

# Terminal Evaluation

## Asia

### 1. Outline of the Project

**Country:**

Philippines

**Project title:**

Research and Development Project on High Productivity Rice Technology

**Issue/Sector:**

Research

**Cooperation scheme:**

Project-type Technical Cooperation

**Division in charge:**

Agricultural Technical Cooperation Division, Agricultural Development Cooperation Department

**Total cost:**

784 Million Yen

**Period of Cooperation**

1 Aug 1997 - 31 July 2002

**Partner Country's Implementing Organization:**

Philippine Rice Research Institute (PhilRice), Department of Agriculture

**Supporting Organization in Japan:**

Ministry of Agriculture, Forestry and Fisheries of Japan

**Related Cooperation:**

Grant Aid

Project-type Technical Cooperation; "The Philippine Rice Research Institute Project"

### 1-1 Background of the Project

In the Philippines, rice is the staple food of over 80 percent of the population. However, the national average of rice yield was low (2.85t/ha) and rice production below the level of self-sufficiency. Rice growing in the Philippines was characterized by many problems, such as location-specific seed cultivation, establishment of rice farming schemes and lack of mechanization. To address these problems, the Government of Philippines (GOP) established the Philippine Rice Research Institute (PhilRice) by Executive Order in 1985, but did not have sufficient research facility and equipment resources to realize its aims.

Under these circumstances, the Government of the Philippines (GOP) requested that the Government of Japan (GOJ) implement Grant Aid cooperation in 1991 for construction of facilities. Later, the GOJ also implemented the Project-type Technical Cooperation "The Philippine Rice Research Institute Project (1992-1997)" and transferred techniques to improve the quality of research. The result of these activities prompted the GOP to request Project-type Technical Cooperation from the GOJ in order to improve the technology for high-yielding rice production, focusing on small-scale rice farmers, who make up the vast majority of rice farmers in the Philippines.

### 1-2 Project Overview

In order to develop high-yielding rice for small-scale rice farmers in the Philippines, this project was aimed at transferring to PhilRice the following techniques: breeding improvement, agricultural machine development, improvement of farming skills, improvement of the rice quality evaluation techniques, development of a farm management model, and development of an information system on farm management techniques.

#### (1) Overall Goal

High quality rice is supplied in sufficient quantity, and farm management is stabilized through high-productivity rice technologies which are sustainable for the conditions in rice growing areas.

## (2) Project Purpose

High-productivity rice technologies for small-scale rice farmers are developed through Project implementation by the Philippine Rice Research Institute (PhilRice).

## (3) Outputs

- 1) High-yielding and better quality rice varieties which are suitable for mechanization are developed.
- 2) Farm machinery for small-scale rice farmers is developed.
- 3) Cultivation techniques for labor-saving and high yielding rice production are improved.
- 4) Rice quality evaluation techniques are improved.
- 5) Mechanized rice-based farm management systems are developed.

## (4) Inputs

Japanese side:

Long-term Experts 8 Equipment 252 Million Yen

Short-term Experts 19 Local Cost 18 Million Yen

Trainees received 21 Project Infrastructure cost 47 Million Yen

Philippine Side:

Counterparts 55

Local Cost

## 2. Evaluation Team

### Members of Evaluation Team

Team Leader/General: Yoshiaki KANO, Managing Director, Tsukuba International Center, JICA  
Agronomy/Plant Breeding: Kunio KARIYA, National Agricultural Research Center for Hokkaido Region, National Agricultural Research Organization (NARO)  
Farm Mechanization: Ken TANIWAKI, National Agricultural Research Center, NARO Planning  
Evaluation: Tomohiro AZEGAMI, Staff, Agricultural Technical Cooperation Division, Agricultural Development Department, JICA  
Evaluation Analysis: Isao DOJUN, Chuo Kaihatsu Corporation

**Period of Evaluation** 18 February 2002 - 2 March 2002 **Type of Evaluation:**  
Terminal Evaluation

## 3. Results of Evaluation

### 3-1 Summary of Evaluation Results

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#### (1) Relevance

The GOP aims to accomplish self-sufficiency in rice by 2004 guided by the priority it has set on food security and poverty reduction. The Agriculture and Fisheries Modernization Act (1997) emphasizes food security, self-sufficiency in food production, involvement of the private sector and enhancement of agriculture and fishery sectors through improving of its citizens' capabilities. The Arroyo administration is acting to realize these objectives.

The Department of Agriculture sets strategic priorities on (1) Policies, planning, monitoring, evaluation and information services, (2) Supporting Policies and marketing credit services, (3) Irrigation and its dissemination, (4) Research and development (R&D) and its dissemination and (5) Regulation services. PhilRice's Offering of rice-related information and R&D of high productivity rice technology are related to (1), (2) and (4) and are in line with the strategic priorities of the Department of Agriculture. The Project is consistent with these development policies, and the validity of the Project is high.

