

# Terminal Evaluation

## Asia

### 1. Outline of the Project

- Country: Philippines
- Project title: Environmental and Productivity Management of Marginal Soils in The Philippines
- Issue/Sector: Agriculture
- Cooperation scheme: Project-type Technical Cooperation
- Division in charge: Paddy Field Based Farming Area Team II, Group I, Rural Development Dept.
- Total cost: 500 million yen
- Period of Cooperation  
(R/D):  
2000.Feb.1 - 2005.Jan.31  
(Extension):  
(F/U):  
(E/N):  
(Grant Aid)
- Partner Country's Implementing Organization: Bureau of Soil and Water Management, BSWM
- Supporting Organization in Japan: Ministry of Agriculture, Forestry and Fisheries; MAFF
- Related Cooperation:  
Grant aid;  
The Soil Research and Development Center Project (1988 - 1989)  
Project-type Technical Cooperation;  
The Soil Research and Development Center Project (1989 - 1994)  
The Soil Research and Development Center Project Phase II (1995 - 2000)

#### 1-1 Background of the Project

In the Philippines, most low-income farmers in the rural area depend on the agricultural production in the marginal land (low soil fertility and steep slope), which accounts 9.3 million hectares equivalent to 90 % of arable land, for their livelihood. However development and introduction of agricultural technologies suitable for the marginal land are delayed. This problem should be solved as soon as possible to sustain natural resources and to increase farmers' income.

Therefore the government of Philippines requested the government of Japan (GOJ) to develop and verify soil and water management technologies for sustainable agricultural productivity in the marginal land.

The GOJ has supported BSWM since 1988, starting from a grant aid of the Soil Research and Development Center Project, which contained construction of the center and procurement of various facilities. Then 2 phases of Project-type Technical Cooperation followed. The first one was the Soil Research and Development Center Project (1989 - 94) targeting capacity building of BSWM staffs in the fields of soil survey/analysis, soil classification, fertility management, technology dissemination and training for rational land use and practical technology development. The second phase was the Soil Research and Development Center Project Phase II (1995 - 2000) focusing on the technology development for problem soils including Ultisols.

#### 1-2 Project Overview

The Project started February 2000 as a five year project, targeting compilation of past cooperation's result and technology refinement for farmers' adoption through economical, environmental and social improvement. Pilot areas are Agoho (Rizal, hillyland), Bulusukan (Bulacan, upland) and Intavas (Bukidnon, highland) and 2 – 3 farmer cooperators maintain each site.

## (1) Overall Goal

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The soil and water management technologies contributing to the stable and sustainable agricultural production are adopted in pilot marginal lands (Macro watersheds of three techno-demo farms).

## (2) Project Purpose

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Suitable soil and water management systems\* are developed for the three techno-demo farms and their micro watersheds.

\* 'systems' means total program implementation methodology of BSWM for practical research and demonstration, in which applicable technologies are decided through the interaction of local member organization and introduced in farmers' fields.

## (3) Outputs

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1. The soil and water management technologies are modified for three techno-demo farms.
2. Three techno-demo farms are well managed and maintained.

## (4) Inputs

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### Japanese side:

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Long-term Expert:	13	Equipment	78 Million Yen
Short-term Expert:	15	Local Cost	37 Million Yen
Trainees received:	16		

### Philippine Side:

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Counterpart:	48 (at the time of Final Evaluation)
Local Cost:	113 Million Pesos
Others:	Land, office, research centers and office's operation cost (electricity, water)

## 2. Evaluation Team

### Members of Evaluation Team:

Team Leader:

Miyasaka Minoru; Team Director, JICA, Rural Development Dept., Group I, Paddy Field Based Farming Area Team II

Soil Conservation:

Sugahara Kazuo; Head, National Institute for Agro-Environmental Soil Fertility Sciences, Dept. of Environment Chemistry, Water Quality and Solute Dynamics Group

Land Utilization:

Ota Takeshi; Laboratory Chief, National Agriculture and Bio-Oriented Evaluation Research Organization, National Agricultural Research Center, Dept. of Soils and Fertilizers, Water Quality Control Laboratory

Evaluation Analysis:

Kuwahara Tsuneo, Design Engineer, Nippon Giken Inc., Overseas Project Department, Technical Div.

