Chapter 2
Terminal Evaluation

Indonesia

Agricultural Extension and Training Methodology

Project Sites

Chiawi

1. Background of Project

Agriculture is a major industry in developing countries in the Asia-Pacific region. The dissemination of agricultural technology among people working in the industry is indispensable to raising agricultural productivity and promoting agriculture in the region.

From 1979 to 1989, Japan implemented Project-type technical cooperation in Indonesia to train agricultural technicians and disseminate agricultural technologies. In order to effectively utilize the results of this project for agricultural development in other developing countries, Japan implemented a third country training program for trainees from the Asia Pacific region countries over five years from FY1990 to FY1994. Due to requests for continuation of the training, Japan then extended the period of the training program from FY1995 through FY1999.

2. Project Overview

(1) Period of Cooperation

FY1995-FY1999

(2) Type of Cooperation

Third country training program

(3) Partner Country's Implementing Organization

Agency for Agricultural Education and Training (AAET)

(4) Narrative Summary

1) Overall Goal

To extend agricultural technologies to the countries of the Asia-Pacific region.

2) Project Purpose

For trainees from Asia-Pacific countries to acquire expertise and skills regarding agriculture technology extension methods.

3) Outputs

a) For trainees to understand agriculture extension system.

b) For trainees to understand approaches and strategies for agriculture extension.

4) Inputs

Japanese Side

Short-term experts	5
Trainees received in Japan	1
Training expenses	16 million yen
Other	970.31 million rupiah (approx. 15 million yen)

Indonesian Side

Counterparts	79
Training facilities	
Training expenses	63.92 million rupiah (approx. 1 million yen)

3. Members of Evaluation Team

Team Leader/Agricultural Production and Extension:
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Training Planning:
Mr. Nobuiku KOJIMA, Training Instructor, Tsukuba International Center, JICA

Agriculture Overall/Evaluation Analysis:
Mr. Akira MATSUMOTO, IC Net Inc.

4. Period of Evaluation

27 January 1999-13 February 1999

5. Results of Evaluation

(1) Efficiency

The relevant organizations on the Indonesian side made efforts to work together, the budget was spent as originally planned, and the training implementation system worked well. The training in Japan of personnel in charge of training management at the AAET, the implementing organization of this training, also contributed to the improvement of training administration at the AAET and smooth training implementation.

However, insufficient English ability was a problem, especially among trainees from Viet Nam, Laos and Cambodia, and there was a tendency for the trainees who were more proficient in English to monopolize the training. A lack of

English ability among instructors was also observed.

(2) Effectiveness

Up to FY1998, there were four courses in which a total of 75 people from 17 countries underwent training. According to questionnaires filled out by trainees and interviews with the AAET, it can be concluded that the trainees fully acquired expertise and skills regarding agriculture extension through their training, and the project purpose has been achieved.

(3) Impact

Since agriculture in the Association of Southeast Asian Nations (ASEAN) countries is similar to that of Indonesia, it is thought that the trainees from ASEAN countries have especially been able to effectively utilize the skills and expertise they obtained through training in their own countries. However, the countries of the South Pacific have not achieved the same level of impact as those of the ASEAN countries.

(4) Relevance

The goal of this training, to cultivate human resources for the purpose of agriculture technology extension, is consistent with the development policies of the participating countries. The cultivation of human resources possessing sufficient knowledge regarding the dissemination of agricultural technology is still lagging behind in the countries. The necessity of this program is immeasurable, especially in South Asia and Indochina countries, and it can be said that this training program has a high degree of relevance.

However, expertise and experience of trainees varied widely and the training content did not always match the expectations of all of the trainees. One request from the trainees is to raise the proportion of practical training in overall training to 30-40%.

(5) Sustainability

In addition to carrying out this training program for nine years, the AAET is implementing training in sericulture areas targeting trainees from not only Asia and the South Pacific but also countries from Africa and Latin America under its own budget. From this record of activities, it appears that the AAET has secured ample human resources and budget and has sufficient organizational and management capabilities, and therefore this training program has a high degree of sustainability.

6. Lessons Learned and Recommendations

(1) Lessons Learned

Since trainees from many countries participate in group courses of third country training programs, it is necessary to work to constantly revise the curriculum to adapt it to the current situation in each country, which is changing every moment. Carrying out training in Japan of instructors and personnel of the training implementing organization is effective toward improving training administration and implementation abilities. There is also a need to devise ways of screening trainees so as to achieve a uniform level of trainees.

Finally, in order to fully grasp the training effects and further enrich the content of training, there is a need to build an information gathering system for such tasks as follow-up studies of the activities of ex-trainees in their own countries.

Trainees get practical training at a cacao farm.

Trainees talk about agriculture in their own countries. Trainees get a chance to learn about the experiences of other participating countries.

Indonesia

Pest Surveillance and Forecasting

Project Sites

Jatisari

1. Background of Project

In Asian countries, the possibility of worsening crop damage caused by disease and pests is high and there is a great need for research and development of dissemination methods pertaining to agricultural technology as well as technologies for predicting their outbreaks. Japan implemented project-type technical cooperation on the Food Crops Protection from FY1980 to FY1991 and provided grant aid in order to construct facilities including Pest Forecasting Center from 1984 to 1987, thereby promoting cooperation in this field.

Under these circumstances, the Government of Indonesia requested Japan to implement a third country training program with the intended goal of transferring the technology for predicting outbreaks of crop-damaging disease and pests, which had been greatly improved through the cooperation, to neighboring countries. For a period of five years from FY1990 to FY1994, Japan implemented this training and thereafter extended the cooperation from FY1995 to FY1999.

2. Project Overview

(1) Period of Cooperation

FY1995-FY1999

(2) Type of Cooperation

Third country training program

(3) Partner Country's Implementing Organization

Pest Forecasting Center

(4) Narrative Summary

1) Overall Goal

To disseminate the technology for predicting outbreaks of crop-damaging disease and pests to Indonesia's neighboring countries and to contribute to the agricultural development of these countries.

2) Project Purpose

For trainees from Indonesia's neighboring countries to acquire the knowledge and techniques to predict outbreaks of crop-damaging disease and pests.

3) Outputs

a) For trainees to understand the outbreak mechanism and prevention techniques of rice plant diseases.

b) For trainees to understand the behavior and control techniques of pests.

4) Inputs

Japanese Side

Trainees received in Japan	1
Training expenses	81 million yen

Indonesian Side

Counterparts	65
Training facilities	
Training expenses	

3. Members of Evaluation Team

Team Leader/Agricultural Production and Extension:
Mr. Koji YAMANAKA, Development Specialist, JICA

Training Planning:
Mr. Nobuki KOJIMA, Training Instructor, Tsukuba International Center, JICA

Agriculture/Evaluation Analysis:
Mr. Akira MATSUMOTO, IC Net Limited

4. Period of Evaluation

27 January 1999-13 February 1999

5. Results of Evaluation

(1) Efficiency

In the situation that there were only a limited number of human resources, the PFC, an implementing organization for the training, made maximum efforts such as the appropriate revisions to the texts and curricula and allocation of instructors in order to achieve the project purpose. The training was implemented smoothly for the most part thereby.

However, due to lack of English language abilities, some trainees could not understand the contents of the lectures and could not assert their opinions clearly, thus causing some difficulties in implementing the training efficiently.

(2) Effectiveness

Up to FY1998, a total of 74 trainees from 14 countries underwent the training under this program, which had implemented four courses. Overall, the project purpose was

achieved at a high level because of the high-quality teaching materials and lectures, the suitable training topics and appropriate technology.

(3) Impact

After returning to their home countries, many of the trainees have been actively working in related fields implementing training of local technicians to spread the fruits of their own training, and promoting research on crop protection. However, depending upon the situations of the individual countries, there were some cases where the activities of the ex-trainees have been limited because of the lack of basic research, lack of funds and lack of equipment.

(4) Relevance

The content of the training is consistent with the agricultural development policy of each participating country. Moreover, at present, because the need of an overall method to exterminate crop-damaging disease and pests has been recognized globally, this training has a high level of relevance.

However, since the target crop of this training was only rice, in the case of some trainees, the range of application was rather limited. There was a need to include other food crops and gardening products. It was also necessary to increase the number of hours of practical training.

(5) Sustainability

The PFC possesses complete facilities for the implementation of training, as well as experienced instructors. The Ministry of Agriculture is willing to continue this training. However, the yearly budget allocation from the government for the administration of the training is insufficient, and even if the Indonesian economy recovers hereafter, it is still uncertain whether or not a sufficient budget can be secured immediately.

6. Lessons Learned and Recommendations

(1) Lessons Learned

For the training to be implemented efficiently, at the stage of the trainees' screening process, it is necessary to ensure that the trainee has a certain level of English.

An instructor uses rats to teach prevention of outbreaks of crop-damaging insects.

Trainees listen to a description of rice-damaging disease and pests.

Indonesia

Irrigation and Drainage Engineering

Project Sites

Bekasi

1. Background of Project

Increased food production and stable supply are important issues in countries of the Asia-Pacific region, and in order to achieve these it is important to expand the agricultural infrastructure centering around the organization of irrigation networks. However, the countries in this region lack the necessary technicians and technology in this field, and these are the obstacles that keep new development of irrigation and its facilities from advancing.

In Indonesia, along with the establishment of the Construction Guidance Service Center in FY1980 through grant aid, Japan had also made the technology transfer in the field of irrigation and drainage facilities construction at the Center under the project-type technical cooperation from April 1981 to March 1988.

Under these circumstances, from FY1985 to FY1989 the third country training program was implemented at the Center with the aim to disseminate to neighboring countries the irrigation and drainage technology that had been transferred to the Center. This training course was thus extended to FY1994 and once again to FY1999.

2. Project Overview

(1) Period of Cooperation

FY1995-FY1999

(2) Type of Cooperation

Third country training program

(3) Partner Country's Implementing Organization

Ministry of Public Works Irrigation Engineering Service Center (IESC) (formerly Construction Guidance Service Center)

(4) Narrative Summary

1) Overall Goal

To distribute irrigation and drainage technology in the Asia-Pacific countries.

2) Project Purpose

For trainees from the Asia-Pacific countries to acquire the knowledge and technology of irrigation and drainage.

3) Outputs

a) Trainees understand the irrigation and drainage plan.
b) Trainees understand the management techniques of water for irrigation.
c) Trainees learn ground improvement techniques.
d) Trainees learn underground water engineering.
e) Trainees understand knowledge and techniques concerning remote-sensing.

4) Inputs

Japanese Side

Short-term experts	12
Training expenses	

Indonesian Side

Lecturer
Training facilities
Training expenses

3. Members of Evaluation Team

JICA Indonesia Office
(Commissioned to PT Andal Agrikarya Prima)

4. Period of Evaluation

1 February 1999-10 March 1999

5. Results of Evaluation

(1) Efficiency

Although the insufficient proficiency in English of some of the trainees and lecturers caused difficulty during discussions and case studies, there had been a high level of interest of the Asia-Pacific countries in the participation in this program and overall those trainees with generally adequate skills were selected for participation. The lecturers were highly skilled, and the training facilities and equipment were sufficient to run this program. The management and supervision of the training implementing organization have appropriately been held, demonstrating the high efficiency of this program.

(2) Effectiveness

Over four training courses from 1995 to 1998, 76 trainees from 17 countries participated in the training. This training

program has drawn out a practical curriculum that well-suits the reality of irrigation and drainage in each participating country. Seeing that the trainees have grasped the content of the lectures and the proficiency in practice is high, it can be said that the initial objective has been achieved. Furthermore, although the trainees have thoroughly acquired the irrigation and drainage techniques, in a survey questionnaire that has been distributed to the trainees, they have responded that actual practice, site visit, and discussions were more effective than the lectures themselves.

(3) Impact

After returning to their home countries, trainees have used and diffused these techniques at their workplaces. Some trainees have also utilized the text that was used in their training in their everyday work.

(4) Relevance

The dissemination of irrigation and drainage technology is an important issue in the Asia-Pacific rice farming regions where irrigation and drainage are still not sufficiently put into practice. Furthermore, some of these countries are in the process of working out a human resources development plan in this area, which illustrates the high relevance of this training program.

(5) Sustainability

Since the IESC, an implementing organization, is capable of prolonging this training program in terms of funds, technology, and organization, the sustainability of this program is high.

6. Lessons Learned and Recommendations

(1) Lessons Learned

It is imperative that trainees who are proficient in English are selected in order to make the technology transfer process go smoothly and to implement it efficiently. Furthermore, the lecturers should be proficient in English. It is imperative that the balance between the lectures and actual practice be examined in order for the trainees to acquire necessary skills more efficiently, depending on the field.

(2) Recommendations

Since the effectiveness of this training program is high and the implementing organization can be independent in terms of funds, technology, and organization, further cooperation by Japan is deemed unnecessary.

Trainees exchange views with members of a local irrigation association

Indonesia

The Higher Education Development Support Project

Project Sites

Banda Aceh, Medan, Padang, Palembang, Bandar Lampung, Pontianak, Banjarmasin

1. Background of Project

In recent years, the lack of human resources in Indonesia due to rapid industrialization had become a serious problem. In 1988, as a joint Japan-U.S. project, the US Agency for International Development (USAID) proposed a program to Japan, aiming to increase the level of higher education in the Sumatra and Kalimantan regions by helping in-service instructors at multiple universities obtain higher academic degrees. After joint study between Japan and the U.S., a framework was established where Japan was responsible for cooperation in engineering fields and USAID was responsible for cooperation in basic sciences and economics business administration studies. Thereafter, the Government of Indonesia requested this project to be implemented.

2. Project Overview

(1) Period of Cooperation

12 April 1990-11 April 1995
12 April 1995-31 July 1996 (First extension)
1 August 1996-31 July 1999 (Second extension)

(2) Type of Cooperation

Project-type technical cooperation

(3) Partner Country's Implementing Organization

Ministry of National Education

(4) Narrative Summary

1) Overall Goal

The graduates of 11 target universities[1)] support the development of engineering university in Sumatra and Kalimantan Islands.

2) Project Purpose

The quality of teaching staff engaged in engineering education at the 11 target universities is improved.

3) Outputs

a) The expertise of teaching staff is enhanced.
b) Core laboratories are well utilized for research and student practice.
c) Research is actively conducted.
d) University administration is improved.
e) Domestic and international networks of research among teaching staff are established.

4) Inputs

Japanese Side

Long-term experts	10
Short-term experts	185
Trainees received	203
Equipment	934 million yen
Local cost	466 million yen

Indonesian Side

Counterparts	approx. 1,300 (number of targeted instructors)
Land and facilities	
Local cost	1.4 billion yen

3. Members of Evaluation Team

Team Leader:
Mr. Kazuo TSUTSUMI, Vice-President, Toyohashi University of Technology

Engineering Education (electrical):
Mr. Juichi IRISAWA, Professor, Faculty of Engineering, Nagaoka University of Technology

Engineering Education (machinery):
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4. Period of Evaluation

9 December 1998-19 December 1998

5. Results of Evaluation

(1) Efficiency

The Project Management Unit that was established among the Government of Indonesia, JICA and USAID for the management of the project. The project was implemented appropriately by 4 long-term experts, led by the Unit. Input from the Indonesian side was three times larger than that of JICA's excluding provision of equipment.

In addition, the "core laboratories" that were established at each of the 11 target universities became the base for research activities and has had remarkable effects, such as improving the research capabilities of the teaching staff and heightening their enthusiasm for research.

(2) Effectiveness

Through the Degree Program, 227 of the 298 teaching staff that enrolled in masters or doctorate courses obtained master's degrees and one received a doctorate thus far. As a result, the proportion of masters or doctorate degree holders at the 11 target universities would be 47% with approximately half of these degree holders obtaining their degrees through this program. Thus, the Government of Indonesia's intended goal of over 50% of teaching staff in the engineering field holding a masters or doctoral degree was achieved.

Research activities were promoted by equipment supply, set-up of core laboratories and Self Development Project Funding. Improvement of university administration has been performed by training for Deans in Japan, computerization and Total Quality Management (TQM).

