

# Terminal Evaluation

## Asia

### 1. Outline of the Project

**Country:**

Republic of Indonesia

**Project title:**

Agricultural Engineering and Technology in the Developing Countries

**Issue/Sector:**

Agriculture/General

**Cooperation scheme:**

Third-Country Training Program

**Division in charge:**

Southeast Asia Division, Regional Department I

**Total cost:**

50 Million Yen

**Period of Cooperation**

Fiscal Year 1998 - 2002

**Partner Country's Implementing Organization:**

Bogor Agricultural University (Institut Pertanian Bogor; IPB)

**Supporting Organization in Japan:**

Ministry of Education, Culture, Sports, Science and Technology (MEXT)

**Related Cooperation:**

Project-type Technical Cooperation; "Academic Development of the Graduate Program at the Faculty of Agricultural Engineering and Technology, Institute Pertanian Bogor" ,"ditto (after care project)"

### 1-1 Background of the Project

The Government of Japan hosted the Tokyo International Conference on African Development (TICAD) in October 1993 and announced aggressive support toward African nations. At the next general meeting of TICAD, the Government of Japan announced the "Initiative for Africa by Japan", making a commitment to support south-south cooperation.

For many African countries, agriculture is the key industry, representing more than a half of the GNP and the majority of the employed population. Therefore, the improvement of production capacity and productivity in the field of agriculture is the key to the development of African countries. Due to insufficient production technology for agriculture, many African countries have difficulty in achieving food self-sufficiency. In contrast, thanks to the balanced development of agricultural and industrial production methods, Asian countries have achieved remarkable economic development. Many Southeast Asian countries are located in the same tropical zone as African countries, so it is considered advantageous for Asian and African countries to cooperate in the field of agricultural development.

Since 1977, Bogor Agriculture University (IPB) has been assisted by the Government of Japan through JICA in developing capability in agricultural education, research and extension. JICA assisted IPB with the Project-type Technical Cooperation "Technical Assistance on Academic Development of the Graduate Program at the Faculty of Agricultural Engineering and Technology (FATETA)" from 1988-1993 to enrich University education in the field of agricultural research and to foster those students who have a degree, after JICA implemented Grant Aid Project for the FATETA building.

Against this background, after the exchange of opinions among Japan, Indonesia and African countries, the Government of Indonesia together with the Government of Japan decided to jointly implement a Third-country Training Program for technical transfer and mutual understanding in the fields of agriculture in Indonesia and African countries.

### 1-2 Project Overview

JICA, together with the Government of Indonesia, offers agricultural engineering and management technology at IPB to the participants from African countries who are university graduates and who have more than five years of practical experience in the fields of agricultural engineering/technology and soil & water.

## (1) Overall Goal

- 1) Improvement of knowledge in the field of agricultural engineering and technology in developing countries
- 2) Improvement of the capability in technology transfer of the implementing organization.

## (2) Project Purpose

- 1) Exchanging of experiences in the field of agriculture
- 2) Providing opportunities for the participants to enhance their current technical and administrative skills.
- 3) Disseminating the capabilities in agricultural problem solving methodologies, by planning and increasing the use of agricultural engineering technology.

## (3) Outputs

By the end of the course, the participants are expected to acquire the following:

- 1) General picture of agricultural policy, development and the role of agriculture in the current economic situation in the participating countries, including Indonesia.
- 2) Information on the appropriate application of agricultural technology in the participating countries.
- 3) Opportunity for possible information exchange in the future through the established network
- 4) Utilizing the obtained knowledge in the specific fields of either food production, agricultural mechanization and/or agricultural engineering and technology.
- 5) Applying the obtained knowledge to the farmers' organizations, the marketing system and the distribution mechanism.

## (4) Inputs

Japanese side:

Short-term Experts	5
Local Cost	40 Million Yen

Indonesian side:

Counterparts	18
--------------	----

## (5) Participant Countries

Federal Democratic Republic of Ethiopia, Republic of Ghana, Republic of Kenya, Republic of Malawi, Kingdom of Swaziland, United Republic of Tanzania, Republic of Zambia, Republic of Zimbabwe, Republic of Uganda, Republic of Botswana, Republic of Namibia, Kingdom of Lesotho, Republic of Malawi, Republic of South Africa and Republic of Indonesia.