Cooperation Planning:

Wada Nobuko, JICA, Rural Development Dept., Group I, Paddy Field Based Farming Area Team II

### Period of Evaluation:

2004 Aut.25 - 2004 Sep.11

### Type of Evaluation:

Final

## 3. Results of Evaluation

### 3-1 Accomplishment

Based on the outcomes of past cooperation, technologies for water resource management, soil conservation, and soil fertility management were developed in the research centers and those technologies were introduced in farmers' fields, called Techno-

Demo Farms (TDFs). Agricultural Resources Information System (ARIS) was also built with the information and data collected around each TDF in geography, soil, water resource, etc. All activities have been implemented mostly as scheduled, and the outputs and the project purpose will be attained as planned.

### **3-2 Summary of Evaluation Results**

#### **(1) Relevance**

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Since the project accords with both the beneficiaries' needs and the policies of Philippine and Japanese governments, the Project is considered highly relevant. Both Philippine and Japanese sides need to agree on how the outcomes such as useful technologies and institutional network are continuously utilized and sustained.

##### **1) Policy of the Philippines Government :**

The direction of the project, sustainable development of the marginal land, accords with 1) The Medium Term Development Plan (2001 - 2004) for poverty alleviation and reduction of social inequality, 2) BSWM's mandate for sustainable development and utilization of soil and water resources in agricultural production, and 3) 10 agenda of the present administration elected in May 2004 for the agricultural development of 1 - 2 million hectares for unemployment reduction and agri-business promotion.

##### **2) Needs of Beneficiaries :**

In accordance with the technological needs of small-scale farmers in marginal area, the indirect beneficiaries, the Project envisions to fulfill such needs. In particular, these are technology development, linkage between TDF and research centers, and institutionalization of feedback mechanism with the farmer cooperators.

##### **3) Policy of the Japanese Government :**

The Japan's supporting policy for the Philippines emphasizes four agenda as 1) strengthening of economical framework and overcoming obstructions for economic growth, 2) reduction of inequality (poverty alleviation and regional gaps), 3) natural environment conservation and disaster prevention and 4) human resource and institutional development. And agenda 2 addresses the importance of agriculture and rural development contributing to poverty alleviation and the support in research and dissemination of agricultural technologies to improve agricultural productivity. Therefore the Project components are consistent with the policy of the government of Japan.

#### **(2) Effectiveness**

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By the end of the Project, project purpose and each output will be achieved and, both the modified technologies and appropriate management of TDFs are considered necessary for fulfillment of the project purpose. Therefore, it can be said that effectiveness is high.

As for the Output 1, applicable technology development, 19 technologies in the field of soil conservation, 6 in water resources management and 10 in soil fertility management were developed, and they were compiled as a package for each TDF. As for the Output 2, TDF management, 3 TDFs were managed well at the time of the final evaluation because TDF management was strengthened according to the remarks made on the mid-term evaluation, although TDFs were not so active at the initial stage of the Project. Thus technologies developed in research centers were introduced to the actual farmers fields. Therefore the project purpose will be achieved within the project period.

#### **(3) Efficiency**

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Efficiency is high because quantity, quality and timing of inputs were mostly as scheduled and inputs have contributed to the achievement of the outputs, reinforcement of BSWM's facility and improvement of counterparts' capability.

1) Japanese side: Japanese side has provided all of required inputs, long and short term experts, facilities and equipments, counterparts training in Japan, and share of local cost. Those have contributed to the achievement of the outputs.

2) Philippine side: Since most counterparts have been enough competitive and active for the Project, they have worked well as expected. From the financial aspect, it is evaluated that BSWM has made the maximum effort in spite of the difficult financial condition. Other necessary inputs, such as lands, buildings, facilities and equipments, have been also secured.

#### **(4) Impact**

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In order to achieve the overall goal, sustained efforts and linkages of BSWM, TDCC members and other stakeholders are necessary even after the Project. Technology application out of TDFs was observed and institutional linkage through TDCC goes beyond expectation. Thus, it is considered that there have been enough impacts.

It is confirmed that considerable number (less than 400) of neighboring farmers has adopted the recommended technologies around 3 TDFs. There are also plans to maintain the TDCC framework and TDF promotion in three sites, so that extension for technology adoption is expected in widespread areas, if those plans will be materialized. Besides, the outcome of the Project

goes beyond the original framework of the Project, as BSWM is requested for collaborations by various groups like Department of Agrarian Reform (DAR), Agricultural Training Institute (ATI) in Department of Agriculture (DA), Philippine Council for Agriculture, Forestry and Natural Resources Research and Development (PCARRD) and LGUs.