The above results demonstrate that the project purpose, namely to improve the quality of teaching staff engaged in engineering education at the target universities, was effectively achieved.

(3) Impact

More practical engineering education is carried out because the improved research capabilities of the instructors have had positive effects on students' education through graduate research instruction and research experiments. As a result, the graduates from the 11 target universities enjoy a better employment rate compared to those from other universities, and the employers hold good opinions of their skills and management capabilities.

The TQM that was applied in this project improved the university administration and used as the basis for the Directorate General of Higher Education to formulate The Third Long-Term Guidelines of Higher Education Development. In addition, joint and contracted research with industries have started at universities, contributing to ensuring the universities' financial sustainability and the development of regional industry. The experience and positive outcomes in 11 target universities have stimulated another participating five universities to take part in some components of the project. New engineering-related departments have been established and inter-university agreements have been concluded.

(4) Relevance

This project is in accordance with the important education policy issues of higher quality teaching staff and higher quality engineering education cited in Indonesia's Second 25-Year Long-Term Development Plan (1994-2018). Because this project also supports the local government's efforts to increase the number of local employees employed by companies, it can be said that the relevance of this project is very high.

(5) Sustainability

Because the Government of Indonesia has given the highest priority of engineering education, research activities by teaching staff could be sustained to a certain extent. In terms of administration, the Ministry of National Education plans to maintain some of the Project Management Unit's activities after the project ends. However, there are usually very few possibilities in Indonesia that the development budget is allocated to the terminated external cooperation project. Each university will be faced with the task of finding other ways to secure funds.

6. Lessons Learned and Recommendations

(1) Lessons Learned

Targeting 11 universities for this project instead of just a single school promoted exchange and healthy competition among the universities.

The fact that only one instructor obtained a doctorate during this project resulted from the weak function of the doctorate course in host universities within Indonesia. Dispatch to Japan should be considered in a project in which doctorate acquisition is involved.

(2) Recommendations

In order to make the university education and research capabilities that have been upgraded through cooperation to date technologically, institutionally and financially sustainable, it will be necessary to downsize the scale of the cooperation and implement follow-up cooperation.

7. Follow-up Situations

Based on the recommendations mentioned above, a three-year follow-up cooperation program ending in July 2002 is currently underway.

[1)] Cooperating Universities: Syiah Kuala University, University of North Sumatra, Islamic University of North Sumatra, University of Medan Area, University of Dharma Agung, Nomensen University, Andalas University, Sriwijaya University, Lampung University, Lanbung Mangkurat University, University of Tanjungpura

Indonesia

The Development of Appropriate Technology for Multi-story Residential Building and Environmental Infrastructures for Low-income People

Project Sites

Bandung

1. Background of Project

In Indonesia, about 60% of the whole population of approximately 200 million people, that is, 120 million people, which is almost equal to the whole population of Japan, reside on the island of Jawa, which occupies only 7% of the whole land of the country. Especially in urban areas like Jakarta, the housing shortage caused by drastically increasing numbers of residents has become a serious issue. As a matter of fact, housing supply to low-income people, the majority of the population, is inadequately improved. In that situation, multi-story residential buildings (MSRB), which make good use of limited land and already constructed infrastructures, are considered an effective solution to the problem.

Since 1980, Japan has cooperated with the Research Institute of Human Settlements (RIHS) in the scheme of the dispatch of individual experts in the fields of earthquake-resistant building engineering and housing policy and so on, grant aid of RIHS buildings and equipment and third country training (in the fields of earthquake-resistant building engineering and housing policy). On these foundations, the Government of Indonesia requested Japan to provide project type technical cooperation for the development of appropriate technology for multi-story residential buildings.

2. Project Overview

(1) Period of Cooperation

1 November 1993-31 October 1998

(2) Type of Cooperation

Project-type technical cooperation

(3) Partner Country's Implementing Organization

Ministry of Settlement and Regional Development, RIHS

(4) Narrative Summary

1) Overall Goal

To build MSRB based on the proposal.
To revise building standards.

2) Project Purpose

To make proposals on technical and legal standards based on the applicable MSRB prototype in six technical fields.

3) Outputs

a) Organization for technical development of MSRB is structured on RIHS initiative.
b) The first integrated proposal for the prototype of MSRB is made considering the importance of locality.
c) Trials of the first integrated proposal are done in actual construction sites.
d) Final proposal for the prototype is made after trials.
e) Information on the newly developed technology is made open to the people concerned outside the project.
f) Researchers for RIHS are developed.

4) Inputs

Japanese Side

Long-term experts	11
Short-term experts	50
Trainees received	15
Equipment	200 million yen
Local cost	35 million yen

Indonesian Side

Counterparts	29
Facilities:	Land for MSRB prototype, office, laboratory, etc.
Local cost	805 million rupiahs (approx. 12 million yen)

3. Members of Evaluation Team

Team Leader:
Mr. Tateo KUMA, Director of the Department of Urban Planning, Building Research Institute, Ministry of Construction

Housing Planning:
Mr. Hideyuki KOBAYASHI, Head of the Urban Development Division, Department of Urban Planning, Building Research Institute, Ministry of Construction

Building Structure:
Mr. Yuji KANAYA, The Building Center of Japan, Manager of International Department

Building Construction:
Mr. Michihiko ABE, Ministry of Construction, Building Research Institute, Materials Department, Head of Inorganic Materials Division

Evaluation Planning:
Mr. Yoshiro SUGINO, First Technical Cooperation Division One, Social Development Cooperation Department, JICA
Evaluation Analysis:
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4. Period of Evaluation

29 June 1998-10 July 1998

5. Results of Evaluation

(1) Efficiency

The supplied equipment was used effectively towards achieving results. Although the construction of experimental prototype MSRB was delayed due to change in the construction site and the number of floors, as well as the effects of the economic crisis, the design and construction processes produced beneficial results. Through monitoring after completion of the portion borne by the Indonesian side, the production of further results is expected. Experts were dispatched according to plan, and a high number (29) of counterparts were assigned. The project was efficiently carried out.

Although construction of experimental prototype MSRB was delayed because of the change in the construction site, the change in number of floors of experimental prototype MSRB from five to ten (based on the request of the Indonesian government), and the lengthening of negotiations with the local government that approves housing construction, on the whole the project was carried out according to plan.

(2) Effectiveness

Through this project, counterparts came to recognize the importance of cooperation in each individual technological field of MSRB construction, and a general implementation system for research and development was established. Because of the delays in construction of prototype MSRB, technology transfer was initially delayed in the areas of construction, building materials, fire safety and sanitary engineering. However, this delay was subsequently made up and the project is now in the midst of compiling the final proposals concerning MSRB construction. Therefore, it is thought that the project purpose of this project has largely been met.

(3) Impact

One of the RIHS proposals has actually been applied to the construction of MSRB in the Sumedang Regency in the suburbs of Bandung. Also, based on the results obtained by this project, Indonesia plans to create new standards concerning MSRB construction.

(4) Relevance

The Indonesian government has prioritized housing provision and improvement, and the Seventh Five-Year National Development Plan outlines "the necessity of MSRB construction" clearly. Because it is predicted that the urban population will continue to rise, there will remain a great need for low-income housing in the future. Therefore, the relevance of this project is high.

Experts and counterparts discuss housing design

(5) Sustainability

Although, due to the instability of the national economy, there remains financial uncertainty regarding the RIHS system, the sustainability in both the organizational aspect and technological and human resources aspect is high. It is thought that the activities of this project will maintain these current conditions.

6. Lessons Learned and Recommendations

(1) Lessons Learned

In order to ensure the establishment and smooth implementation of a project's advisory system, it is necessary to have cooperation from all national government organizations and local governments concerned with the project's important activities in the advance planning stage. Considering that the time required for ensuring cooperation at each relevant organization will vary, this should be handled with a flexible schedule.

Indonesia

The Telephone Outside Plant Construction Center Project

Project Sites

Bandung

1. Background of Project

At the end of FY1993, only 0.8 of every 100 people in Indonesia had a telephone, the lowest diffusion rate of ASEAN countries. The poor state of Indonesia's telephone situation was an obstacle to economic development. For this reason, the Indonesian government, under the Sixth Five-Year National Plan beginning in FY1994, has planned to establish one million telephone circuits every year, resulting in a total increase of five million new circuits. In addition, because of the lack of standards for telephone line design, construction methods and materials, as well as the lack of construction management ability, the failure rate of telephone lines in Indonesia was extremely high (4.1 out of every 100 per month, compared with 0.2 out of every 100 in Japan).

With this situation as background, the Indonesian government requested project-type technical cooperation from Japan in order to establish construction standards for Indonesia's telecommunications company Pt. Telekomunikasi Indonesia (PT. TELEKOM) to standardize telephone line construction and train construction supervisors.

2. Project Overview

(1) Period of Cooperation

20 November 1994-19 November 1998

(2) Type of Cooperation

Project-type technical cooperation

(3) Partner Country's Implementing Organization

Ministry of Tourism, Posts, and Telecommunications, PT. TELKOM

(4) Narrative Summary

1) Overall Goal

To improve the quality of the Telephone Outside Plant Construction (TOPC).

2) Project Purpose

To establish the supervisor training course and to train PT. TELKOM personnel in charge of TOPC supervision.

3) Outputs

a) The PT. TELKOM staff is to be trained in TOPC work, supervision and inspection methods according to the revised work methods in the fields of the cable engineering, civil engineering and subscriber premises engineering at the P.T. TELKOM Training Center.

b) The TOPC problems are to be identified and counter-measures are to be found in the course of preparation and revision of the supervisor training course.

c) The revised TOPC standards and methods are to be disseminated to regional offices.

4) Inputs

Japanese Side

Long-term experts	8
Short-term experts	21
Trainees received	12
Equipment	212 million yen
Local cost	49 million yen

Indonesian Side

Counterparts	13
Facilities	
Local cost	1,593.26 million rupiahs (approx. 23 million yen)

3. Members of Evaluation Team

Team Leader:
Mr. Nobuaki TERAOKA, Planning Director, International Cooperation Division, Ministry of Posts and Telecommunications

Sub Team Leader:
Mr. Shigemaro AOKI, Development Specialist, JICA

Cable Engineering:
Mr. Shigeru MOTOYANAGI, Senior Manager, International Cooperation and Development, Nippon Telegraph and Telephone Corporation

Subscriber Premises Engineering:
Mr. Kenji MATSUNAGA, Assistant Manager, International Cooperation and Development, Nippon Telegraph and Telephone Corporation

Evaluation Planning:
Mr. Izumi YAMAMOTO, First Technical Cooperation

Division, Social Development Cooperation Department, JICA
Evaluation Analysis:
Mr. Akira MATSUMOTO, IC Net Ltd.

4. Period of Evaluation

23 August 1998-2 September 1998

5. Results of Evaluation

(1) Efficiency

Through close cooperation between Japan and Indonesia, this project was generally managed appropriately and efficiently. The dispatch of Japanese long-term experts, the acceptance of counterparts for training in Japan, and the supply of equipment were all enacted in a timely manner. The fact that two of the long-term experts have been assigned from the beginning until the end of the project also contributed to the high level of efficiency. The assignment of Indonesian counterparts and the share of the local cost were given priority even in the midst of difficult financial times for the government.

During the latter half of the project, PT. TELKOM's circumstances underwent a large change due to privatization, reorganization, and economic crisis. Although some change in plan and stagnation of activities was unavoidable, the project as a whole was implemented appropriately.

(2) Effectiveness

Through training in Japan and on-the-job training, counterparts have become able to develop materials and perform research and experiments independently. The improvement in their ability to act as on-site training course instructors is remarkable. The revised construction standards and methods were applied in the training of construction supervisors, and also disseminated to regional offices. Through the appropriate implementation of a training course for construction supervisors, the project's main activity, the project's purpose was very successfully accomplished, although the degree of accomplishment varied depending on the technological field.

(3) Impact

PT. TELKOM Training Center received ISO 9001 certification, and received a letter of gratitude from PT. TELKOM. These events clearly indicate that Indonesia's telephone line technology is approaching international standards through this project.

(4) Relevance

The increase in the number of telephone lines and the decrease in the failure rate remains a national issue in Indonesia. With its objective of establishing construction standards and ensuring their dissemination to all regions through the training of construction supervisors, the relevance of this program is high.

(5) Sustainability

The project purpose has been steadily met, and all counterparts have remained without quitting. Therefore, there is a high probability that from now on this project will continue to manage independently.

A counterpart carries out a telephone switchboard test.

Counterparts inspect underground telephone lines.

6. Lessons Learned and Recommendations

(1) Recommendations

Because the management system of this project is well established and functioning smoothly, there is no need for an extension of the cooperation period or follow-up cooperation.

Indonesia

The Irrigation Engineering Service Center Project

Project Sites

Bekasi

1. Background of Project

In 1981, Japan implemented grant aid and project-type technical cooperation for seven years at the Construction Guidance Service Center in Indonesia to improve the agriculture base and contribute to the dissemination of irrigation facility construction technology for the purpose of increasing food production. An additional two years of aftercare cooperation was implemented in 1990. However, because an emphasis was placed on construction management technology, other important fields such as design, maintenance, and a general information/database system were not initially subject to cooperation.

Against this backdrop, the Government of Indonesia, based on the results of the project, decided to reorganize the Construction Guidance Service Center, a center that focused on construction techniques, into the Irrigation Engineering Service Center (IESC), which handles the entire spectrum of irrigation technology, and thereby aim to improve the level of Indonesia's irrigation technology based on a consistent technological system. For this purpose, Indonesia asked Japan for project-type technical cooperation.

2. Project Overview

(1) Period of Cooperation

10 June 1994-9 June 1999

(2) Type of Cooperation

Project-type technical cooperation

(3) Partner Country's Implementing Organization

Directorate General of Water Resources Development, Ministry of Public Works

(4) Narrative Summary

1) Overall Goal

To establish in Indonesia appropriate irrigation projects, in which irrigation establishments are appropriately maintained, managed, repaired and renovated.

2) Project Purpose

To develop the needed technology standards for the implementation of the irrigation projects, and to establish a structure for dissemination.

3) Outputs

a) To create three fields of technology standards: "Examination, Planning and Design" "Maintenance and Management" and "Repair and Renovation."

b) To create guidelines and manuals for these three fields

b) To implement training at the IESC geared towards irrigation technicians.

4) Inputs

Japanese Side

Long-term experts	11
Short-term experts	30
Trainees received	22
Equipment	285 million yen
Local cost	99 million yen

Indonesian Side

Counterparts	41
Facility	
Local cost	2,883.7 million rupiah (approx. 42 million yen)

3. Members of Evaluation Team

Team Leader:

Mr. Koji HARADA, Planning Manager, Kanto Regional Agricultural Administration Office, Ministry of Agriculture, Forestry and Fisheries

Evaluation, Planning and Design/System Development:

Mr. Kazuhiro WATANABE, Director, Overseas Technology Standards, Overseas Ground Improvement Project Division, Structure Improvement Bureau, Ministry of Agriculture, Forestry and Fisheries

Restoration Renovation and Maintenance Management:

Mr. Kenichiro SHOJI, Chief Investigator of Technology Coordination, Agricultural Land Planning Division, Forestry and Fishery Department, Yamagata Prefecture

Technical Cooperation:

Mr. Kenji FUJIYAMA, Agricultural Technology Cooperation Division Agricultural Development Cooperation Department, JICA

Evaluation Analysis:

Mr. Shigeru KOBAYASHI, Systems Engineering Consultants Corporation

4. Period of Evaluation

16 February 1999-27 February 1999

5. Results of Evaluation

(1) Efficiency

The dispatch of long and short-term experts by the Japanese side, as well as equipment supply and the training of Indonesian counterparts in Japan was conducted appropriately according to plan.

However, due to the economic crisis in Indonesia in the later half of 1997, the Indonesian side was behind in their budgetary measures, which especially affected the implementation of dissemination activities. Also, due to work for the Three Year Irrigation Promotion Project for Urgent Food Increase (1998-2000) that the Indonesian government drew up in response to the economic crisis, counterparts were sometime unable to devote themselves to the project.