## (2) Effectiveness

19 strains of high quality and high yielding rice were developed and another line is expected to be bred by the end of the Project period. Five rice farm machines will reach to the commercialization stage. Each output, such as the field of farm management, cultivation management and quality evaluation, was achieved. Rice productivity at the experimental level increased by 10 percent in both irrigated lowlands and cool elevated areas. Labor requirements in rice cultivation decreased by 25 percent in transplanted rice, and 40 percent in direct-seeded rice. Therefore, the Project Purpose has been accomplished.

## (3) Efficiency

The input by the Japanese side was appropriate in terms of quality, duration and timing. Around 50 counterparts, consisting of 15 with PhD degrees and 28 with MS degrees, were excellent. These two reasons contributed to efficient technology transfer. Although budget reductions occurred due to the Asian financial crisis, the Philippine side allocated a total PhilRice budget of 833 Million Pesos (2,166 Million Yen) and additional funds were also provided for field testing and trials during the Project period; therefore, there were no major obstacles where implementation of the Training was concerned.

## (4) Impact

With R&D techniques as its objective, the Project had limited impact on the Overall Goals of "farm management is stabilized" and "high quality rice is supplied in sufficient quantity". Farmers in some areas and Local Governmental Units (LGUs) were interested in the Project through the field trials and tried to utilize the developed techniques in wider areas. The promising line was officially registered as a variety for cool elevated areas, and the rice farm machines that were developed were commercialized. Judging from these achievements, although the impact was limited at the point of terminal evaluation, the effects of the R&D will be disseminated to farmers in the future, and the farmers will try to utilize the techniques on their own.

## (5) Sustainability

Since the management of PhilRice is stable, it is thought that that importance of rice research will not change much. Therefore, the GOP will continue to support the increase of rice production. PhilRice has well maintained facilities and equipment, so the research environment of PhilRice is good, which contributes to the fact that the staff remain at PhilRice, and that PhilRice is stable.

Counterparts whose ability has been enhanced tend to stay at PhilRice, and a leave of absence for doctor's degree acquisition is provided; therefore, the staff of PhilRice are highly motivated. The expectation of the Department of Agriculture, congressmen and LGUs with regard to PhilRice is huge, and the activities of the Project are regarded as one of the seven R&D projects. PhilRice has been provided with a regular budget by the GOP to cover each program, so there are no budgetary problems. Judging from these facts, sustainability is evaluated as high.

### **3-2 Factors that promoted realization of effects**

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#### (1) Factors concerning Planning

1) As this Project was carried out in sequence by "The Philippine Rice Research Institute Project (1992-1997)", the needs of the Philippine side were grasped accurately; the validity of the content of the plan was high. This contributed to efficient formulation of the Project Purpose, Outputs and the evaluation parameters. This Project owes the good achievements to the clear understanding of the needs and the reasonable plan that was formed to address them.

2) The Project is regarded as one of the existing programs of PhilRice and, therefore, management of budget and staff allocation is not temporary, just for the Project, but rather is permanent and institutionalized.

#### (2) Factors concerning the Implementation Process

N/A

### **3-3 Factors that impeded realization of effects**

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#### (1) Factors concerning Planning

While the Project Purpose is "technology development at the research institute level" the Overall Goal is "stabilized farm management and rice supply". The Overall Goal is extremely higher in terms of level than the Project Purpose. To attain the Overall Goal, it is necessary to put more focus on subjects other than "technology development at the research institute level"; therefore, the Overall Goal was set with some over-enthusiasm. It is necessary to study the ways to connect the rice technologies developed at the research institute level to the Overall Goal.

## (2) Factors concerning the Implementation Process

N/A

### **3-4 Conclusion**

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The Outputs and Purpose of the Project are expected to be met by the time the Project ends, and Outputs have been achieved at a higher level than expected. It may take time to achieve the Overall Goal, but the sustainability on the Philippine side is high.

### **3-5 Recommendations**

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It is necessary to prepare a method by which the outputs of the Project can be disseminated among small-scale rice farmers in order to attain the Overall Goal ("stabilized farm management and rice supply"). Examples are as follows:

- (1) To establish location-specific applications.
- (2) To implement verification trials, taking rice-based industries into consideration.
- (3) To strengthen the feedback mechanism from gathering trial data for improvement to disseminating more effective techniques.

### **3-6 Lessons Learned**

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The Project has been regarded as a component of the existing program of PhilRice from the beginning of the cooperation. The sustainability will be ensured by allocation of a management budget and staff allocation that permanent, rather than just during the Project period.

### **3-7 Follow-up Situation**

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N/A