However, in order to secure the further dissemination of the project outcome, technologies should be more farmer friendly with minimum risks and the governmental agencies should support farmers.

## **(5) Sustainability**

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Policy and technical sustainability is considered high, however, regarding financial and institutional sustainability, necessary measures have to be taken. As a whole, it can be said that sustainability is fairly satisfactory.

From the policy aspect, the direction of the Project is consistent with the national agricultural policy and it is expected to be supported by the Philippine government. The problem of shortage of arable land cannot be solved in a short term so that the necessity of utilizing marginal land will remain high. From the technical aspect, the counterpart researchers of BSWM are well-qualified and capable of continuing activities by themselves. From the institutional aspect, after the end of the Project, the management of TDFs will be transferred from BSWM to the Local Government Units (LGUs) so that the management should be monitored carefully, if it is well maintained. From the financial aspect, the sustainability is not clear due to the financial constraints of the government agencies.

### **3-3 Factors That Promoted Realization of Effects**

#### **(1) Factors Concerning to Planning**

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Past 2 phases (10 years) of supports for the Soil Research and Development Center Project contributed not only to improvement of researchers but also to reinforcement of BSWM's facilities. The Project has utilized those resources effectively. The framework of the Project designated technical refinement in research centers before their introduction to TDFs. That stepwise technical application made the project implementation smoother.

#### **(2) Factors Concerning to the Implementation Process**

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At the initial stage, the Project did not emphasize the TDF activities so much, so that the mid-term evaluation team recommended more active operation. Since then, the Project has made more efforts to strengthen TDF activities and competitive center chiefs were assigned. At the time of the final evaluation, 3 TDFs were well managed and Techno-Demo farm Coordination Committee (TDCC) played an important role as an advisory group. Besides real time technical support from Japan facilitated the efficiency of the Project.

Although Intavas TDF had security problem, as mentioned below, monthly dispatch of counterparts and intensive support from the research center have kept the TDF active with enough demonstration effect.

### **3-4 Factors That Impeded Realization of Effects**

#### **(1) Factors Concerning to Planning**

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Intavas TDF located in Mindanao had a security problem and there was restriction for Japanese experts to visit. Therefore they hardly instructed project staff in the research center and farmer cooperators directly. Far distance from BSWM to TDFs (Agoho and Bulusukan), about 1.5 – 2 hours drive, affected the efficiency.

#### **(2) Factors Concerning to the Implementation Process**

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In Agoho TDF, the landowners are non-residents of the area and not farmers but caretakers are responsible for the land. Caretakers were neither active nor knowledgeable for agriculture and they were replaced from time to time, so that the TDF management had difficulties at the initial stage of the Project.

### **3-5 Conclusion**

The project purpose is expected to be achieved within the project period. Therefore, the Joint Evaluation Committee concludes that the Project will be terminated on 31 January 2005 as initially agreed.

The activities of the 5 main project components, which are ARIS, water resources management, soil conservation management, soil fertility management, and TDFs, were carried out as planned. Sufficient technology transfer of JICA experts and industrious BSWM counterpart engagement resulted in comprehensive soil and water management technologies for marginal lands.

### **3-6 Recommendations**

The Joint Evaluation Committee recommends BSWM and JICA monitor the activities of TDCC or LGUs after transferring the management of TDF to the LGUs.

The following recommendation are for the Philippines:

**(1) To maintain activities in the TDF and function of TDCC**

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- Activities at the TDFs should be continued and the developed technologies should be disseminated to neighboring farmers.
- After the transfer of management on TDF from BSWM to LGUs, the LGUs should have the responsibility for the management of TDF and the Mayor of the LGUs should take the leadership of the TDCC.
- TDCC assists in disseminating information and technologies to farmers as well as advises on the management of TDF in terms of planning its activities in consultation with the stakeholders.

**(2) To develop the project results**

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- BSWM should expand and sustain the achievement attained in this Project through replications in other marginal lands.
- BSWM should brush up the technologies developed in the Project and make them more adoptable for farmers.
- BSWM should train their staff to deal with the cultivation of high value crops as a whole and place the appropriate staff on the Bulacan, Rizal and Bukidnon National Research Centers.