(2) Effectiveness

Despite the effects of the economic crisis, the transfer of technology to counterparts was completed for the most part. The Directorate General of Water Resources Development came to be able to independently hold seminars and training and to draw up training plans in 1998-1999.

Since the project did not have any concrete numerical goal regarding its dissemination activities, the evaluation results by the Indonesian side of the extent of the achievement in terms of dissemination were divided. However, guidelines were created through the project, and IESC is in a position to continue developing their dissemination activities through its training activities. Thus, for the most part, the project purpose seems to have been achieved.

(3) Impact

The guidelines for technology were created by the counterparts, and the contents have been revised continuously. A portion of the guidelines has been presented at academic societies and seminars, and some private companies are also making practical use of them. The introduction of the irrigation information system is under consideration in a project of the Overseas Economic Cooperation Fund (OECF) (currently the Japan Bank for International Cooperation (JBIC).

(4) Relevance

The overall goal of this project was in line with the development plan of the Sixth Five Year National Development Plan and is related to the Urgent Three Year Plan. The needs for preparing an irrigation system in Indonesia are as high as ever, making the relevance of the project very high.

(5) Sustainability

The technology transferred to the counterparts has been certainly established. The Directorate General of Water Resources Development has secured budgets for dissemination activities, and there are signs of sustainability. However, the IESC must be further strengthened organizationally and institutionally toward smooth project management.

Water flow is studied and analyzed.

An expert explains soil properties to counterparts.

6. Lessons Learned and Recommendations

(1) Recommendations

It is expected that the project purpose will be achieved within the initial cooperation period. However, in order for the IESC to appropriately respond to the Urgent Three-Year Plan, two years of follow-up cooperation focusing on dissemination activities at the on-site level, utilizing materials such as the guidelines prepared in this project will be necessary.

7. Follow-up Situations

Two years of follow-up cooperation has been underway since the conclusion of the initial cooperation period. The follow-up cooperation is to end in June 2001.

Indonesia

The Research and Development for the Multispecies Hatchery Project

Project Sites

Gondol

1. Background of Project

The acquisition of foreign currency through the promotion of aquaculture is an important challenge in Indonesia. However, prawn culture had been conspicuous in Indonesia's fishery industry, and most hatcheries had been producing prawns.

Since this situation was fragile when faced with market, environmental and other changes, the Government of Indonesia asked Japan to implement project-type technical cooperation with the goal of further developing aquaculture, and researching, developing and disseminating multispecies hatchery techniques suited to Indonesia's regional characteristics.

2. Project Overview

(1) Period of Cooperation

2 April 1994-1 April 1999

(2) Type of Cooperation

Project-type technical cooperation

(3) Partner Country's Implementing Organization

Gondol Research Station of the Central Research Institute for Fisheries, Agency for Agricultural Research Development (AARD)

(4) Narrative Summary

1) Overall Goal

To achieve stable hatching and supply of commercially important species.

2) Project Purpose

To strengthen the capability of the Gondol Research Station.

3) Outputs

a) To develop methods adaptable to multispecies hatching.

b) To implement training regarding hatching for extension workers.

c) To research and develop technologies for diagnosis and prevention of marine diseases.

4) Inputs

Japanese Side

Short-term experts	16
Long-term experts	10
Trainees received	14
Equipment	171 million yen
Local cost	75 million yen

Indonesian Side

Counterparts	24
Equipment	(Pumps, PCs, telephones, etc.)
Offices for experts, testing labs, etc.	
Local cost	4.695 billion rupiah (approx. 68 million yen)

3. Members of Evaluation Team

Team Leader/Shrimp Hatching:
Mr. Keigo MARUYAMA, Director, Goto Office, Japan Sea Farming Association

Fish Hatching:
Mr. Jun ONO, Assistant Professor, Department of Resource Management, Tokyo University of Fisheries

Marine Disease:
Mr. Kishio HATAI, Professor, Marine Disease Science Class, Nippon Veterinary and Animal Science University

Propagation Plan:
Mr. Shu IKEDA, Subsection Chief, International Division, Fishery Policy Department, Fisheries Agency, Ministry of Agriculture, Forestry and Fisheries

Planning Evaluation:
Mr. Hiroyuki TANAKA, Fisheries Cooperation, Forestry and Fisheries Development Cooperation Department, JICA

4. Period of Evaluation

18 October 1998-31 October 1998

5. Results of Evaluation

(1) Efficiency

The dispatch of experts and the training of Indonesian counterparts in Japan were all appropriate in terms of quality,

amount, and timing. The inputs from the Indonesian side, with the exception of the research budget reduction in the project's final year due to the economic crisis, were also implemented according to plan. Technology transfer was well carried out due to the small number of counterparts who were transferred to other departments. On the other hand, although collaboration on dissemination activities was pursued with the dissemination organization that was newly established through structural reform of AARD, the formulation of dissemination activity content required some time because the roles among each reformed division of AARD were not initially clear.

(2) Effectiveness

Through this project, the Gondol Research Station enhanced facilities and equipment. In addition, the staff members' level of research and development in the fields of hatcheries, dissemination, and disease improved and the station became Indonesia's center for research and dissemination regarding hatching of marine products.

(3) Impact

The number of small-scale milkfish backyard hatcheries in the vicinity of the Gondol Research Station has grown rapidly. However, the task of applying the Cromileptes altivelis hatching technologies developed under this project to actual hatcheries remains.

(4) Relevance

From now on, if the hatchery techniques developed through this project can be systematized for application, it is expected that local residents can avoid the risk of single species production and be able to realize increased income and job creation in a relatively short period of time. This project is also highly relevant from the standpoint that it also contributes to the acquisition of foreign currency.

(5) Sustainability

Organizationally, the Gondol Research Station is deemed to have sufficient sustainability. In terms of finances, although the economic crisis had the effect of reducing the budget, the station has an independent revenue source (sale of hatched fish) and the outlook for sustainability is bright. If technical cooperation for the application to production sites of the Cromileptes altivelis hatching technologies developed under this project is implemented, then the technological sustainability will also be enhanced.

6. Lessons Learned and Recommendations

(1) Lessons Learned

When teaming up with a newly established organization to implement continuous project activities, it is necessary to fully investigate the functions and roles of each division in the new organization.

(2) Recommendations

In order to support the application of the hatchery techniques developed under this project to backyard hatcheries, there is a need to implement follow-up cooperation of roughly two years in order to prepare manuals for hatchery techniques and to package technology that includes the cultivation of adult fish.

An expert teaches marine disease prevention technology

Research on fish hatching is carried out at the Gondol Research Station

7. Follow-up Situations

A roughly two-year follow-up cooperation period is underway, beginning from the end of the original cooperation period until March 2001.

Indonesia

Training in Industrial Pollution Prevention Technology

Project Sites

Jakarta

1. Background of Project

Economic development in Indonesia in recent years had brought with it increased industrial activity, which in turn caused pollution problems such as the contamination of the atmosphere and rivers, and the accumulation of solid waste. Rivers in the metropolitan area had especially serious water pollution problems due to drainage because most small and mid-sized companies that dominate the industrial sector zone were not equipped with proper waste disposal facilities. The Indonesian government had made efforts to prevent industrial pollution. It formulated emission standards, regulated pollution through environmental monitoring and carried out activities to educate the public. It also drafted a river purification plan and tackled the problem of water quality.

However, because there was a lack of technical experts to guide pollution prevention measures, Indonesia was faced with the urgent task of cultivating such experts. Therefore, the Government of Indonesia requested that Japan implement technical cooperation with the goal of strengthening the functions of the Agency for Industrial and Trade Research and Development (BPPI) and the Institute for Research and Development of Chemical Industry (BBIK), which is under the jurisdiction of BPPI, and cultivating experts in industrial pollution prevention.

2. Project Overview

(1) Period of Cooperation

8 October 1993-7 October 1998

(2) Type of Cooperation

Project-type technical cooperation

(3) Partner Country's Implementing Organization

Agency for Industrial and Trade Research and Development (BPPI)

(4) Narrative Summary

1) Overall Goal

To ensure that factories in Indonesia properly understand how to prevent industrial pollution and observe emission regulations.

2) Project Purpose

To enhance the technical and administrative capabilities of BPPI in regard to industrial pollution prevention.

3) Outputs

a) To ensure that BBIK staff are well trained in analytical methods, application technology, and facility operation and maintenance methods.

b) To teach administrators about industrial pollution prevention policy.

c) To allow BBPI technicians to acquire factory survey techniques and grasp the pollution level in a factory.

d) To popularize and disseminate information on techniques for industrial pollution prevention.

4) Inputs

Japanese Side

Long-term experts	8
Short-term experts	26
Trainees received	17
Equipment	352 million yen

Indonesian Side

Counterparts	41
Facilities	
Local cost	1.74 billion rupiah (approx. 26 million yen)

3. Members of Evaluation Team

Team Leader:

Mr. Tsuyoshi USAMI, Special Technical Advisor to the President, JICA

Technical Cooperation Planning:

Mr. Ko MORIMOTO, Assistant Section Chief, Environmental Guidance Office, Environmental Protection and Industrial Relocation Bureau, Ministry of International Trade and Industry

Technology Transfer Planning:

Mr. Tadashi KATAOKA, Director, Research Department, International Center for Environmental Technology Transfer

Project Management:

Mr. Yasuhiro YOKOSAWA, Second Mining and Industrial Development Cooperation Division, Mining and Industrial Development Cooperation Department, JICA

Project Analysis and Evaluation:
Mr. Mitsuyasu IDA, IC Net Inc.

4. Period of Evaluation

27 July 1998-12 August 1998

5. Results of Evaluation

(1) Efficiency

On the Japanese side, apart from difficulty in recruiting experts in the field of waste treatment technology, the experts from Japan were dispatched mostly on schedule.

Although the supplied equipment was installed on schedule for the most part, there was a one-year wait for the supply of necessary parts for the Landfill Experimental Apparatus due to the delay in the recruitment of experts. In particular, time was needed before the incinerator could be fully used, because of several wide-ranging alterations that were made in order to adapt the equipment to the needs of training at the research lab.

(2) Effectiveness

Through this project, BBIK's technical capabilities improved rapidly. BBIK became able to plan and implement seminar programs and training for third parties, and particularly the accuracy of industrial waste (water pollution, emissions and harmful substances) analyses was improved. However, although general understanding of factory survey theory and methodology deepened, the accumulation of further experience is needed in order to be able to carry out appropriate guidance counseling to factories.

At the same time, administrators deepened their understanding of pollution prevention laws and regulations, systems and administration in Japan. The establishment of opportunities to compare the laws, regulations and systems of Indonesia and Japan relevant to this project, was also significant toward contributing to the drafting of industrial pollution prevention policies in Indonesia.

In these ways, counterparts improved their technical and administrative support capabilities regarding industrial pollution prevention in the form of lectures by experts, training in Japan and through on-the-job training, including factory surveys, and the project purpose has been achieved on the whole.

(3) Impact

BBIK, whose technological capability has improved, has implemented seminars and training for other administrative agencies, universities and other organizations concerned with pollution prevention, becoming well-known through these activities.

More than 120 factory surveys have been implemented as part of on-the-job training, and it can be said to a certain extent that this project has also had the effect of promoting the prevention of pollution to private companies. However, many factories still do not show much interest in pollution prevention. There is a large tendency for foreign companies doing business in Indonesia to look to other foreign companies and investor companies for consultation in this area instead of BBIK. Under these circumstances, the scale of pollution prevention technology dissemination and technical alliance that BBIK can carry out with regard to private companies is still limited.


An expert explains the emissions cleaning process

(4) Relevance

Environmental conservation is a priority issue in Indonesia's Sixth National Development Plan, and the improvement of technological and administrative support abilities in regard to the prevention of industrial pollution, targeting small and mid-sized companies, which are this project's purpose, were relevant. However, due to the economic crisis that threatened Indonesia in 1997, the government made its Economic Rescue Program a priority, and as a result, the priority level of policies in the area of pollution prevention has become relatively low.

(5) Sustainability

At present, BPPI is considering institutional improvements regarding the strengthening of cooperative relationships between the BBIK and other related organizations, and is now in the process of preparing a plan to increase work efficiency at BBIK. As for financial sustainability, the effects of the ongoing economic crisis are inescapable and elements of uncertainty are considerable. Regarding technical aspects, it is necessary to accumulate more practical experience in order to be able to implement the appropriate guidance counseling to factories.

6. Lessons Learned and Recommendations

(1) Recommendations

The transfer of basic technologies regarding pollution prevention was for the most part carried out completely and the project purpose is considered achievable within the cooperation period. However, in order to further increase sustainability, there is a need to provide counterparts with opportunities to accumulate practical experience and to carry out guidance regarding maintenance of the equipment supplied.

Indonesia

The Project for Strengthening District Health Services in Sulawesi

Project Sites

Four Sulawesi Provinces

1. Background of Project

Indonesia has a unique health care system. Each region or village maintains, for example, health centers, sub-health centers, sub-stations for midwives, basic medical facilities, educational activities for the local people, and a prescription center. These facilities provide basic health care services to people living in local areas which do not have hospitals. However, in the mountainous Sulawesi islands in eastern Indonesia where development has been delayed, health care standards were very low, due to lack of diagnostic and medical equipment, medical vehicles to make rounds, and other resources at the facilities.

On the other hand, Japan announced the Global Issues Initiative (GII) on Population and AIDS in February 1994. To promote cooperation in this area, the strengthening of Sulawesi's regional health systems was considered part of the GII.

Japan conducted a project formation study in Sulawesi from 1994 to 1995, and after receiving the results of this investigation, decided to implement cooperation which effectively combined grant aid, yen loans, and technical cooperation. This grant aid is the first project of these sequential cooperation projects.

2. Project Overview

(1) Period of Cooperation

FY1995

(2) Type of Cooperation

Grant aid

(3) Partner Country's Implementing Organization

Ministry of Health, Health Center

(4) Narrative Summary

1) Overall Goal

To improve the standard of health care in rural areas of Sulawesi.

2) Project Purpose

To be able to offer appropriate health services at rural health care facilities on Sulawesi.

3) Outputs

a) To provide equipment (such as infusion sets, weighing scales, emergency sets, and microscopes) at Sulawesi's health service centers.

b) To provide vehicles (such as ambulances, mobile guidance vehicles) at Sulawesi's health service centers.

4) Inputs

Japanese Side

Grant	1.209 billion yen (E/N amount)

Indonesian Side

Local cost

3. Members of Evaluation Team

Team Leader:

Mr. Makoto INABA, Director, Follow-up Division, Grant Aid Project Management Department, JICA

Supply Conditions Evaluation:

Ms. Reiko HAYASHI, Japan International Cooperation Systems

4. Period of Evaluation

30 November 1998-11 December 1998

5. Results of Evaluation

(1) Efficiency

In order to distribute medical equipment and vehicles to all 728 facilities on Sulawesi, a preliminary, basic but detailed survey was conducted during this project. As a result, suitable medical equipment that met the needs of the local health facilities was selected and procured, showing high efficiency.

(2) Sustainability

The supplied equipment was being kept at the central health facility, since it was uncertain whether the equipment would be handled properly. Accordingly, some equipment has not reached the health facilities of villages on the outskirts. However, through this project, all 728 regional health facilities on Sulawesi received basic medical equipment.

In this project, the equipment, which was previously used and simple, has been mostly selected. Although there is some difference among facilities, the distributed equipment is being used fairly effectively. Vehicles are also essential, particularly in rural areas, and they are being used very frequently.

From the above, it can be said that the project purpose-providing appropriate health services through Sulawesi's regional health centers-has been accomplished.

(3) Impact

Through assistance towards primary regional health care, the level of health care services in rural Sulawesi has improved.

Recently in Indonesia a system that disseminates information about the consultation rate and diseases of each health center every month via a personal computer network has just been introduced. It is thought that, by using this system, monitoring and evaluating this project is feasible.

