has been firmly established.

<Financial Aspect>

Financial conditions of IRRI and PhilRice to promote or disseminate quality rice seed production, distribution, and extension have been

firmly established. Both organizations have had sufficient budget for their regular operations. Aside from internal sources, IRRI have received funding resources from different types of donors such as foundation, government partners, financing institutions, multilateral agencies, development organizations and the private sector. In addition to its internally generated revenues as Government-Owned and Controlled Corporation (GOCC), PhilRice has received an annual subsidy from the central government, and funding from various government agency programs and projects.

However, after project completion in 2019, IRRI and PhilRice did not conduct any follow-up training specifically on QBFS and RSPE in CARD countries because there was no similar partnership agreement with other development partners or organizations hence, there were no available funds for such purpose.

<Environmental and Social Aspect>

No issue on environmental and social aspect has been observed, and it has not been necessary to take any countermeasures.

<Evaluation Result>

In light of the above, some problems have been observed in terms of the technical aspects of the implementing agency. Therefore, the sustainability of the project effects is ③.

5 Summary of the Evaluation

The project mostly achieved the Project Purpose as planned, as capacities of the oriented seed value chain and the rice extension professionals in CARD countries were strengthened. The project partially achieved the Overall Goal. Rice production and rice yield, and rice consumption increased in many CARD countries, while most of the countries recorded dependency on imported rice. As for the sustainability, some problems have been observed in terms of the technical aspects of the implementing agency.

Considering all of the above points, this project is evaluated to be satisfactory.

III. Non-score Items

Adaption and Contribution:

JICA Philippines Office conducted supervision and supports such as i) attending Joint Coordination Committee (JCC) meetings, ii) reviewing and commenting Progress Monitoring Sheets (PMS), and iii) providing administrative and technical support to ex-ante evaluation. As for the communications, national staff of JICA-Philippines Office established functional communication with IRRI and PhilRice.

IV. Recommendations & Lessons Learned

Recommendations for Implementing Agency:

As mentioned above, formal monitoring of the activities of the ex-trainees after project completion was not conducted. To keep track of the in-country application of knowledge and skills acquired by ex-trainees during IRRI/PhilRice trainings, and to monitor the sustained generation of project effects, it is recommended that IRRI and PhilRice establish a monitoring system for the post-training activities of ex-trainees.

Lessons Learned for JICA:

A clear agreement was not made on post-project monitoring as counterpart input of the implementing agency to the project. The implementing agency is obligated to provide support to JICA's post-project evaluation activities but the responsibility to monitor the application of knowledge and skills learned from the trainings and its results after project completion was not included as part of their counterpart input. For capacity building projects, it is better to agree on the inclusion of post-project monitoring particularly on the in-country application by ex-trainees of the acquired knowledge and learned skills, the results of which shall be used as inputs to JICA's ex-post evaluation. The cost for conducting such post-project monitoring, which can be done online, shall be proposed as one of the local counterparts of the implementing agency.



Participants undergoing RSPE training at PhilRice



Participants undergoing QFBS training at IRRI

Attachment: Indicators for Overall Goal

Indicator 1: Country data on rice production, yield, net rice trade

1-1. Rice production (Paddy, Ton)

CARD Country	2015	2021	% growth increase (decrease)
Burkina Faso	No data	451,000	-
Zambia	25,514	65,876	158%
Benin	204,310	519,667	154%
Sierra Leone	871,693	1,978,902	127%
Ghana	641,492	1,231,200	92%
Kenya	116,473	186,000	60%
Congo	1,021,815	1,580,620	55%
Senegal	906,348	1,382,120	52%
Mozambique	128,197	189,000	47%
Ethiopia	139,780	200,000	43%
Tanzania	1,937,000	2,688,000	39%
Rwanda	97,435	131,758	35%
Cameroon	278,281	362,294	30%
Uganda	238,193	303,283	27%
Guinea	2,047,365	2,475,325	21%
Madagascar	3,722,304	4,391,386	18%
Nigeria	7,186,570	8,342,000	16%
Togo	140,952	150,000	6%
Mali	2,331,053	2,420,245	4%
Liberia	296,000	255,600	-14%
Cote d' Ivoire	2,153,000	1,659,000	-23%
Gambia	70,000	41,900	-40%

1-2. Rice yield (Paddy, Ton/ha)

CARD country	2015	2021	% growth increase (-decrease)
Burkina Faso	No data	2.15	-
Kenya	3.96	7.28	84%
Tanzania	1.68	2.81	67%
Sierra Leone	1.44	2.1	46%
Congo	0.76	1.1	45%
Benin	3.13	4.1	31%
Rwanda	3.23	4.16	29%
Guinea	1.2	1.5	25%
Mozambique	0.55	0.66	20%
Uganda	2.5	2.99	20%
Cote d' Ivoire	2.55	2.85	12%
Ethiopia	3.08	3.33	8%
Ghana	2.75	2.97	8%
Zambia	1.42	1.49	5%
Cameroon	1.23	1.22	-1%
Senegal	3.82	3.73	-2%
Togo	1.73	1.65	-5%
Liberia	1.13	1.06	-6%
Mali	3.06	2.77	-9%
Nigeria	2.3	1.93	-16%
Madagascar	3.29	2.74	-17%
Gambia	0.82	0.64	-22%

1-3 Net Rice Trade (ton)

CARD country	2015	2020/2021	% increase/ decrease in importation
Uganda	-39,300	-241,000	513%
Congo	-54,000	-190,000	252%
Zambia	-7,000	-24,000	243%
Rwanda	-25,000	-71,000	184%
Ghana	-475,000	-1,178,000	148%
Togo	-92,000	-197,000	114%
Gambia	-82,000	-175,000	113%
Madagascar	-234,000	-424,000	81%
Cote d' Ivoire	(1,211,0)	-1,959,000	62%
Mozambique	-748,000	-1,071,000	43%
Liberia	-176,000	-246,000	40%
Kenya	-471,000	-617,000	31%
Sierra Leone	-375,000	-459,000	22%
Guinea	-597,000	-725,000	21%
Nigeria	-851,000	-887,000	4%
Senegal	(1,033,0)	-1,046,000	1%
Benin	-863,000	-858,000**	-1%
Cameroon	-631,000	-550,000**	-13%
Mali	-83,000	-46,000	-45%
Ethiopia	-209,000	-77,000	-63%
Tanzania	-14,000	344,997	-2564%
Burkina Faso	-	-87,000**	-

**Data from 2021

Indicator 2 Per capita rice consumption (kg)

CARD country	2015	2020/2021	% increase/ decrease
Ethiopia	1.95	3.42	75%
Ghana	26.64	43.12	62%
Rwanda	7.12	10.5	47%
Uganda	4.97	6.47	30%
Congo	8.0	10.43	30%
Kenya	11.1	14.19	28%
Tanzania	22.61	28.58	26%
Gambia	58.49	62.47	7%
Liberia	67.98	72.56	7%
Nigeria	26.05	27.48	5%
Benin	52.1	54.94**	5%
Mali	45.59	47.9	5%
Cameroon	26.96	27.54**	2%
Guinea	99.98	101.88	2%
Sierra Leone	103.6	103.55	0%
Mozambique	24.81	24.6	-1%
Togo	16.11	15.82	-2%
Madagascar	96.23	94.47	-2%
Senegal	78.68	75.73	-4%
Cote d' Ivoire	79.52	75.74	-5%
Zambia	1.89	1.52	-20%
Burkina Faso		15**	

**Data from 2021