## 2. Evaluation Team

**Members of Evaluation Team** JICA Indonesia office  
(Local consultant: PT. INDOKOEI INTERNATIONAL)

**Period of Evaluation** 19 February 2002 - 28 March 2002      **Type of Evaluation:**  
Terminal Evaluation by Overseas Offices

## 3. Results of Evaluation

### 3-1 Summary of Evaluation Results

#### (1) Relevance

The training course was evaluated as highly relevant for the following reasons: All tropical crops were covered and the content of the curriculum was well planned to meet the policy of support toward African countries in the field of agricultural technology by the Government of Japan. According to the answers to the questionnaire to ex-participants after their return home, less than half of the ex-participants said that the knowledge and skills introduced in the course were very useful in their daily work. On the other hand, the Implementing Organization said that the course was useful from the viewpoint that the agricultural world should be more business-oriented.

## (2) Effectiveness

Some of the respondents (71%) said that the content of the curriculum was good and well planned to meet the course objective. All respondents said that they understood almost fully, 80 percent to 100 percent, the knowledge and skills introduced in the course. Judging from the above, it is considered that the Training Course was highly effective.

## (3) Efficiency

Other responses to the questionnaire are as follows: (1) almost all of the respondents evaluated the training activities (lectures, country report, study tour, practice panel discussions and observation) as sufficient or effective and most respondents (71%) said that the balance was maintained among technical, economical and farm practices although some felt that too much emphasis was placed on lectures and panel discussions: (2) All respondents rated lecturers ability high in their fields of specialty and well-experienced; and (3) all respondents said that the quality of the facility, textbooks and training equipment was appropriate. Based on the above indicators, it is considered that the training program was implemented with high efficiency, and most participants could acquire the knowledge and skills in the field of agricultural engineering and management technology introduced in the training course.

## (4) Impact

The biggest benefit for the organizations of ex-trainees is that they now have well-trained personnel in the field of agricultural engineering and technology, and that they can improve the overall level of know-how of the staff and apply the knowledge in their daily work. The ex-trainees have made efforts to disseminate the skills and knowledge to other staff in the institution through seminars, lectures and workshops, even though they faced problems in terms of lack of equipment and funds. The Implementing Organization, IPB, stated that they have improved their capabilities by having implemented the Course, especially in predicting and programming the training budget. They also mentioned that the ideas and objectives of the training were fulfilled and that they have become more experienced.

## (5) Sustainability

Some ex-participants mentioned that some issues had been tackled utilizing the knowledge and skills they had acquired during the Course, such as maize shelling and threshing, agricultural processing engineering (drying, processing of cereals, coffee, milk, and bread making, post harvest handling of fruit crops products, and how to manage irrigation water requirements, etc.). Unfortunately, some of the ex-trainees noted that they had some problems in utilizing the knowledge and skills they had acquired through the course because of the lack of equipment and funds. Therefore, there remain concerns of sustainability in their home country and in terms of dissemination of the acquired skill and knowledge and their sufficient utilization.

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

---

#### (1) Factors concerning Planning

N/A

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

N/A

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

---

#### (1) Factors concerning Planning

N/A

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

- 1) The implementing Organization had no budget for monitoring the application of the knowledge and technology attained through the Course in the third country, which hindered confirmation of cooperation effects.
- 2) The unavailability of adequate facilities in the third countries for supporting participants after returning home and the lack of a budget or funding to conduct further training and seminars for disseminating the transfer of technology acquired in the training.

### **3-4 Conclusion**

---

It can be concluded that the Project was excellent in general. The objectives attained through the training activities were achieved in line with the needs of the participating countries and organizations. The ex-participants disseminated their trained skill and knowledge to other staff to some extent. The participating countries needed to disseminate the knowledge and technology acquired in the training, but there remained concerns about the sustainability of the training effects due to the lack of funding, facilities and equipment.

### **3-5 Recommendations**

---

- 1) For sustainability of the Course benefits, the governments of the third countries should support the participants by providing equipment, facilities and funding for the application of the skills, knowledge and technology acquired during the course.
- 2) The general information should be given to the third country earlier, so there will be enough time for preparation and selection of the participants.
- 3) IPB should stay in close contact with the ex-participants in order to monitor the dissemination of knowledge and technology attained in the Course and to understand the policy of the third country in agricultural development through seminars and workshops.
- 4) IPB should secure a budget on its own so that it can continue the Course without JICA support.

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

---

For better implementation of the course, the implementing organization should arrange lecturers, facilities and a training curriculum that are in line with the purpose of the training.

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

---

N/A