(4) Relevance

The eastern regions, including Sulawesi, have been made the focus of Indonesia's Sixth National Development Plan. Previously, health care has been the highlight of the development plan, and this project is in line with that emphasis. Also, because this project orchestrated the selection of medical equipment based on a detailed primary survey implemented at the planning stage, it has been an appropriate plan to meet the needs of each health facility and the people it serves.

(5) Sustainability

Many health care facilities visited in this evaluation recognize that there are insufficient equipment maintenance engineers, but because most of the equipment supplied by this project is simple, when slight troubles occur, it is repaired and put back to use.

However, due to having run out of consumables, there is a need for additional equipment in the future.

6. Lessons Learned and Recommendations

(1) Lessons Learned

In projects such as this one, which supply a great deal of equipment to many facilities in order to be able to appropriately facilitate the distribution of equipment and the monitoring of conditions of use after the distribution, it is necessary to pay particular attention to the systems of acceptance and management at the site of the project.

A nurse treating an emergency patient with an intravenous drip provided by grant aid.

Patient undergoing a medical examination.

Indonesia

Project for Equipment Supply to the TV Training Center

Project Sites

Jakarta

1. Background of Project

Indonesia's national television station Televisi Republik Indonesia (TVRI) was playing a large role in raising living standards, especially those of residents of regional communities where development was lagging behind, through the spread of government policy and Indonesian language, the broadcast of children's educational programs and the diffusion of family planning. As a national state policy, it had been promoting the development of regional television stations to swiftly cover the entire country. However, the lack of technicians at local stations was conspicuous and a sufficient broadcasting system had not been developed.

Facilities and equipment were provided to the TVRI Training Center (TVTC), which is the training center for TVRI's television technicians, through assistance from the former West Germany in 1980. However, this equipment was not upgraded. As digitization progressed at private television stations, the situation at the TVTC hindered training, with half of the equipment broken and the remaining half in an old format. Since this situation prevented the development of human resources at TVRI, the Government of Indonesia requested grant aid from Japan for the upgrade of TVTC's training equipment

2. Project Overview

(1) Period of Cooperation

FY1996

(2) Type of Cooperation

Grant aid

(3) Partner Country's Implementing Organization

TVRI Training Center (TVTC)

(4) Narrative Summary

1) Overall Goal

To cultivate human resources at TVRI.

2) Project Purpose

To improve the level of training at TVTC.

3) Outputs

a) Program production equipment is provided.
b) Editing equipment is provided.
c) Broadcast-related equipment is provided.
d) The ability to operate and maintain equipment appropriately is developed.

4) Inputs

Japanese Side

Grant	497 million yen (E/N amount)

Indonesian Side

Local cost

3. Members of Evaluation Team

JICA Indonesia Office
(Commissioned to Polling Center)

4. Period of Evaluation

15 February 1999-7 March 1999

5. Results of Evaluation

(1) Efficiency

The procured equipment was installed and maintained at TVTC as planned. Based on the advice of individual experts dispatched to TVRI, this project was carried out without any special problems from the planning through implementation thanks to the demonstration of mutual teamwork between the Japanese and Indonesian sides. The economic crisis that accompanied the drastic fall of the value of the Indonesian rupiah had no special effect on the project, which was calculated in yen and had already entered the implementation phase when the crisis broke out.

(2) Effectiveness

The equipment provided has already been utilized for actual training. To date, 96 technicians have completed the six training courses using new digital instruments. Thanks to the elimination of superannuated equipment and other limitations, training of TVRI staff has become smooth and training time shortened.

Five new training courses are scheduled to be set up in the future.

Through the upgrade of equipment, training activities at

the TVTC were revitalized and the level of enthusiasm of instructors and trainees increased. Although it has been only several months since the use of equipment began, the intended objectives are in the process of being achieved.

(3) Impact

Although the latest digital instruments were introduced to the TVTC and training using digital instruments has commenced, individual TVRI stations are still using analog equipment. Therefore, although positive effects are probable over the long term, at present, a gap is developing between training and actual post-training work.

However, the trainees who acquired program production skills using digital instruments raised their level of enthusiasm toward program production and have become able to come up with more diverse ideas. From now on, technicians completing training are expected to utilize the abilities such as the spirit of teamwork and creativity acquired at the TVTC in their work for TVRI to produce high quality programs.

(4) Relevance

The Government of Indonesia considers TVRI an important means of promoting national unity. In this project, both the Japanese and Indonesian sides approached the selection of equipment based on close mutual consultation for the sake of strengthening TVRI's functions. The training of TVRI staff members also fulfilled the needs of the Indonesian side and thus the project possesses immediate relevance.

(5) Sustainability

At present, due to the small number of maintenance personnel at TVTC who are proficient with digital instruments, there is a need for support from experts and consultants. From now on, the training of maintenance personnel is also necessary.

6. Lessons Learned and Recommendations

(1) Lessons Learned

To ensure that the equipment provided is used appropriately and the skills acquired by trainees through training are used in actual work, it is important to consider the level of equipment possessed by the trainees' organizations in addition to the maintenance systems and technology level of the implementing organization.

(2) Recommendations

It is desirable that the transfer of digital technology by experts to TVTC instructors and maintenance technicians, as well as the TVRI maintenance center, is continually promoted to ensure that the provided digital instruments are used more effectively.

A video camera provided through this project.

Editing techniques are trained using equipment provided through this project.

Laos

The Joint Japan-WHO Technical Cooperation for the Primary Health Care Project

Project Sites

Vientiane, Khammouane Province

1. Background of Project

When former Minister for Foreign Affairs Taro NAKAYAMA visited Laos in 1990, he promised assistance for democratization to the country, which was advancing liberalization policies. Technical cooperation in health-related fields was considered as part of this support. Around the same time, the World Health Organization (WHO) sounded out Japan regarding cooperation in Laos. In response, a joint WHO-Japan survey mission was dispatched in 1991.

As a result of the survey, the Government of Laos requested from Japan technical cooperation regarding a Primary Health Care (PHC) Project based on the Expanded Programme on Immunization (EPI).

2. Project Overview

(1) Period of Cooperation

1 October 1992-30 September 1997
1 October 1997-30 September 1998 (extension)

(2) Type of Cooperation

Project-type technical cooperation

(3) Partner Country's Implementing Organization

Ministry of Health

(4) Narrative Summary

1) Overall Goal

To establish a foundation for PHC activities, EPI and strengthening of measures against infectious diseases (viruses, bacteria, parasites).

2) Project Purpose

To facilitate the provision of comprehensive PHC services in Khammouane Province, using a nationally developed EPI as a foothold.

3) Outputs

a) To educate people employed in PHC
b) To implement EPI activities
c) To formulate preventive measures concerning infectious diseases that include surveillance systems
d) To strengthen local health activities taken part in by residents
e) To improve testing techniques at the National Institute of Hygiene and Epidemiology and the Institute of Malariology, Parasitology and Entomology

4) Inputs

Japanese Side

Long-term experts	22
Short-term experts	49
Trainees received	22
Equipment	354 million yen
Local cost	114 million yen

Lao Side

Counterparts	20
Project office, research facilities	
Local cost	123.02 million kips (approx. 3 million yen)

3. Members of Evaluation Team

Team Leader:
Dr. Toshihiko FUKUNAGA, Head of School of Medicine, Faculty of Medicine, University of the Ryukyus

PHC:
Dr. Atsushi SAITO, Professor, Department of Internal Medicine, Faculty of Medicine, University of the Ryukyus

Parasitology:
Dr. Yoshiya SATO, Professor, Department of Parasitology, Faculty of Medicine, University of the Ryukyus

Cooperation Impact:
Mr. Masakatsu KOMORI, First Medical Cooperation Division, Medical Cooperation Department, JICA

4. Period of Evaluation

6 August 1998-18 August 1998

5. Results of Evaluation

(1) Efficiency

This joint project with the WHO, while realizing a mutually cooperative approach with the WHO, was on the whole implemented efficiently through the unerring support of the Embassy of Japan, JICA Headquarters, JICA Laos office and other parties involved. Laos' progressing economic development,

the high degree of awareness and enthusiasm of the counterparts and technology exchange with neighboring Thailand, which has advanced PHC, health and medical technologies, also contributed to the efficiency of technology transfer.

However, there were problems such as some of the experts' lack of language ability, an inability to dispatch some of the experts in a timely fashion, as well as lacks of finances, human resources and a clear PHC policy on the Lao side.

(2) Effectiveness

Through the establishment of the Drug Revolving Fund and a Mobile Clinic system, the development of a basic framework for health and hygiene education for village residents, instruction for hospital and laboratory technicians, national development of the EPI and other efforts, a model for comprehensive PHC services in Khammouane Province has been created. Since a foothold for the eradication of polio in Laos has been established, the project purpose is deemed to be achieved for the most part.

(3) Impact

Moves can also be seen within the Ministry of Health to develop PHC nationwide based on the comprehensive PHC model in Khammouane Province created through this project. In addition, in response to the strengthening of the organizational aspects and capabilities of related agencies involved in health through this project, a malaria control project through grant aid from Japan is under consideration.

(4) Relevance

There has been no change in conditions regarding the need for this project since the time of the request for cooperation. Therefore, it remains relevant at present.

(5) Sustainability

As mentioned under "Impact" above, efforts are being made at the development of new activities based on this project and sustainability is considered high. However, in order to further develop these activities, the establishment of a system of more effective measures by central government ministries and agencies and provincial health offices will be necessary.

6. Lessons Learned and Recommendations

(1) Recommendations

Regarding technology exchange with neighboring Thailand, which has been promoted from the outset of the project, it will be necessary for Japan, Thailand and Laos to make such cooperation official as a trilateral cooperation project, which will continue to be implemented and expanded after this project is completed.

7. Follow-up Situations

To carry on the results of this project, the Pediatric Infectious Disease Prevention Project (1 October 1998-30 September 2001) and the Project for the Improvement of Sethathirath Hospital (1 October 1999-30 September 2004) are being implemented.

Residents using the well installed under the project

Children using the well installed under the project

Laos

The Project for Improvement of the Solid Waste Management System in Vientiane Urban Area

Project Sites

Vientiane

1. Background of Project

Waste had been hardly ever collected from the Lao capital of Vientiane. The uncollected waste was disposed of and left in drainage ways and in the Mekong River, giving rise to diseases, pests and bad smells. This became a large environmental sanitation problem.

Under these circumstances, the Government of Laos requested that Japan provide grant aid to help improve Vientiane Municipality's waste disposal systems and its sanitation environment.

2. Project Overview

(1) Period of Cooperation

FY1996

(2) Type of Cooperation

Grant aid

(3) Partner Country's Implementing Organization

Vientiane Municipality

(4) Narrative Summary

1) Overall Goal

To construct a waste disposal system and to improve the sanitation environment in Vientiane Municipality

2) Project Purpose

To improve waste disposal in Vientiane Municipality

3) Outputs

a) To provide materials and machinery for waste collection, solid waste transportation and land reclamation

b) To construct a final waste disposal facility

c) To construct a maintenance workshop for the machinery for waste disposal

4) Inputs

Japanese Side

Grant	705 million yen (E/N amount)

Lao Side

Counterparts	187
	Land for the final waste disposal facility and maintenance facility
	Local cost

3. Members of Evaluation Team

Survey of Administrative Situation:

Mr. Katsuo SHOJI, Deputy Director, Follow-up Division, Grant Aid Project Management Department, JICA

Facilities Survey:

Mr. Goro SAKAI, Deputy Director, Coordination and Appraisal Division, Grant Aid Project Study Department, JICA

4. Period of Evaluation

26 January 1999-3 February 1999

5. Results of Evaluation

(1) Efficiency

Because of the appropriate management of the work process, the construction work of the final waste disposal facility and waste collection machinery maintenance workshop, and the procurement of waste disposal machinery were all completed within the scheduled time period.

(2) Effectiveness

The Lao side has begun to collect and dispose of the waste using the machinery and facilities that have been provided, bringing the project to its intended goal.

(3) Impact

Through the implementation of this project, the establishment of a waste collection and disposal system in Vientiane Municipality was promoted. The process of waste collection and treatment of the waste in its final waste disposal facility has improved greatly, bettering the living environment of the residents.

(4) Relevance

This project was implemented in accordance with a priority project which was recommended through Japan's development study on the Solid Waste Management System Improvement

Project in Vientiane. Therefore, this project has high relevancy.

(5) Sustainability

The budget and personnel are allocated well for this project according to need and the sustainable management of the machinery is carried out correctly. In addition, Vientiane Municipality is purchasing needed materials and machinery with its own funds and is working towards a sound management system through activities such as managing machine parts and collecting fees. Moreover, Vientiane Municipality has been steadily increasing its contractors of waste collection and has purchased waste collection containers with its own funds in order to spread the project's effects. In considering such efforts on behalf of the Municipality, the level of sustainability is high.

6. Lessons Learned and Recommendations

(1) Lessons Learned

As the budget of this project was limited, it was not possible to secure enough spare parts during the procurement of the machinery. Though Japan had supplied Laos with spare parts just a year before, there are very few spare parts left in stock. Since it is a very crucial point now for the promotion of the Vientiane Municipality Urban Area Waste Disposal Basic Project to get the waste collection and disposal project of Vientiane Municipality on track, follow-up, including the supply of spare parts, needs to be considered.

7. Follow-up Situations

For six months from March 1993 onwards, Japan dispatched short-term experts to supervise waste disposal management, and for two years from April 1999, sent Japanese Overseas Cooperation Volunteers to undertake civil engineering. Japan is conducting technological instruction on the construction of waste disposal sites.

Waste being collected by a maintained garbage truck

Waste being collected by a maintained garbage truck

Malaysia

The Malaysia External Trade Development Corporation

Project Sites

Kuala Lumpur

1. Background of Project

The Malaysian Export Trade Centre (MEXPO) was established in 1980 to promote exports of small-and medium-size Malaysian companies. However, due to recent economic developments in Malaysia, industrial products have come to comprise approximately 50% of Malaysia's total exports, and it became necessary to expand and strengthen the function of MEXPO in order to respond to this change in export structure.

In 1991 the Government of Malaysia established the Malaysia External Trade Development Corporation (MATRADE) as the body responsible for the promotion of Malaysian exports, and, in order to strengthen its function and implement proper management, requested project-type technological cooperation from Japan.

2. Project Overview

(1) Period of Cooperation

1 July 1994-30 June 1999

(2) Type of Cooperation

Project-type technological cooperation

(3) Partner Country's Implementing Organization

Malaysia External Trade Development Corporation (MATRADE) of the Ministry of International Trade and Industry

(4) Narrative Summary

1) Overall Goal

To promote Malaysian external trade.

2) Project Purpose

To enable MATRADE to organize, operate and manage a variety of programs for trade promotion

3) Outputs

a) To learn appropriate knowledge and technology concerning the promotion of exports
b) To conduct activities concerning sourcing, collection, and processing of trade information
c) To develop a computerized trade information system
d) To disseminate trade information
e) To organize permanent exhibitions and ad hoc trade fairs

4) Inputs

Japanese Side

Long-term experts	7
Short-term experts	25
Trainees received	20
Equipment	192 million yen
Local cost	20 million yen

Malaysian Side

Counterparts	32
Land and facilities	
Equipment	10 million ringgit (approx. 326 million yen)
Local cost	219 million ringgit (approx. 7021 million yen)

3. Members of Evaluation Team

Team Leader:
Mr. Tadao YAMAZAKI, Executive Director, Manufactured Import Promotion Organization

Advisor:
Mr. Yuji HOSOYA, Director of Human Resources Development, Technical Cooperation Division, International Trade Policy Bureau, Ministry of International Trade and Industry

Technology Transfer Planning:
Mr. Masaaki HANAI, Development Specialist, JICA

Training Planning:
Mr. Yutaka KAWAHARA, Deputy Director-General of the Economic Development Assistance Department, Japan External Trade Organization

Evaluation Management:
Mr. Fumio YAMASHITA, Deputy Director, First Technical Cooperation Division, Mining and Industrial Development Cooperation Department, JICA

Evaluation Analysis:
Mr. Jiro IGUCHI, PADECO Co., Ltd.

