

Internal Ex-Post Evaluation for Technical Cooperation Project

conducted by Philippines Office/ January, 2014

Country Name	The Project on the Development and Promotion of Location-Specific Integrated High-Yielding Rice and Rice-Based Technologies.
Republic of the Philippines	

I. Project Outline

Background	<p>In the Philippines, rice is the key crop accounting for about 40% of the agricultural outputs. The Philippine Rice Research Institute (PhilRice) was established in 1985 for research and development of rice and extension support. Japan has been continuously supporting PhilRice mainly focusing on basic research of rice cultivation technologies and capacity development of researchers. Since there was a concern about shortage of rice in future due to the limited cultivated areas, increases in productivity of rice became a critical issue. Also, improvement of agricultural productivity is important since more than 70% of the poor population is engaged in the agriculture sector. Therefore, practical application and dissemination of technologies developed by PhilRice was essential for improvement of rice productivity as well as income of poor farmers.</p>				
Objectives of the Project	<p>1. Overall Goal: 1) Productivity of rice in the target areas is increased 2) Agricultural income of farmers in the target areas is increased. 2. Project Purpose: Rice productivity of participating farmers is improved. 3. Assumed steps for achieving the project goals¹</p> <p>The project implemented development of technical manuals, trainings for extension staff and farmers, joint experiment activities at Technology Demonstration Farms (TDFs) by researchers of PhilRice, extension staff and farmers and development of TDF in order to introduce location-specific technologies, including high-yield variety of rice, double cropping technology, vegetable and upland crops. Through these activities, the project aims at improving rice productivity of farmers participating in TDF trainings and farmers in the target area and thereby rice productivity and agricultural income of the farmers in the target areas are improved.</p>				
Activities of the project	<p>1. Project site: 7 municipalities (Rizal, Cabanatuan and San Antonio in Central Luzon, Currimao and Cabugao in Northwest Luzon, and Bayugan and Butuan in Northern Mindanao) 2. Main activities: Development of technical manuals, trainings of extension staff and farmers, establishment of TDF committees, development of TDFs in the target areas, experiment and evaluation of location-specific technologies, and development of Demonstration Farms (DFs) by Local Government Unit (LGUs) 3. Inputs (to carry out above activities)</p> <table border="0" style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;"> <p>Japanese Side</p> <p>1) Experts: 17 persons 2) Trainees received: 16 persons 3) Equipment: Laboratory equipment, including Nitrogen Analyzer, microscopes, vehicles, PCs, etc. 4) Local Cost: Construction of training center, administrative cost, etc.</p> </td> <td style="width: 50%; vertical-align: top;"> <p>Philippine Side</p> <p>1. Staff allocated: 30 persons 2. Land and facilities: project offices at PhilRice Central Experimental Station (CES), PhilRice Batac, and PhilRice Agusan 3. Local Cost: Construction of training center, onsite demonstration cost, cost for improvement of varieties, administration cost, etc.</p> </td> </tr> </table>			<p>Japanese Side</p> <p>1) Experts: 17 persons 2) Trainees received: 16 persons 3) Equipment: Laboratory equipment, including Nitrogen Analyzer, microscopes, vehicles, PCs, etc. 4) Local Cost: Construction of training center, administrative cost, etc.</p>	<p>Philippine Side</p> <p>1. Staff allocated: 30 persons 2. Land and facilities: project offices at PhilRice Central Experimental Station (CES), PhilRice Batac, and PhilRice Agusan 3. Local Cost: Construction of training center, onsite demonstration cost, cost for improvement of varieties, administration cost, etc.</p>
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Project Period	November, 2005 to November 2009	Project Cost	455 million yen		
Implementing Agency	Philippine Rice Research Institute (PhilRice)				
Cooperation Agency in Japan	Ministry of Agriculture, Forestry and Fisheries, National Agriculture and Food Research Organization				
Related Projects (if any)	<p>Japan's cooperation: Project for Improvement of the Central Experiment Station of the Philippine Rice Research Institute (GA, 1989-1991), The Philippine Rice Research Institute Project (TC, 1992-1997), The Research and Development Project on High Productivity Rice Technology (TC, 1997-2002), Rice-based Farming System Training and Support Program for ARMM (TC, 2005-2010), Rice-based Farming Technology Extension Project for the Autonomous Region in Muslim Mindanao (TC, 2012-2017)</p>				

II. Result of the Evaluation

1 Relevance

This project has been highly relevant with the Philippines' development policy to target "promotion of rice-based technologies for improvement of productivity and income of farmers" as set in policy documents including Key Crops Production Promotion

¹ Reviewed at the time of the ex-post evaluation.

Plan (GMA: Ginintuang Masaganang-Ani) and the Agri-Pinoy Rice Program and the Food Staples Sufficiency Program (FSSP), development needs of “improvement of productivity and promotion of appropriate technologies”, as well as Japan’s ODA policy to support poverty alleviation and improvement of regional gaps including agriculture and rural development at the time of both ex-ante and project completion. Therefore, relevance of this project is high.

