

# Terminal Evaluation

## Asia

### 1. Outline of the Project

**Country:**

Republic of Indonesia

**Project title:**

International Training Course on Sabo Engineering and Water Induced Disaster Countermeasures

**Issue/Sector:**

Rivers/Sand Arrestment

**Cooperation scheme:**

Third-Country Training Program

**Division in charge:**

Southeast Asia Division, Regional Department I

**Total cost:**

25 Million Yen

**Period of Cooperation** Fiscal Year 1999 - 2001

**Partner Country's Implementing Organization:**

Sabo Technical Center (STC)

**Supporting Organization in Japan:**

Former Ministry of Construction

**Related Cooperation:**

Project-type Technical Cooperation "Sabo Technical Center Project in Indonesia"

Third-country Training Program "Sabo Engineering (Erosion and Sediment Control Engineering)" and "Erosion and Sediment Control Engineering Course"

### 1-1 Background of the Project

Indonesia has faced serious disaster problems caused by volcanic ejecta in high-population density areas, especially volcanic mudflow disasters due to concentrated heavy rains during the monsoon season. Under these circumstances, the Government of Indonesia requested cooperation from the Government of Japan. In response, the government of Japan established the Sabo Technical Center, trained Sabo engineers, and developed Sabo technology in Indonesia. To disseminate these techniques to Asian and Pacific countries and to contribute to the solution of each country's similar problems, the Government of Indonesia in cooperation with the Government of Japan implemented the Third-country Training Program, "Sabo Engineering (Erosion and Sediment Control Engineering)" and "Erosion and Sediment Control Engineering Course". Having terminated the program, the participants and their organization requested an advanced course. Corresponding needs for training in surrounding countries were also still high. Under these circumstances, the Government of Indonesia requested the Government of Japan to continue the program with the additional subject of "Water Induced Disaster Countermeasures".

### 1-2 Project Overview

Through implementation of the training course in sabo engineering, the participants attained knowledge and techniques related to Sabo Engineering and Water Induced Disaster Countermeasures, which also meet the need of each participating country.

#### (1) Overall Goal

- 1) Improvement of skill and knowledge in Sabo Engineering in the participant's country
- 2) Improvement of capability in technology transfer of the implementing organization

#### (2) Project Purpose

To improve the ability of participants from Asia and Pacific through an opportunity to update and upgrade relevant techniques and knowledge by way of the project, and to contribute to finding a solution to the manifold problems related to Sabo Engineering and Water Induced Disaster Countermeasures in line with the specific features of each country

### (3) Outputs

- 1) The participants are expected to have acquired the essential knowledge and practical experience of Sabo Engineering and Water Induced Disaster Countermeasures and its related technology.
- 2) The participants are expected to have refreshed their understanding and improved their traditional technique relevant to Sabo Engineering and Water Induced Disaster Countermeasures.

### (4) Inputs

Japanese side:

Short-term Experts	4
Local Cost	20 Million Yen

Indonesian Side:

Counterparts	about 20/year
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### (5) Participant Countries

Pakistan, Nepal, Sri Lanka, China, Thailand, Vietnam, Cambodia, Lao, Malaysia, the Philippines, Papua New Guinea, Tonga, Samoa and Fiji.

## 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 Office

## 3. Results of Evaluation

### 3-1 Summary of Evaluation Results

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#### (1) Relevance

The participants were involved in Sabo Engineering and Water Induced Disaster mainly on mountain roads. According to questionnaire survey (responses of four trainees completing the course, four organizations and the implementing organization), Seventy-five percent of the respondents said that the content of the curriculum was in line with the policy of each participant's country. Considering that of volcanic mudflow disasters caused by concentrated heavy rains in the monsoon season has been a major problem in the Asia Pacific region, this Program had a high relevancy for the participants because the participants could acquire the knowledge and practical techniques of Sabo Engineering and Water Induced Disaster Countermeasures through the Program.

#### (2) Effectiveness

According to the results of the questionnaire survey, Seventy-five percent of the participants responded that they almost fully (about 80-100%) understood the course content. The Implementing Organization mentioned that the achievement of the ex-participants was excellent at levels between 80 and 100%. The ex-participants also said that they were satisfied with the content of the training. Based on the above indicators, it is considered that the participants acquired knowledge and practical techniques of Sabo Engineering and Water Induced Disaster Countermeasures through the Training Program.

#### (3) Efficiency

According to the results of the questionnaire, seventy-five percent of the participants evaluated that the training activities (content of the curriculum, study tour, practical training in design, etc.) as having been conducted smoothly and efficiently without any problems. The Implementing Organization said that they had no problems in budgeting, settling the training period as planned. The three main benefits of the Training Program were that Sabo Engineering techniques were disseminated to

Asian and Pacific area countries, that a network was formed among the developing countries, and that the Sabo Engineering techniques were strengthened.

#### (4) Impact

The knowledge and skills acquired through the course were applicable to the ongoing projects of the participant's organization and utilized in their daily work. The organizations evaluated in their response that, particularly, young participants showed a rapid development of ability. The main benefits for the implementing organization were that they were able to disseminate the knowledge of Sabo technology to other countries in the region, improve the network among developing countries, and strengthen the functions of the Sabo Training Center.

#### (5) Sustainability

The ex-participants said that the knowledge and skills acquired through the course were disseminated in their own countries through their daily work, seminars, workshops, exhibitions of textbooks, etc. Unfortunately, according to the result of the questioner survey, 75 percent of the respondents said they have some problems in utilizing the knowledge and skills which they acquired through the course due to the lack of equipment and funds. Therefore, without budgetary support in their own country, it would be difficult for the participants to disseminate and utilize their acquired knowledge and techniques at home. The Implementing Organization also stated that there was no possibility of organizing a similar course by itself because of the lack of financial support. It will be necessary to provide some financial support to continue the training course at the international level.

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

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#### (1) Factors concerning Planning

N/A

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

N/A

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

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#### (1) Factors concerning Planning

N/A

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

- 1) Even though the implementing organization has implemented other national level Sabo Engineering courses, they face difficulties in securing the budget for continuing the Third Country Training Program, since the Course is an international level one and requires larger expenditures.
- 2) The lack of budget, facility and equipment of each participating country hinders the dissemination of the knowledge and techniques.

### **3-4 Conclusion**

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The Training Course produced some achievement at participant level or in their organizations. The content of the Program was in line with the needs of Indonesia and other participating countries, and the former participants played an active role in their organization or country. However, because the participating countries lacked a sufficient budget, facilities and equipment, there remained concern about the dissemination of the acquired knowledge and techniques during the Training Program.

### **3-5 Recommendations**

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- 1) The Implementing Organization should consider well-balanced training activities such as lectures, country reports, study tours, practice, panel discussions and observations.
- 2) JICA should donate up-to-date presentation equipment and should dispatch lecturers who are highly proficient in English.
- 3) The Sabo Technical Center should monitor the dissemination of skills, knowledge and technology attained in the Course through close coordination with former participants. The problems encountered should be considered as feedback for the next training materials.
- 4) For sustainability of the Course benefits, Third Country Governments should support the participants by providing equipment and funds for application of the skill, knowledge and technology in field work. The third Country Government should conduct seminars, workshops and training in this field of study for the dissemination of the knowledge and the technology.

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

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- 1) For improvement of the knowledge and techniques through the case studies of each country, the exchange of information should be promoted among the former participants.
- 2) For better implementation, the implementing organization should send the materials and textbooks to trainees much earlier so they have sufficient time for preparation.

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

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N/A