4. Period of Evaluation

10 March 1999-27 March 1999

5. Results of Evaluation

(1) Efficiency

Including the dispatch of experienced and enthusiastic experts, the inputs from the Japanese side were appropriate in amount, quality, and timing. The inputs from the Malaysian side, such as the assignment of excellent counterparts, were also enacted effectively, and this contributed to the efficient achievement of project outputs. However, if the Malaysia Trade Statistics Retrieving System had been completed more quickly, and construction of the new MATRADE building by the Malaysian side had been finished in 1996 as planned, there would have been a possibility for more effective technology transfer.

(2) Effectiveness

The transfer of technology to MATRADE has largely been completed, and therefore it is judged that the project purpose, to enable MATRADE to organize, operate and manage a variety of programs for trade promotion, will be able to be accomplished by the end of the period of cooperation.

(3) Impact

Through the activities of this project, Malaysia's export revenue has been increasing steadily. Also, private corporations' expectations and needs concerning MATRADE have increased. From 1994 to 1997, MATRADE's corporate membership has more than doubled. This upward trend is continuing, and it is hoped that there will be an increase in opportunities to utilize technology transferred through this project.

(4) Relevance

The promotion of export has been continuously raised as one of the most important issues in the Sixth Malaysia Plan. Because offering accurate trade information has steadily increased in importance, with regard to increasing the scale of and diversifying export markets, even now, the purpose of this project is relevant. MATRADE member companies and governmental organizations, in light of the needs of the project's beneficiaries, have also judged the project purpose to be relevant.

(5) Sustainability

It is confirmed that the Government of Malaysia will continue to aid MATRADE organizationally and financially in the future. Also, technologically, efforts are being made to fix transferred technology in the form of teaching materials and manuals, so it is thought that MATRADE has high sustainability.

6. Lessons Learned and Recommendations

(1) Lessons Learned

In cases of soft-type projects, in order to preserve the freshness of "information" that serves as the foundation of technology transfer, it is absolutely necessary that there be, along with the frequent collection of information concerning the partner country and neighboring countries, a close sharing of information with interested parties including project support committees in Japan, and that information network be built.

Seminar implemented through this project

Panel discussion at seminar

(2) Recommendations

The transfer of technology to MATRADE is complete for the most part. Also, neither extension of the cooperation nor follow-up cooperation is necessary because MATRADE has already achieved a certain level of sustainability.

Philippines

The Medium-Rise Housing Construction for Low Income Families

Project Sites

Metro-Manila

1. Background of Project

In the Philippines, the concentration of the population in urban areas and soaring land prices had been making the supply of housing for illegal squatters and medium-income office workers a serious issue. From 1993 to 1998, the Government of the Philippines adopted a National Shelter Program that intended to supply 1.24 million social housing units for low-income families.

However, the National Housing Authority (NHA) who implemented the program, was still in the early stages of conceiving the operational framework for the production of medium-rise housing. Therefore, it asked Japan for technical cooperation with the goal of promoting the construction of medium-rise housing through the formulation of standard designs and specifications.

2. Project Overview

(1) Period of Cooperation

1 September 1995-31 August 1998

(2) Type of Cooperation

Expert team dispatch program

(3) Partner Country's Implementing Organization

National Housing Authority (NHA)

(4) Narrative Summary

1) Overall Goal

To increase the number of medium-rise housing units built for low-income families in the Philippines.

2) Project Purpose

To improve standard designs specifications for medium-rise housing at the NHA.

3) Outputs

a) Implementation of studies of existing medium-rise housing.

b) Construction of experimental buildings

c) Formulation of standard specifications and standard designs for medium-rise housing.

4) Inputs

Japanese Side

Long-term experts	1
Short-term experts	15
Seminar experts	5
Trainees received	5
Equipment	26 million yen

Philippine Side

Counterparts	12
Land and facilities	

3. Members of Evaluation Team

Team Leader:

Mr. Tomoki SERA, Deputy Director, Housing Construction and Improvement Division, Housing Bureau, Ministry of Construction

Evaluation Analysis:

Mr. Shinsuke TSURUTA, Director, Regional Planning International Co., Ltd.

Technical Cooperation:

Mr. Masayoshi TAKEHARA, First Experts Assignment Division, Experts Assignment Department, JICA

4. Period of Evaluation

17 August 1998-22 August 1998

5. Results of Evaluation

(1) Efficiency

One long-term expert was dispatched as planned, while the number of short-term experts was increased to 15 because the construction of experimental buildings was added to the project. Five counterpart trainees were received. Technology transfer covered all related areas including construction, civil engineering, structure, machinery and electricity, with special emphasis on waterproofing and supply/drainage of water. Sufficient outputs were achieved from these inputs.

(2) Effectiveness

Through studies of existing medium-rise housing, formulation of standard specifications and standard designs,

construction of experimental buildings and announcement of interim results through seminars, the transfer of technology to counterparts was achieved satisfactorily. The transferred technology was also widely disseminated among the pertinent staff of the NHA, and this led to the increased technical prowess of the NHA as a whole.

(3) Impact

Based on the fruits of this project, the NHA applied its own independently improved drainage system in the construction of medium-rise housing in Maharlica Village. The NHA also plans to implement the standard specifications and standard designs developed through this project in earnest in their other work. Moreover the project, by promoting the relocation of illegal squatters, also led to infrastructure development and improvement of the urban environment.

(4) Relevance

This project involves the provision of housing to low-income families, which is consistent with the Philippine Government's policy. It also conforms with the NHA policy of making the construction of medium-rise housing through efficient use of land a main pillar of its activities. Thus, the project has been deemed highly relevant.

(5) Sustainability

Through this project the NHA's technology standards improved, and the provided equipment is being sufficiently maintained by the selected staff. In addition, now that the funds for the construction of medium-rise housing have been secured to a certain degree through the Comprehensive and Integrated Shelter Financing Act of 1994, the promotion of the construction of medium-rise housing by the NHA can be expected to continue.

6. Lessons Learned and Recommendations

(1) Recommendations

In order to further promote the construction of medium-rise housing, it is necessary to spread information to low-income households such as what constitutes medium-rise housing (in terms of sales price, payment of rent, room layout, etc.), as well as rules and etiquette for living in medium-rise housing. Close cooperation with organizations other than the NHA that provide housing (private enterprises, local governments, Housing and Urban Development Coordinating Council, etc.) is also important.

To promote the provision of medium-rise housing from now on, regarding cooperation for prototyping (implementation of model projects), which is requested by the Philippine side, it is desirable that experts are effectively dispatched in areas such as construction management, structural design, maintenance and cost planning.

Philippines

The National Center for Transportation Studies

Project Sites

Quezon

1. Background of Project

Owing to the increasingly worsening transportation situation in the Philippines, Japan implemented the "Traffic Transportation Center (TTC)" project-type technical cooperation for seven years from April 1977 at the national University of the Philippines as technical cooperation for the Department of Transportation and Communications of the Government of the Philippines. Later, the Government, based on the results of the project and using the TTC as a core, decided to establish a National Center for Transportation Studies (NCTS) that possesses advanced research and educational functions in addition to training functions for government employees. In response, Japan implemented project-type technical cooperation for an initial period of five years starting in April 1992 aimed at strengthening NCTS's functions.

Later, Japan carried out follow-up cooperation for two additional years in order to further assist the Philippine side's self-help efforts in four areas: establishment of advanced training courses; development of a database of information in the field of transportation; strengthening of the research system; and improvement of the quality of instructors.

2. Project Overview

(1) Period of Cooperation

1 April 1992-31 March 1997
1 April 1997-31 March 1999 (Follow-up cooperation)

(2) Type of Cooperation

Project-type technical cooperation

(3) Partner Country's Implementing Organization

Department of Transportation and Communications

(4) Narrative Summary

1) Overall Goal

To contribute to the development of human resources and the improvement of research activities in the field of transportation in the Philippines.

2) Project Purpose

To sustainably cultivate transportation experts at NCTS.

3) Outputs

a) To establish advanced training for personnel involved in policy planning.
b) To improve transportation and traffic information services.
c) To promote study and research on general transportation policy.
d) To develop instructors to teach master's courses and to improve their abilities.

4) Inputs

Japanese Side

Long-term experts	7
Short-term experts	9
Equipment	28 million yen
Local cost	15 million yen

Philippine Side

Counterparts	29
Enlargement of facilities	3 million yen
Local cost	12 million pesos (approx. 38 million yen)

3. Members of Evaluation Team

Team Leader:
Mr. Takeshi KUROKAWA, Professor, Graduate School of Science and Engineering, Tokyo Institute of Technology

Graduate School Education:
Ms. Akiko USHIJIMA, Unit Chief, International Affairs Planning Division, Science and International Affairs Bureau, Ministry of Education, Science, Sports and Culture

Advanced Training:
Mr. Hideo MATSUDA, Deputy Director, City Planning Division, City Bureau, Ministry of Construction

Evaluation Planning:
Mr. Yoshiro SUGINO, First Technical Cooperation Division, Social Development Cooperation Department, JICA

Evaluation Survey:
Mr. Akira MATSUMOTO, IC Net Ltd.

4. Period of Evaluation

24 November 1998-2 December 1998

5. Results of Evaluation

(1) Efficiency

In this project, a domestic assistance mechanism was established in which the Japanese government and academia (the Ministry of Construction, the Ministry of Education, Science, Sports and Culture and university representatives) collaborated. This has enabled cooperation to take place for the Philippines on both research and business practice levels, and the results of the cooperation have been all the more effective. Furthermore, third country training program, implemented at the National Center for Transportation Studies (NCTS) (FY1993-FY1997), has also provided a suitable opportunity to inspire counterparts through exchanges of information with overseas transportation experts. The in-house seminars at the NCTS have also produced a friendly rivalry among instructors and students that has been instrumental in increasing the capacity of each individual. As a result, this project has been extremely efficient, effectively building ties with relevant Japanese domestic organizations and liaising with JICA's other types of cooperation.

(2) Effectiveness

So far, NCTS has produced a total of 30 masters (six students completed the master's course in March 1998) in transport engineering and transport planning. Owing to this proliferation of gifted alumni, there is now a larger stock of talented young people able to propose policy recommendations. This project is judged to have achieved the project purpose of substantially cultivating transportation experts at the NCTS. NCTS is holding advanced training courses with participants from Central Government ministries and agencies as well as local government offices, and is running numerous local seminars.

(3) Impact

NCTS is making advances in the provision and exchange of information in this field through the improvement of library facilities and the establishment of a website, as well as other means. In addition to the construction of this information network, NCTS is padding along to society the fruits of its studies and research through the publication of study and research results and the recommendation of policies for improving traffic environment and analysis of traffic accidents. It is expected that through the holding of local seminars, the impact of the project will spread across the whole country and thereby bring about the continued improvement of the traffic situation in the Philippines.

Moreover, the Transportation Science Society of the Philippines and the Eastern Asia Society for Transportation Studies were established and as a result of their bases being located at NCTS, it is increasingly probable that they will perform a pivotal function for ASEAN in this area of transportation in the future.

(4) Relevance

The increase in volumes of traffic brought about by economic development has resulted in increased national needs for engineering research and training of engineers. This project is highly valid because it addresses these needs.

(5) Sustainability

In 1993, the NCTS formally became part of the National Engineering Center of the University of the Philippines, and it is expected to become a university department with newly established undergraduate and doctor's courses by 2002. Moreover, as stated above, by playing a central role in the Transportation Science Society of the Philippines and having established an international standing for itself as a research center in this field, NCTS is considered to have high organizational and technical sustainability.

Support from the University of the Philippines and the establishment of an independent foundation have served to help secure funds, and financial sustainability is also judged to be high.

6. Lessons Learned and Recommendations

(1) Lessons Learned

The assistance mechanism involving both the Japanese Government and academia enables a project to work with the partner country on both research and practical business levels. This makes the cooperation all the more effective, and a great ripple effect can be expected.

Philippines

The Project on Enhancing Vocational Training

Project Sites

Metro-Manila

1. Background of Project

In the early 1990s, in addition to frequent natural disasters, the national economy of the Philippines was sluggish, beset by economic problems such as accumulated debt, shortage of foreign currency, high unemployment rates and rising prices. The Government of the Philippines set the alleviation of poverty, the remedy of the economic gap between urban and rural areas, the increase of national production, the creation of employment opportunities and the sustaining of the economic growth as priority targets for national development. Creating employment opportunities was the most important issue on the agenda. In 1991, the unemployment rate was 10.6%, and when the underemployment rate at that time is added, this figure balloons to over 30%. The increased number of unemployed persons could only threaten political and social stability.

Under these circumstances, the Government of the Philippines had made efforts to expand new employment opportunities through the promotion of the manufacturing industry, and in order to improve the level of laborers' skills has actively aimed to expand vocational training both qualitatively and quantitatively. As part of these efforts, the Government of the Philippines requested project-type technical cooperation from Japan with the goal of improving the vocational training system managed by the Technical Education and Skills Development Authority (TESDA).

2. Project Overview

(1) Period of Cooperation

1 April 1994-31 March 1999

(2) Type of Cooperation

Project-type technical cooperation

(3) Partner Country's Implementing Organization

Technical Education and Skills Development Authority (TESDA)

(4) Narrative Summary

1) Overall Goal

To improve the capacity of vocational training institutions in the Philippines.

2) Project Purpose

To increase the capacity of the Institute of Vocational Training and Development to implement vocational training in line with the Training Management Cycle (TMC)[1].

3) Outputs

a) To conduct training trial for managers and trainers.

b) To improve vocational training courses.

4) Inputs

Japanese Side

Long-term experts	15
Short-term experts	16
Trainees received	16
Equipment	240 million yen
Local cost	30 million yen

Philippine Side

Counterparts	20
Office	
Construction of management and training facilities	14.4 million pesos (approx. 46 million yen)
Local cost	7.36 million pesos (approx. 24 million yen)

3. Members of Evaluation Team

Team Leader:

Mr. Nobuto OKUMURA, Deputy Director, Overseas Cooperation Division, Human Resources Development Bureau, Ministry of Labour

Training Management:

Mr. Tomohiro UCHINO, Vocational Training Specialist in charge of Technical Cooperation, Overseas Cooperation Division, Human Resources Development Bureau, Ministry of Labour

Curriculum and Teaching Materials Development:

Mr. Shoji KAKEMIZU, Senior Advisor, International Cooperation Division, Human Resources Development Guidance Department, Employment Promotion Corporation

Training Course Development:

Mr. Toru YATSUZAKI, Associate Professor, Kitakyushu Polytechnic College, Employment Promotion Corporation

Evaluation Planning:

Mr. Yoshiro SUGINO, First Technical Cooperation Division,

Social Development Cooperation Department, JICA
Evaluation Analysis:
Mr. Akira MATSUMOTO, IC Net Ltd.

4. Period of Evaluation

19 October 1998-30 October 1998

5. Results of Evaluation

(1) Efficiency

The content of this project included the introduction and application of new software called the Training Management Cycle (TMC) to help improve vocational training abilities. For Japan's technical cooperation in the vocational training field, this type of cooperation was new and different from traditional cooperation in hardware technology. For this reason, at the start of the cooperation, it was a continuous process of trial and error. However, since a project steering committee in which there were active discussions between the Japanese side and the Philippine side regarding action plans and operations, was established at the start of the project and since there were high levels of willingness and enthusiasm from counterparts, the technology was transferred as planned for the most part.

(2) Effectiveness

The counterparts have come to understand the basic objectives of TMC, and a TMC model well suited for the Philippines was developed. The counterparts planned seminars under the guidance of experts and trained several hundred managers and trainers from local vocational training centers. At present, counterparts are able to more or less independently develop curricula and teaching materials for the training of managers and trainers. In addition, the development ability of various training courses has improved. It can be said that the project purpose has been achieved.