2 Effectiveness/Impact



Training facility at Agusan

The project focuses on improvement of rice productivity in the target areas through practicing location-specific technologies developed by the project. During the project, 851 farmers were trained at TDFs. Almost 100% of the participating farmers in TDF activities (PFs) adopted at least 3 components of the location-specific technologies by the time of terminal evaluation. According to the survey of the ex-post evaluation, all the PFs have been continuously practicing the technologies. In terms of productivity, only Currimao municipality had achieved the target (at least 70% of PF increase their productivity of rice by 1 ton/ha) at the terminal evaluation. 4 municipalities had achieved the target at the time of ex-post evaluation through the application of the high-yielding variety. In addition, 31 DFs were established by the LGUs during the project period in order to disseminate the location-specific technologies. DFs have been continued in Rizal, Cabanatuan, Currimao,

Bayugan. In particular, in Currimao, the number of DFs has been increased from 3 at terminal evaluation to 9 at the time of ex-post evaluation. Therefore, the Project Purpose has been largely achieved. As for the overall goal, according to the impact assessment survey by PhilRice, the productivity of rice cultivation in the 3 municipalities of Rizal, Cabanatuan and San Antonio, increased by around 1 ton/ha despite the floods caused by typhoon in 2011. Also, despite of no available quantitative data on overall rice production in target municipalities including sales volume of rice, the agricultural income of the farmer in the target areas considerably increased from the baseline year of 2004 to 2011 or 2012. Since the increment of agricultural income (more than 75%) was higher than the escalation of selling price of rice (67-76%), the real income growth of the farmers could be attributed to the increases in agricultural productivity by the location-specific technologies.

According to the PFs, the location-specific technologies reduced their production costs due to the less use of inputs such as seeds, fertilizers and pesticides. In addition, more varieties of rice for tolerance to low solar radiation which were tested by PhilRice were released and promoted to rice farmers after the project. In Currimao, some technology packages were modified and adopted for vegetable production. The improved technologies increased income from vegetable production as well. Furthermore, the organization of cooperatives through the project activities facilitated access to government programs such as production loan and farm machinery grant.

Therefore, effectiveness/ impact of the project is high.

Achievement of project purpose and overall goal

Aim	Indicators	Results
(Project Purpose) Improvement of rice productivity of the participating farmers	At least 70% of participating farmers adopt at least 3 components of location-specific technologies.	(Terminal Evaluation) Achieved. 100% in Rizal, Cabanatuan, San Antonio, Currimao, Cabugao, more than 90% in Bayugan and Butuan. (Ex-post Evaluation) Achieved. All the 85 PFs surveyed by the ex-post evaluation have been continuously practicing at least three components of location-specific technologies developed by the project.
	At least 70% of participating farmers increase productivity of rice by 1 ton/ha	(Terminal Evaluation) Partially achieved. Only in Currimao, 81% of PFs achieved the increase in rice productivity by 1 ton/ha in average. (Ex-post Evaluation) According to the questionnaire survey by the ex-post evaluation, 80% of PFs increased more than 1 ton/ha compared to the baseline year in Rizal, Cabanatuan, Currimao and Bayugan (2004).
	Income of participating farmers in TDFs from rice-based farming increased by average of 15%	(Terminal Evaluation) Achieved. [Change of income of PFs from 2004 to 2006] Rizal (63%), Cabanatuan (136%), San Antonio (54%), Currimao*(180%), Cabugao (78%), Bayugan (95%), Butuan (N.A.) (Ex-post Evaluation) See the Overall Goal 2. The Baseline Year for Currimao is 2005 due to the drought in 2004.
	Municipal LGUs establish at least 2 Demonstration Farms in their respective municipalities.	(Terminal Evaluation) Achieved. Rizal (9), Cabanatuan (8), San Antonio (5), Currimao (3), Cabugao (2), Bayugan (2), Butuan (2) (Ex-post Evaluation) Rizal (9), Cabanatuan (7), San Antonio (N.A.), Currimao (9), Cabugao (N.A.), Bayugan (2), Butuan (N.A.)
(Overall goal) 1. Increase in rice productivity in the target area 2. Increase in agricultural income of farmers in the target areas	Productivity in the target municipalities increased by average of 1ton/ha.	(Ex-post Evaluation) Mostly achieved. [Change in rice productivity in the 3 target municipalities surveyed by PhilRice] Rizal (0.94ton/ha), Cabanatuan (1.19ton/ha), San Antonio (0.83ton/ha)
	Income of participating farmers in TDFs and DFs increased by average of 15%.	(Ex-post Evaluation) Achieved. [Changes in income of PFs from 2004 to 2012]* Rizal (84%), Cabanatuan (102%), Currimao (394%), Bayugan (77%), [Changes in income in DF farmers from 2004 to 2011]** Rizal (116%), Cabanatuan (140%), San Antonio (134%)

Source : Terminal Evaluation Report, The Impact Assessment Survey in Nueva Ecija by PhilRice (2011), Questionnaire Survey for 5 farmers per municipality for a total of 20 farmers. (5 x 4) in the target areas conducted in July, 2013, Interviews with counterparts

Note: * Data are not available in San Antonio, Cabugao and Butuan.