(3) Impact

At present, the TMC method is disseminating and becoming established beyond the project throughout the Philippines. With the distribution of the TMC introductory video and educational materials developed under this project and the dissemination of the TMC method by vocational training center trainers in each region, TMC is being disseminated throughout the country, and is expected to contribute to improvements in the quality of vocational training in the Philippines.

(4) Relevance

Human resources development remains the most important policy today for contributing to the priority targets for national development such as the alleviation of poverty, the remedy of the economic gap between urban and rural areas, the creation of infrastructure for economic development and the creation of employment opportunities. In order to achieve the policy goal of human resources development, the development and improvement of the vocational training system are immediate tasks, and thus this project is extremely relevant.

(5) Sustainability

There are no particular problems with organizational, personnel and technical aspects. As for financial considerations, the overall fiscal situation of the Philippines cannot be viewed very optimistically. However, since liaisons with the private sector aimed at securing independent funding are under consideration, there seems to be potential for securing funds for operation.

6. Lessons Learned and Recommendations

(1) Lessons Learned

This project involved a new type of cooperation that was different from traditional cooperation. Through this project it was learned that meticulous preparation at the planning stage is important in order to transfer to a partner country, in a limited period of time, technology that is still being established in Japan.

(2) Recommendations

The functions of the TESDA should be strengthened further and strong leadership demonstrated in order for the TMC method to spread and be applied throughout the Philippines.

[1)] TMC (Training Management Cycle) is a program (software) that attempts to put together an effective and efficient vocational training implementation system through the following process:

Training needs survey-> Training planning-> Development of teaching materials-> Training implementation-> Evaluation

Philippines

The Science and Mathematics Education Manpower Development Project

Project Sites

Metro-Manila

1. Background of Project

Advances in industry are indispensable for sustainable economic growth. However, in the Philippines, the human resources that support these advances were extremely lacking, and the need to improve science and mathematics education at the primary and secondary levels was considered as one of the country's top priority issues. To this end, in FY1988, Japan cooperated in the effort by providing grant aid to establish the Science Teacher Training Center (STTC) within the University of the Philippines. The Government of the Philippines subsequently made a request to Japan for project-type technical cooperation to improve the functions of the STTC.

This project is considered to be the core of the "Package Cooperation on Improvement of Education in Science and Mathematics at the Primary and Secondary Levels in the Philippines," a comprehensive cooperation approach that effectively combines various forms of cooperation, such as individual experts (December 1995-December 1997: coordination with, advice to and guidance for the Department of Education, Culture and Sports for all areas of the Package Cooperation), Country-Focused Group Training Course (FY1993-FY1997: training in areas of education administration), grant aid (FY1989-FY1997: to provide STTC facilities and equipment, and provide elementary and secondary school facilities and equipment) and Japan Overseas Cooperation Volunteers (12 science and mathematics teachers, from July 1994 to the present: giving guidance to science and mathematics teachers in elementary and secondary schools under the regional model science and mathematics educations centers).

2. Project Overview

(1) Period of Cooperation

1 April 1994-31 May 1999

(2) Type of Cooperation

Project-type technical cooperation

(3) Partner Country's Implementing Organization

Department of Education, Culture, and Sports; Department of Science and Technology; University of the Philippines Science Teacher Training Center (STTC)

(4) Narrative Summary

1) Overall Goal

To improve the capabilities of elementary and secondary school science and mathematics teachers in the Philippines.

2) Project Purpose

To improve the STTC's capabilities for training elementary and secondary school science and mathematics teachers.

3) Outputs

a) To develop a training program curriculum and teaching materials for education leaders in science and mathematics.

b) To hold training courses for science and mathematics education leaders from all over the country is held at STTC.

c) To develop a training program curriculum and teaching materials for science and mathematics teachers.

d) To hold training courses for science and mathematics teachers at three regional model science and mathematics education centers.

4) Inputs

Japanese Side

Long-term experts	15
Short-term experts	24
Trainees received	18
Equipment	approx. 114 million yen

Philippine Side

Counterparts	105-117 each year
Facilities	
Local cost	91 million pesos (approx. 286 million yen)

(STTC budget of 72 million pesos, plus 19 million pesos in the form of the government's budget for foreign aid projects.)

3. Members of Evaluation Team

Team Leader:

Mr. Ikufumi TOMIMOTO, Development Specialist, JICA

Science Education:

Mr. Norikazu OSUMI, Professor, Kyoto University of Education

Mathematics Education:
Mr. Shizumi SHIMIZU, Assistant Professor, Tsukuba University
Evaluation Planning:
Mr. Akira NAKAYAMA, 1st Regional Division, Planning Department, JICA
Education Administration:
Mr. Narietsu TAKEHARA, 1st Experts Assignment Division, Experts Assignment Department, JICA
Central Training:
Mr. Naoki UMEMIYA, 1st Development Study Division, Social Development Study Department, JICA
Evaluation Analysis:
Mr. Shoko YAMADA, Project Manager, Global Link Management, Co., Ltd.

4. Period of Evaluation

30 November 1998-12 December 1998

5. Results of Evaluation

(1) Efficiency

This project was established as part of a package cooperation combining dispatch of individual experts, country-focused group training course, grant aid and dispatch of Japan Overseas Cooperation Volunteers. This was the first such package cooperation. The support mechanism in Japan functioned well and the timing of dispatch of experts was appropriate.

Within the Philippines, due to the fact that there were a wide variety of institutions with interest in the project, much time and efforts were spent on coordination among them. However, on the Philippine side there was a high degree of interest in the project, and during the period of cooperation sufficient budgetary measures were taken.

(2) Effectiveness

At the STTC, teacher trainers in science and mathematics gather from all over the country to implement training. When studying the pre-participation and post-participation test scores of the participants, it was found that the participants' scores improved in all subjects and exceeded expected standards. The project purpose to improve the STTC's training capabilities for elementary and secondary school science and mathematics teachers has been achieved.

(3) Impact

Under this package cooperation, the training program has been extended from the regional level to the local level through the activities of the Japan Overseas Cooperation Volunteers, thereby making a contribution to the improvement of the capabilities of elementary and secondary school science and mathematics teachers actively engaged in teaching. In addition, through these local level activities many requests for training of teachers have been received from schools and from overseas, and teacher-training programs have been implemented in response. This also represents an impact of this project. By the inclusion of this project in the package cooperation, it can be expected that the results of the cooperation will continue to be disseminated into the future.


Training on the use of teaching materials

(4) Relevance

This project is highly relevant because the government's priority on the improvement of science and mathematics in elementary and secondary schools continued to be high and the STTC's place in that policy remained unchanged at the time of the evaluation.

(5) Sustainability

The Government of the Philippines is acutely aware that the improvement of science and mathematics education is an urgent task for national development, and political support will continue to be given to this project. However, when the period of cooperation comes to a close, the special budget measures for foreign aid projects will be terminated. Efforts are being continued to ensure the budget for implementation of training.

6. Lessons Learned and Recommendations

(1) Lessons Learned

In projects such as this one where centrally achieved training results are expected to be passed along to a regional level and then to the workplace, it is important that a system is created whereby model regions with suitable scales and scopes are established, activities in them are evaluated and results are fed back into training at the central facility.

Singapore

Intelligent Systems for Management Information Systems Managers

Project Sites

Singapore

1. Background of Project

In the Asia-Pacific region, advanced information processing (intelligent) systems are being introduced, but are still in their initial stages. In Singapore, intelligent systems have shown remarkable development in recent years. In addition, the Japan-Singapore Artificial Intelligence Center (JSAIC) was established in 1989, and since then until 1995, Japan's project-type technical cooperation had been implemented and made a contribution to the development of these fields.

Against such a backdrop, the Government of Singapore, with the aim of transferring the results of this technical cooperation to neighboring countries, and under the Japan Singapore Partnership Program[1)], requested the implementation of this training program.

2. Project Overview

(1) Period of Cooperation

FY1995-FY1999

(2) Type of Cooperation

Third country training program

(3) Partner Country's Implementing Organization

Japan-Singapore Artificial Intelligence Center (JSAIC)

(4) Narrative Summary

1) Overall Goal

To promote the use of intelligent systems in the Asia-Pacific countries.

2) Project Purpose

For trainees from the Asia-Pacific countries to acquire knowledge and technologies related to intelligent systems.

3) Outputs

a) Understanding of the types of intelligent technology used in the market at present.

b) Understanding of the conditions of use and how to make use of intelligent systems in each industry's field are understood.

c) Understanding of the methods of practical use and development of intelligent technology are understood.

4) Inputs

Japanese Side

Short-term experts	7
Training expenses	34 million yen

Singaporean Side

Lecturers	35
Training facilities, equipment and teaching materials	
Training expenses	

3. Members of Evaluation Team

JICA Singapore Office
(Commissioned to Applied Research Corporation)

4. Period of Evaluation

28 December 1998-31 March 1999

5. Results of Evaluation

(1) Efficiency

Through a high level of training management capabilities, its own computer facilities and favorable cooperation with related organizations at JSAIC, the training was efficiently implemented. In particular, many trainees had pointed out that the duration of the training was too short, and the 21-day training period from the first year of training was extended over five days from the second year onwards. Such demands made by the trainees were dealt with in an flexible manner in order for trainees to enhance their understanding regarding the technology, making the training even more efficient.

On the other hand, because of the insufficient capabilities in the English language used in training and the lack of work experience among trainees, some of them could not fully digest the contents of the training.

(2) Effectiveness

Over four training courses up to FY1998, when this evaluation was conducted, a total of 80 information technology administrators (with more than two years of practical work experience) from 20 countries in Asia-Pacific region participated in the training. Through the training, the trainees understood

and acquired the types and methods of use, development and application of intelligent technology. Thirty-four of the 36 ex-trainees who responded to the questionnaire said that the content of the training was appropriate, and 20 said that the training was beneficial. The 42 organizations to which these ex-trainees belong replied that they were satisfied with the results of the training. Therefore, the effectiveness of this training program was high.

(3) Impact

After returning to their home countries, the trainees have capitalized on their training results in such areas as the improvement of computer systems and the introduction of intelligent systems to the organization to which they belong. However, because the countries that the participating trainees were from differed greatly in computer facilities and dissemination conditions and the current situation of use of information technology, there were also trainees who could not capitalize on the results of their training due to a lack of facilities in their own countries.

(4) Relevance

All 42 organizations to which ex-trainees belong that responded to our questionnaire survey desired a continuation of the training course. The needs for the training course are high. There is high potential for future development and the range of areas to which such technology can be applied is very wide, especially in regard to intelligent systems, because the countries that participated in this training are still in the early stages. Therefore, the training program is highly relevant.

(5) Sustainability

The training implementation capabilities of JSAIC is high, and the expertise from Japan's implementation of third country training program has been thoroughly obtained. Therefore, the sustainability of JSAIC is high.

6. Lessons Learned and Recommendations

(1) Lessons Learned

In order to select trainees who are well qualified, a list of entrance requirements for applicants, along with a rigorous selection process, is necessary. Also, in regard to the planning of the third-country training program, from the standpoint that the trainees effectively capitalize on the technology they acquired through training, not only do the needs of the participating countries need to be addressed, but the technical level of the areas concerned and the current conditions of the facilities must also be considered.

(2) Recommendations

The continuation of this training program is strongly desired by the participating countries. It is hoped that this training program will continue henceforth, after devising training contents whereby the results of such training can be put to practical use in each country, through the implementation of training courses that are divided depending on the technical level of each country, or training that is one training course, but for which the technical level of the contents is differentiated.

A class using a projector

Announcement of the study results of trainees from the Philippines

7. Follow-up Situations

Based on the above recommendation, this training program was extended until FY2000.

[1)] Since January 1996, Singapore has switched over to Part II of the Development Assistance Committee's (DAC) Developing Countries list. In order to promote Singapore as a donor country and South-South Cooperation, Japan and Singapore concluded this program in January 1994. This incorporated the expansion of third country training programs, with Singapore and Japan each sharing 50% of the expenses of third country training programs, with the Singaporean side to bear all expenses by 2000, among other terms.

Singapore

The Koban System of Japan and Its Adoption as the Neighborhood Police Post System

Project Sites

Singapore

1. Background of Project

As a result of rapid industrialization, Singapore experienced the deterioration of its social environment since the early 1980s. While introducing the Japanese police box system, Singapore modified it to suit the needs of its society and established the Neighborhood Police Post system. Police activity is carried out according to the philosophy of community policing, and the creation of one of the safest countries in the world is taking place.

Of the Asia-Pacific countries, there are many which are currently either introducing the police box system or deliberating introducing it. This training program was requested under the Japan Singapore Partnership program[1)] so that trainees from these countries learn in Singapore, where there is much general know-how concerning the establishment and spread of the system, about Japan and Singapore's police box systems, and the example of Singapore's introduction and improvement of the police box system, and to use it to build a safer society.

2. Project Overview

(1) Period of Cooperation

FY1995-FY1999

(2) Type of Cooperation

Third country training program

(3) Partner Country's Implementing Organization

Singapore Police Force (SPF)

(4) Narrative Summary

1) Overall Goal

To secure public peace in the Asia-Pacific countries.

2) Project Purpose

For trainees from Asia-Pacific countries to acquire skills and knowledge about the police box system and its applications.

3) Outputs

a) Both the Japanese and Singapore police box systems and their management and operation methods are understood.

b) Singapore's introduction of Japan's police box system and its improvements are learned.

4) Inputs

Japanese Side

Short-term experts	10
Training expenses	45 million yen

Singaporean Side

Lecturers	6
Training facilities, equipment, teaching materials	
Training expenses	

3. Members of Evaluation Team

JICA Singapore Office
(Commissioned to Applied Research Corporation)

4. Period of Evaluation

28 December 1998-31 March 1999

5. Results of Evaluation

(1) Efficiency

Due to the high level of training management ability of the SPF, the cooperation of Japan's National Police Agency, which accepted trainees, and good liaison with other relevant entities, the training program was implemented in a very efficient manner. In the first year of training, FY1995, the Japanese and Singaporean sides bore 50% each of the training's expenditure costs. After that, the costs for the Singaporean side were gradually increased every year, and by the last year of the program, FY1999, the Japanese side paid 16% and the Singaporean side paid for 84% of the costs. The fact that both Japanese and Singaporean sides were able to suitably secure the training management funds also contributed to the implementation of efficient training.

There were disparities among the trainees in their English ability (language used in the training), and extent of job experience, and a few of them could not fully digest the contents of the training. However, about 70% of the ex-trainees who responded to a survey said that the lecture content was clear, and the duration of the training (each session was 10 to 13 days) was also appropriate, showing that this training was

concentrated and highly effective in a short period of time.

In particular, the training consists of a 10-13 day training in Singapore, to which one week of training in Japan was added from FY1996, and through the understanding of both Japan's and Singapore's police box systems, its content has become even richer.

(2) Effectiveness

As of the time of evaluation in FY1998, four training sessions have been carried out, and a total of 79 executive police officers from 23 countries of the Asia-Pacific region completed the training. Through this training, the trainees learned about Japan's and Singapore's police box systems, the state of their respective contributions to the community, management and operation methods of police boxes and the system's introduction and modification process in Singapore, among other things. Thirty of the 38 ex-trainees that responded to the survey said that the training was very beneficial and adequate, and that the educational value was high. Also, 40 of the 41 organizations to which the ex-trainees belong responded to the survey and said that they were satisfied with the results of the training, indicating that the training was highly effective.

(3) Impact

After returning to their home countries, many trainees have made active use of the knowledge acquired through the training to prepare plans for future regional police activities and the introduction of the police box system in their own countries. There are also cases where ex-trainees have gone on to be put in charge of the introduction of the police box system and cases where the police box system has actually been introduced in parts of their own countries.

(4) Relevance

Thirty-nine of the 41 organizations to which ex-trainees belong that responded to our survey hope to continue to dispatch personnel to this training program. There is a great need for such training in neighboring countries, and it would be very relevant to continue this training in Singapore, which was successful in the practical application of the police box system.

(5) Sustainability

The training implementation capability of the SPF is very high, and it has sufficient know-how obtained through the implementation of Japan's third country training program. In this field, Singapore has grown from the "learning side" to the "teaching side," and this training program is highly sustainable.

6. Lessons Learned and Recommendations

(1) Lessons Learned

In order to choose the trainees who best meet the qualification requirements, it is necessary to make the application guidelines more exact and conduct more rigorous screening.

(2) Recommendations

As the continuation of this training is strongly desired by the countries that participated in the training, it would be preferable to continue it.

An opening ceremony

Trainees

7. Follow-up Situations

In response to the above recommendation, this training program has been extended until FY2000.

Thailand

Sustainable Agricultural Production in the Tropics

Project Sites

Kamphaengsaen

1. Background of Project

Both Japan and Thailand utilized their experience in development to support economic development in least developed countries (LDCs) such as those of Indochina by signing the Japan-Thailand Partnership Program in Technical Cooperation in August 1994, and Japan has implemented cooperation programs starting with the third country training program. At the Forum for Comprehensive Development of Indochina held in February 1995, discussions were held on the scheme of various countries cooperating to stabilize and develop the Indochina region, and Thailand announced that it has intentions to cooperate as much as possible for the development of the aforementioned region.

With this background, in 1995 Thailand requested a training program from Japan to assist agricultural development in the Indochina region by aiming to transfer sustainable agricultural production technology.

2. Project Overview

(1) Period of Cooperation

FY1995-FY1999

(2) Type of Cooperation

Third country training program

(3) Partner Country's Implementing Organization

Kasetsart University National Agricultural Extension and Training Center

(4) Narrative Summary

1) Overall Goal

To promote sustainable agriculture in Cambodia, Laos, and Viet Nam that takes into consideration the resources and environment.

2) Project Purpose

For trainees of Cambodia, Laos, and Viet Nam to acquire the knowledge and technology of sustainable agricultural production.

3) Outputs

a) For trainees to understand the necessity of sustainable agriculture.

b) For trainees to study the production resources and environmental conservation technology.

c) For trainees to understand the agricultural and rural development methodology to carry out sustainable agriculture.

d) For trainees to understand policy measures to carry out sustainable agriculture.

4) Inputs

Japanese Side

Short-term experts	3
Trainees received	1
Training expenses	11 million yen

Thailand Side

Training facilities	
Training expenses	2.388 million baht (approx. 8 million yen)

3. Members of Evaluation Team

Team leader/Agricultural Production and Extension:
Mr. Koji YAMANAKA, Development Specialist, JICA

Training Planning:
Mr. Nobuki KOJIMA, Instructor, Tsukuba International Center, JICA

Agriculture/Evaluation Analysis:
Mr. Akira MATSUMOTO, IC Net Ltd.

4. Period of Evaluation

27 January 1999-13 February 1999

5. Results of Evaluation

(1) Efficiency

The structure of this training implementation was well set up, and the training itself was managed and implemented smoothly. The training materials and the curriculum were in line with the respective situations of training participating countries. The quality and quantity of the human resources and training equipment invested in this training were adequate, and the efficiency of this program was high. However, the trainees' English proficiency, as well as their education and working experience varied from person to person, and there was room

for improvement regarding the selection of them.

(2) Effectiveness

According to a questionnaire survey conducted, collaboration among related organizations was sound, and thanks to an able team of instructors, suitable training materials and the arrangement of training subjects, trainees fully understood and acquired techniques for sustainable agricultural production, thus making the effectiveness high.

(3) Impact

After having returned home, the trainees have been working in related areas in their home countries and contributing directly to the development of sustainable agriculture. However, due to insufficient budget and textbooks in their native languages, there is the possibility that the dissemination of knowledge and technology gained through this training program and the trainee's activities will be limited.

(4) Relevance

Based on the fact that the three countries of Indochina have issues of worsening environment, forest destruction, and deterioration of soil, and independent training programs concerning sustainable agricultural production is not being carried out, the demand for this training program are high. The content of the training is in line with the development policy of each respective country, and this training has a high level of relevance.

(5) Sustainability

Kasetsart University's National Agricultural Extension and Training Center, an implementing organization of this training program, is one of the best training centers in Thailand. The sustainability of this program is high in the organizational, operational, and technological aspects because of its facilities and capacities to implement a high-quality training program. Although the Center is expressing its intent to continue this program, due to the fact that there has been a decrease in the share of training cost on the Thailand side from 30% to 15% as a result of the economic crisis that struck Thailand, the independent continuation of this training program by the Thai side will be financially constrained.

6. Lessons Learned and Recommendations

(1) Lessons Learned

There is room for improvement in the selection of trainees in order to efficiently implement training program. Furthermore, it is important to make the curriculum more flexible so that it corresponds with the competence of the trainees.

The establishment of an information network that incorporates the ex-trainees and their organization is deemed necessary so that the trainees will be able to receive technological and physical support after having returned home.

(2) Recommendations

This training program was implemented efficiently and its effects are being manifested. However, considering that vast need in the countries of Indochina still exists for this kind of training and Thailand's tight financial situation, cooperation should be continued even after the five-year period of cooperation under the original plan is completed.

Participants enjoy a lively exchange of views even during class

Students on a study tour receiving an explanation from Thai instructors

Thailand

Enhancing Women's Role in Rural Development

Project Sites

Kamphaengsaen

1. Background of Project

Women play a large role in agricultural production in many Asian countries, where it is important to give consideration to the role that women play in rural development. Based on that, it is desirable to promote female participation in society by reducing the labor burden of the women in rural villages and by generating a cash income. With this backdrop, this training program for women from Asian rural villages was implemented with the goal of improving rural life by developing their abilities and improving agricultural technology.

2. Project Overview

(1) Period of Cooperation

FY1995-FY1999

(2) Type of Cooperation

Third country training program

(3) Partner Country's Implementing Organization

Kasetsart University National Agricultural Extension and Training Center

(4) Narrative Summary

1) Overall Goal

To improve the lives of women and farmers in Asian countries through the dissemination of agricultural technology to the women in rural areas.

2) Project Purpose

For trainees from Asia to acquire the knowledge and technology for the dissemination of agricultural technology targeting women in rural areas.

3) Outputs

a) To acquire the knowledge and technology for the improvement of agricultural technology utilizing local resources.

b) To obtain the knowledge and technology for organizing women in rural areas and accelerating that process.

c) To acquire the knowledge and technology related to methods of disseminating agricultural technology targeting women in rural areas.

4) Inputs

Japanese Side

Short-term experts	5
Trainees received in Japan	2
Training expenses	3.658 million baht (13 million yen)

Thai Side

Instructors	
Training equipment	
Training expenses	2.277 million baht (8 million yen)

3. Members of Evaluation Team

Team Leader and Training Planning:

Ms. Sae ETO, Part-time Lecturer, National Rehabilitation Center for the Disabled

Role of Women:

Ms. Satoko KURATA, Environment, WID and Other Global Issues Division, Planning Department, JICA

4. Period of Evaluation

24 March 1999-3 April 1999

5. Results of Evaluation

(1) Efficiency

While a total of five short-term experts from Japan were dispatched as training instructors, two female extension leaders from Kasetsart University's National Agricultural Extension and Training Center, the training implementing organization, were received for training in Japan. As a result, the operation and implementation went smoothly for the most part. However, there were several trainees who did not meet the qualification for the program, thus restricting the smooth implementation of the training.

(2) Effectiveness

During this training program, a four-year period between FY1995 and FY1998, 75 trainees acquired the knowledge and technology regarding utilization of local resources, organization of women in rural areas and methods of dissemination of

agricultural technology to the women in rural areas. Because the present situation and the technical level of the Thai rural areas were similar to those of the participating countries, the effectiveness of technology transfer to the trainees was high.

(3) Impact

The knowledge and technology that were transferred through this training program can be applied to practical activities in the trainees' home countries. However, the extent of the application of the knowledge and technology are varied depending upon the occupations of the ex-trainees, and the securing of equipment and budget of their home countries. Through the future implementing of a follow-up survey of the ex-trainees, the overall evaluation of this training program will be determined.

(4) Relevance

The women were supposed to be in charge of half of the production and living activities in the rural areas, but there was a tendency for their roles to be overlooked. In order to lead the future agricultural development to success, it is indispensable that the women's capabilities are developed and that their technology is improved. This necessity has been acknowledged internationally in the International Women's Year in 1975 and following in the United Nations Decade for Women.

The two sample surveys carried out in Thailand and Cambodia showed that the need for human resources development of the women in rural areas in various Asian countries is still very high.

(5) Sustainability

Kasetsart University's National Agricultural Extension and Training Center, the implementing organization for this training, has a well-established system for training implementation in terms of the organization and its human resources. The level of sustainability from here on is expected to be high.

6. Lessons Learned and Recommendations

(1) Lessons Learned

Because some of the participants of the training program did not satisfy the qualification for the program, it had some effects on the efficient implementation of the training. For third country training, it is necessary to fully grasp through the surveys taken in advance, the level of the people who want to participate in the training program, and to review, in a flexible manner, the qualification requirements so that they reflect the actual circumstances.

(2) Recommendations

It is necessary to monitor how the technology that the trainees acquired through this training is being used after they return to their home countries, and to make the effects and problems clear. In addition, there is also a need from now on, to consider implementing JICA's in-country training program in Thailand due to the extremely large number of Thai people who desired to participate in this training program.

A lecture in progress (lecture by Dr. Chaiskran on gender)

Trainees enthusiastically taking in a lecture

Thailand

Development of Construction Technology for Low-Cost Housing

Project Sites

Bangkok

1. Background of Project

In Thailand, rapid economic development in recent years was accompanied by a construction boom that was especially evident in the metropolitan area of Bangkok. This situation made a variety of problems more apparent, including sudden rises in the cost of land prices, building materials and personnel expenses, a lack of manpower and construction delays. Despite the fact that average floor space shrank, the gap between supply and demand continued to expand, as housing prices skyrocketed and ordinary housing was moved to areas far away from the city center.

Under these circumstances, Japan implemented this project aiming at the development of pre-fab technology, for the National Housing Authority (NHA) of Thailand, an organization supplying housing for low-income people in Thailand, in order to construct apartment complexes at low cost and over a short time period.

2. Project Overview

(1) Period of Cooperation

1 November 1995-31 October 1998

(2) Type of Cooperation

Expert team dispatch program

(3) Partner Country's Implementing Organization

National Housing Authority (NHA)

(4) Narrative Summary

1) Overall Goal

To promote the provision of lower-cost housing by the NHA.

2) Project Purpose

To develop pre-fab technology to construct apartment complexes at low cost and over a short time period.

3) Outputs

a) Ideas for pre-fab structure and design for constructing apartment complexes at low cost and over a short time period.

b) Materials that match the design in a) are developed.

c) Model housing based on the results of a) and b) is constructed.

4) Inputs

Japanese Side

Long-term experts	1
Short-term experts	12
Trainees received	8
Equipment	24 million yen

Thai Side

Counterparts	24
Land and buildings	
Local cost	

3. Members of Evaluation Team

JICA Thailand Office
(Commissioned to Siam System Built Co., Ltd.)

4. Period of Evaluation

1 October 1998-1 November 1998

5. Results of Evaluation

(1) Efficiency

Thanks to the on-schedule dispatch of long-term and short-term experts from Japan and the assignment with highly capable Thai counterparts, technology transfer was smoothly implemented.

However, due to the economic crisis which afflicted Thailand in the midst of this cooperation, the budget of the NHA has been placed under severe pressure, thus necessitating the postponement of the construction of model housing funded by the NHA until budget is allocated.

(2) Effectiveness

The pre-fab technology development that was the purpose of this project was achieved and the technology was widely introduced into Thailand through a seminar on the development of pre-fab construction methods held in 1998. However, the technology is still in the trial stages. In order to put it into practical use, further technology transfer through the construction of model housing is necessary.

(3) Impact

It is hoped that from now on the NHA will put into practical use the technology that has been developed through the construction of model housing and eventually provide low-cost housing.

(4) Relevance

The economic crisis which afflicted Thailand in 1996 had the effect of cooling the demand for housing construction in the country. NHA housing projects are also being delayed. The developed pre-fab construction methods will have a considerable advantage in resolving problems such as steep rises in construction material and personnel costs expected to reoccur in the future, and therefore this project is deemed highly relevant.

(5) Sustainability

The NHA is the only government organization supplying housing for low-income people in Thailand. Due to the fact that the country will continue to experience much demand for the construction of housing, provided that the technology that has been transferred under this project is used to build model housing and reaches the level where it comes into practical use, then this project will be deemed sustainable.

6. Lessons Learned and Recommendations

(1) Recommendations

The NHA should wait until the Thai economy and the NHA's finances recover, and then go ahead with the construction of model housing, which has been delayed under this project. When it does so, it will be necessary for Japan to dispatch experts to provide support on the technical aspects of these activities and consider the training of NHA staff in Japan.

7. Follow-up Situations

As of May 2000, the NHA has allocated budget to cover the costs of the construction of model housing, and in May Japan dispatched long-term experts to provide guidance on the construction of model housing for a scheduled period of one-and-a-half years.

Thailand

Soft Clay Foundation

Project Sites

Bangkok

1. Background of Project

Thailand was a country that depended on road transportation for 80% of its personnel transport and more than 90% of its goods transport, but central Thailand, including Bangkok, was facing serious problems of road instability, consolidation settlement, and damage to pavement surfaces because there is a wide distribution of soft foundations with high water content in the region. Also, since the by-pass construction project of its main roads, the first inter-city highway construction in Thailand, and a new airport project were scheduled in this region, measures to address soft foundation were of top priority.

Against this background, the Government of Thailand requested a joint study with Japan concerning an analysis of the characteristics of soft foundations, reinforcement and improvement techniques, and the formulation of a manual on foundation planning.

2. Project Overview

(1) Period of Cooperation

7 January 1996-6 January 1999

(2) Type of Cooperation

Research cooperation

(3) Partner Country's Implementing Organization

Department of Highways (DOH) of the Ministry of Transportation and Communications, and the Road Research Development Center (RRDC)

(4) Narrative Summary

1) Overall Goal

To disseminate within Thailand developed technology concerning measures to address soft foundation.

2) Project Purpose

To develop appropriate technology to be used in measures to address soft foundation in Thai highway construction.

3) Outputs

a) A database of soft foundation in the central region of Thailand is constructed.

b) Research and development are conducted in order to apply prefabricated vertical drain (PVD) and cement column techniques-representative technologies used in measures to address soft foundation.

c) Developed techniques are used in actual highway construction.

d) Techniques are improved through construction-site monitoring.

e) A manual about the improved techniques is created.

4) Inputs

Japanese Side

Long-term experts	1
Short-term experts	19
Trainees received	7
Equipment	27 million yen

Thai Side

Counterparts	7
Facilities	
Local cost	

3. Members of Evaluation Team

Team Leader:

Mr. Shoshiro HORIGOME, Development Specialist

Evaluation of Soft Foundation Techniques:

Mr. Koichi YAMAMOTO, Deputy-Director General, Public Works Research Institute, Ministry of Construction

Evaluation Planning:

Mr. Isamu IWAMA, Visiting Development Specialist, JICA

Evaluation Analysis:

Mr. Shigeru KOBAYASHI, System Science Consultants, Inc.

4. Period of Evaluation

13 December 1998-19 December 1998

5. Results of Evaluation

(1) Efficiency

Because the purpose of this project was to develop technology for which needs were high in Thailand, there was much enthusiasm and interest on the Thai side, and the project's research and development on appropriate technology was

implemented efficiently.

At the start of the project, two expressways were currently under construction, therefore, the project began at the best possible time to be able to immediately apply techniques developed by the project in actual expressway construction. However, because expressway construction was delayed due to the worsening domestic economic situation in Thailand, project activities were also affected.

(2) Effectiveness

The PVD and cement column techniques developed through the project were both applied to the actual expressway construction, which extends over 130 kilometers.