** Data are not available in Currimao, Cabugao, Bayugan and Butuan

3 Efficiency

The inputs were appropriate for producing the outputs of the project, and both the project cost and the project period were as planned (ratio against the plan: 100%, 100%). Therefore, efficiency of this project is high.

4 Sustainability

In the policy aspect, the development and the promotion of high-yield rice and rice-based technologies was incorporated in the Rice Sufficiency Program launched in 2009 and the Food Staples Sufficiency Program (2011-2016) (FSSP). There is no change in the main function of PhilRice to develop and promote rice and rice-based technologies including location-specific technologies. PhilRice maintains the sufficient number of researchers (295 permanent staff and 1,029 contract-based staff) and most of the trained staff by the project continue their work at PhilRice. LGUs are primarily responsible for agricultural extension by the Agricultural Technologists (AT, extension staff) while the Agricultural Training Institute (ATI) prepares an integrated plan for publicly funded training programs and guidelines for national extension programs, assists the local government units for extension service as well as provides technological transfer including trainings. Extension supports including farm inputs are provided by the Regional Field Units of the Department of Agriculture (DA-RFUs).

In the technical aspect, the researchers of PhilRice have adequate technical knowledge and skills for development of new varieties of rice and rice-based technologies. The ATs of LGUs in the target areas also have sufficient technical knowledge and skills to disseminate the location-specific technologies to farmers. The technical manuals and guidelines developed by the project were distributed to the ATs and the Rice Sufficiency Officers, who are contractual workers hired and trained by PhilRice to implement the Rice Sufficiency Program (RSP) from 2009 to 2011, and have been utilized by them. PhilRice continues to deliver trainings for ATs to promote the location-specific technologies. In addition, at least once a month, the training facilities in PhilRice Agusan station constructed by the project have been utilized for trainings and workshop for farmers, seed growers, government personnel and NGO staff. The PFs also maintain their knowledge and skills to practice the location-specific technologies to increase their productivity and income.

As for the financial aspect, sufficient budget has been allocated to PhilRice by the national government. The budget for PhilRice increased from 393 million pesos in 2009 to 532 million pesos in 2013. Also sufficient budget had been allocated from the DA to RFUs for development, promotion and extension of the location-specific technologies under FSSP. The budgets for RFUs also expanded from 4.3 billion pesos in 2011 to 6.2 billion pesos in 2013. The budget of RFUs include support for LGUs to cover the operation cost for extension service (2,000 pesos per month per AT and specialists conducting technology transfer in farmers' field school). Also LGUs offer subsidies for seeds and fertilizers to farmers. From these findings, there is no problem in policy, institutional, technical and financial aspects, therefore, sustainability of the project is high.

5 Summary of the Evaluation

The project has largely achieved the project purpose and overall goal. PFs adopted the location-specific technologies and have been continuously practicing the technologies. Through the application of the high-yield variety, PFs successfully increased their rice production. Also, through the establishment of DFs in the target areas, the location-specific technologies have been disseminated and have contributed to the increase in productivity of rice in the target area. In addition, the improved rice productivity increased the farmers' income. As for sustainability, the promotion of the farm technologies introduced by the project has been supported by the national policy and the enhanced extension system of PhilRice and LGUs. The necessary knowledge and skills have been maintained by the researchers of PhilRice, ATs and PFs through utilization of the manuals and guidelines developed by the project as well as the continuous delivery of technical trainings and workshops. Also, the budget for those activities has been ensured. In the light above, this project is evaluated to be highly satisfactory.

III. Recommendations & Lessons Learned

Recommendations for Implementing agency:

- PhilRice should monitor results/impact of the project in all seven (7) municipalities, since, currently, PhilRice has data on three (3) target municipalities only.

Lessons learned for JICA:

- Construction of training facilities by the project at PhilRice Agusan Station contributes to continuation of technical trainings to disseminate the location-specific technologies. Furthermore, it provides opportunities for sustaining network and information-sharing among key stakeholders including, farmers, ATs, and PhilRice even after project completion. In the case of the project aiming at dissemination of technologies, support for development of training facilities can be effective to ensure sustainability of project effects including continuation of technical trainings and maintaining network for extension service since the training facilities can be a focal point of technical transfer.
- Since the local government units (LGUs) are one of key players to disseminate agricultural technologies, the project activities to address improvement of capacity of LGUs at the beginning stage enabled not only smooth implementation of the project but also continuation of extension services after the project completion through clear commitment and participation of the LGUs in the project. Therefore, in the case that the local government entities are one of the main body of extension service, it is essential to design a project component for capacity development of local government entities at early stage of project implementation.