However, because of the delay in construction due to the worsening economic situation, monitoring of the construction site did not begin until November 1998. Therefore the data has not yet been completely collected. Because the monitoring needs to be implemented for at least two years, the project has therefore not reached the stage of analysis and evaluation to determine the final effects of both techniques. In the future, the monitoring implementation capacities of the Thai side will need to be verified in detail.

(3) Impact

The research results of the project on the PVD technique and the cement column technique were reported and disseminated through seminars to universities and research institutes in Thailand and neighboring countries, as well as to researchers and engineers from private sectors. Furthermore, based on the research results of this project, a joint study project on "Soft Ground Improvement" has been launched by Thailand, Japan, France and Indonesia.

(4) Relevance

Because in Thailand soft foundation is widespread mainly in the central regions, the need for techniques to deal with soft foundation remains great; therefore this project is considered relevant.

(5) Sustainability

The RRDC plans to continue monitoring surveys of construction sites that utilized the developed techniques, but has not reached the technical level where it can conduct analysis and evaluation of the survey results.

6. Lessons Learned and Recommendations

(1) Recommendations

In order to conduct a final evaluation of the developed techniques, it will be necessary to implement two years of monitoring surveys. However, considering the current technical level of the RRDC, it is thought that technical assistance from Japan will be necessary.

Thailand

The Project to Enhance the Capacity of the Faculty of Engineering at Thammasat University

Project Sites

Prathum Thani

1. Background of Project

After the late 1980's the Thai economy experienced rapid growth, but the advances in the industrial sector brought about by an increase in private investment had created a chronic shortage of engineers. Every year, there were 3000 to 4000 new graduates in the engineering field but a demand of 8000 engineers, thus raising concerns that a shortage of engineers would be an obstacle to further growth of the Thai economy.

In order to deal with this situation, the Thai government, as a part of its Seventh National Economic and Social Development Plan (1992 to 1996), adopted the development of human resources in science and technology as a key issue, and planned the establishment of an engineering department in eight national universities and a number of private universities, as a policy for expanding engineering education.

As part of this policy, the Thai government established a Faculty of Engineering at Thammasat University, an institution already renowned in the humanities and social sciences. The government also requested from Japan grant aid, with the objective of establishing educational machinery for the Faculty of Engineering, and project-type technical cooperation aiming to cultivate instructors for the Faculty of Engineering.

2. Project Overview

(1) Period of Cooperation

1 April 1994-31 March 1999

(2) Type of Cooperation

Project-type technical cooperation

(3) Partner Country's Implementing Organization

Ministry of University Affairs and the Faculty of Engineering at Thammasat University

(4) Narrative Summary

1) Overall Goal

The Faculty of Engineering of the Thammasat University becomes one of the leading faculties in the field of engineering in Thailand providing highly qualified engineers and technical services to Thai industry.

2) Project Purpose

To enhance the education and research capability of the Faculty of Engineering.

3) Outputs

a) The Faculty of Engineering acquires capabilities to educate qualified graduates by giving high quality lectures, laboratory/workshops, guidance, and so on, to senior students.

b) Academic staff of the Faculty of Engineering acquire enhanced research capabilities in research with developing institutional and non-institutional academic linkages for research collaboration.

c) The Faculty of Engineering's administrative system is improved and acquires increased efficiency and effectiveness in management and coordination of education and research activities as well as overall management of the Faculty.

4) Inputs

Japanese Side

Long-term experts	17
Short-term experts	62
Trainees received	21
Equipment	258 million yen

Thai Side

Counterparts	83
Facilities	
Local cost	360 million baht (approx. 1205 million yen) (budget for the entire Engineering Faculty)

3. Members of Evaluation Team

Team Leader/Civil Engineering:

Mr. Fumio NISHINO, Professor, National Graduate Institute for Policy Studies/Dean of International Development Graduate School of Policy Science

Electrical Engineering:

Mr. Seishi IIDA, Professor, Nagaoka University of Technology

Production Engineering:

Mr. Ario OSATO, Professor, Nagaoka University of

Technology

Mechanical Engineering:

Mr. Shigeo OSONO, Professor, Tokyo University

Chemical Engineering:

Mr. Kazuo TSUTSUMI, Vice-President of Toyohashi University of Technology

Evaluation Planning:

Mr. Shuichi IKEDA, Deputy Director, First Technical Cooperation Division, Social Development Cooperation Department

Evaluation Analysis:

Mr. Hajime SONODA, IC Net Ltd.

4. Period of Evaluation

19 August 1998-27 August 1998

5. Results of Evaluation

(1) Efficiency

This project appointed one Japanese university for each subject in the Thammasat University Faculty of Engineering (five in total), forming continual cooperation between the Japanese supporting institutions and the individual department of Thammasat. In this way, the project was able to ensure the continuation of the dispatch of experts, and connect with the trainees in Japan, increasing the efficiency of technology transfer to the counterparts.

However, at the start of the project, although there was a capacity for 100 instructors in the five sections, only 44 instructors were hired. This delayed the assignment of counterparts, which was an obstacle to some of the activities of this project.

(2) Effectiveness

Every year, the curriculum and syllabus were renewed and improved with cooperation from the experts. So that the university would be able to hold lectures at the same level as those of industrialized countries, technology transfer was implemented through the enactment of model lectures, which had a great effect on the cultivation of counterparts.

The counterparts acquired a wide range of educational skills at the undergraduate level, but the research abilities necessary to conduct education at the graduate level were observed only occasionally. It is necessary to further improve the capabilities of the counterparts, particularly in the Chemical Engineering Department and the Mechanical Engineering Department, where the recruitment of qualified staff was delayed.

(3) Impact

Through the implementation of this project, the Faculty of Engineering at Thammasat University is providing superior graduates into Thailand's industry as engineers. During the implementation of the project, the degree of difficulty for entry into the Faculty of Engineering increased, as indicated entrance exam scores. It is thought that this was caused by the rising popularity of the university amongst students. Also, academic exchanges between Thammasat University and universities in Japan, as well as cooperation between industry and academia were promoted.

(4) Relevance

Due to the economic crisis, the growth of Thai industry leveled off, and in the 1997 graduates, a decreasing trend in company employment can be seen. However, the needs of Thai industry for human resources in this area are as great as ever, and from a long-term perspective, it is thought that the demand for superior engineers will increase in the future. Therefore, it is judged that, even now, the relevance of this project is high.

(5) Sustainability

In the Faculty of Engineering, the hiring of teachers is being phased in under a plan to fulfill the set number of staff. In addition, the teachers studying abroad continue to return to their home countries. Moreover, acquisition of degrees by studying abroad is encouraged through the Thai government's scholarship system. Thanks to these and other developments, the programs toward eventually having the majority of teachers as doctorate degree holders are being carried out. Moreover, the establishment of a graduate school in each department is being promoted, and along with the progress of these efforts, the fruits of this project are being used in a sustainable way.

6. Lessons Learned and Recommendations

(1) Lessons Learned

The continual and organizational "backup" from the supporting universities in Japan contributed to the effectiveness of this project. In order to implement a project in the field of higher education, it is necessary to establish such a supporting system with Japanese universities.

(2) Recommendations

In two of the Departments, Chemical Engineering and Mechanical Engineering, it was difficult to accomplish the objectives, particularly the those concerning research ability, within the initially expected period. Therefore, it is necessary to implement a two-year follow-up cooperation.

7. Follow-up Situations

In order to increase the research skills of the instructors in the Chemical and Mechanical Engineering Departments, a two-year follow-up cooperation lasting until March 2001 is currently being implemented.

Thailand

The Project for Strengthening of Food Sanitation Activities

Project Sites

Bangkok

1. Background of Project

In response to the increase in demand and advancements in manufacturing process technology, Thailand had been expanding its food industry rapidly. However, manufacturers-mainly small and medium-sized manufacturers-did not always have sufficient knowledge about how to ensure safety and appropriate quality control during the manufacturing process. The consumer's awareness of food safety was also not sufficient.

Based on this, the Government of Thailand, in order to maintain and improve Thai people's health through food safety and quality control, requested Japan for project-type technical cooperation.

2. Project Overview

(1) Period of Cooperation

1 April 1994-31 March 1999

(2) Type of Cooperation

Project-type technical cooperation

(3) Partner Country's Implementing Organization

Ministry of Public Health, Department of Medical Sciences (DMSc), Office of Food and Drug Administration (FDA)

(4) Narrative Summary

1) Overall Goal

To reduce illnesses caused by harmful food products.

2) Project Purpose

To ensure food safety for the consumer.

3) Outputs

a) Food control activities are strengthened.

b) Hygiene management by food manufacturers becomes sufficient.

c) Consumer awareness of food sanitation is enhanced.

4) Inputs

Japanese Side

Long-term experts	11
Short-term experts	34
Trainees received	17
Equipment	346 million yen
Local cost	91 million yen

Thai Side

Counterparts	75
Project Office	
Local cost	67.39 million baht (approx. 226 million yen)

3. Members of Evaluation Team

Team Leader:
Dr. Tsutomu MARUYAMA, Professor, Faculty of Environmental Health Sciences, Azabu University

Deputy Team Leader:
Dr. Akira HASHIZUME, First Medical Cooperation Division, Medical Cooperation Department, JICA

Food Analysis:
Dr. Yukio SAITO, Deputy Director General, National Institute of Health Sciences

Food Sanitation Administration:
Dr. Hirotsugu KIMURA, Deputy Director, Food Sanitation Division, Environmental Health Bureau, Ministry of Health and Welfare

Project Evaluation:
Ms. Takako HARAGUCHI, GlobalLink Management, Inc.

4. Period of Evaluation

27 July 1999-14 August 1999

5. Results of Evaluation

(1) Efficiency

The dispatch of experts was implemented almost as planned, and equipment was appropriate in terms of quality, quantity and timing and was fully utilized. Our counterpart's assignment by the Thai side was also appropriate. The implementing organizations-the DMSc and FDA-used to be distant geographically (now they are located in the same site), and to begin with there was not enough communication between them. But due to the enthusiastic guidance of the experts, as well as other factors, both sides actively communicated with each other and started joint work. As a result, technology was transferred efficiently.

(2) Effectiveness

The proportion of drinking water and milk, the targeted food products for this project, that did not meet safety standards decreased greatly. In the samples for examination, the proportions of products that violated regulations were as follows. Milk decreased from 7.1% in 1993 to 4.7% in 1996, bottled drinking water dropped from 30.9% in 1993 to 12 percent in 1997 and ice fell from 76.9 % in 1994 to 9.1% in 1996.

Also, the enhancement of testing technology was deemed absolutely necessary for the improvement of hygiene control and was adopted by the food manufacturers. Consumers purchased safer products than before by checking the labels and registered marks on the products.

Judging from the above, the project purpose, which was to ensure food safety for consumers, has been achieved.

(3) Impact

The Ministry of Public Health, Ministry of Industry, Ministry of Agriculture and Cooperatives, universities and the private sector have considered systemization and efficient operation of food sanitation programs. As for the guidelines of the food sanitation management system, the formulation of a National Food Safety Plan looks promising.

In addition, as an impact of this project, it is now possible to disseminate food sanitation knowledge and skills from Thailand to other third countries. In the future, the DMSc and the FDA, through the implementation of Japan's third country training program, hope to become training centers in the area of food sanitation in Southeast Asia.

(4) Relevance

In the Eighth National Health Plan, the protection of consumers continues to be a priority issue, and ensuring food safety is the direct responsibility of both the DMSc and the FDA. The goal of this project matches the needs of the consumers in Thailand, and this project is highly relevant even in the present.

(5) Sustainability

The counterparts to whom the technology was transferred are still working, and the laboratory technology is being widely applied. One area of concern is that there is little technological exchange with other departments and private analysis institutions, because in Thailand in general, there is a tendency for individuals and departments which have received technology transfer to monopolize that technology.

6. Lessons Learned and Recommendations

(1) Lessons Learned

In order to build the capacities of the Thai side to a level where it is able to establish and strengthen Good Laboratory Practice (GLP) and transfer the technology of the results of the project to neighboring countries, a further one year of cooperation will need to be considered.

Furthermore, based on the results of the project, it is expected a third country training program will also be applied in this area.

7. Follow-up Situations

Based on the above recommendation, the period of cooperation was extended for one year until March 2000.

Thailand

The National Institute of Animal Health Project Phase II

Project Sites

Lampang, Khonkaen, Bangkok, Thung Song

1. Background of Project

In Thailand the decline in productivity due to domestic animal diseases was a major factor hindering the promotion of livestock breeding. Japan responded to this situation in August 1986 by building the National Institute of Animal Health (NIAH) with grant aid. In December of the same year Japan implemented project-type technical cooperation. Seven years of cooperation through 1993 resulted in the considerable strengthening of the functions of the NIAH, including strengthening of basic diagnosis techniques, development of biological drugs, foot-and-mouth disease diagnosis methods and vaccine improvements.

However, as the diagnosis techniques of local organizations were undeveloped, systematic epidemiological surveys and research activities were not possible at the national level, and epidemic prevention activities involving serious illnesses have not been carried out. Therefore, the Government of Thailand requested Japan to implement the National Institute of Animal Health Project Phase II, which seeks to improve the diagnostic technology of Regional Veterinary Research and Diagnostic Centers (RVRDCs) through the standardization of diagnostic methods and to promote systematic and effective epidemic prevention at the national level.

2. Project Overview

(1) Period of Cooperation

9 December 1993-8 December 1998

(2) Type of Cooperation

Project-type technical cooperation

(3) Partner Country's Implementing Organization

National Institute of Animal Health (NIAH)

(4) Narrative Summary

1) Overall Goal

To prepare an epidemic prevention plan involving Thailand's major livestock diseases.

2) Project Purpose

To standardize and make effective use of diagnosis technology for Thailand's major livestock diseases.

3) Outputs

a) Effective preventive methods for five major diseases (swine fever, brucellosis, tuberculosis, Johne's disease, and arthropod-borne disease) are identified from the scientific perspective.

b) The NIAH establishes diagnosis technology for major livestock diseases, and transfers the technology to three Regional Veterinary Research and Diagnosis Centers (RVRDCs), one each in northeastern, northern and southern Thailand.

c) The NIAH and the RVRDCs provide training and technological guidance to provincial and district veterinarians.

4) Inputs

Japanese Side

Long-term experts	12
Short-term experts	33
Trainees received	25
Equipment	253 million yen
Local cost	73 million yen

Thai Side

Counterparts	121
Research center and center facilities	
Local cost	115 million baht (approx. 385 million yen)

3. Members of Evaluation Team

Team Leader/Livestock Health Research:

Mr. Yasuo MIURA, Director, Department of Biological Products, National Institute of Animal Health, Ministry of Agriculture, Forestry and Fisheries

Infectious Animal Diseases:

Mr. Takafumi HAMAOKA, Head, Laboratory of Epidemiology, Department of Systematic Diagnosis, National Institute of Animal Health, Ministry of Agriculture, Forestry and Fisheries

Non-infectious Animal Diseases:

Mr. Masanori KUBO, Head, Laboratory of Pathological Diagnosis, Department of Systematic Diagnosis, National Institute of Animal Health, Ministry of Agriculture, Forestry and Fisheries

Cooperation Impact:

Mr. Takayuki KURIYAMA, Overseas Technical Cooperation Officer, Technical Cooperation Division, Economic Affairs Bureau, Ministry of Agriculture, Forestry and Fisheries

Evaluation Planning:

Ms. Junko KATSUNISHI, Livestock and Horticulture Division, Agricultural Development Cooperation Department, JICA

4. Period of Evaluation

12 July 1999-25 July 1999

5. Results of Evaluation

(1) Efficiency

Under this project, numerous seminars, lectures and study groups were held, taking special measures to supplement a portion of local expenditures, including those for propagation activities and technology exchange. Knowledge acquisition and skills upgrading were attempted for not only counterparts but also veterinarians and other people who work with animals. In this sense, the project was deemed highly efficient.

However, outstanding counterparts of medium standing on the Thai side were forced to involve themselves in various activities other than those of the Department of Livestock, and could not devote themselves completely to the project's activities. In addition, the economic crisis that broke out in mid-1997 had a direct impact on subsequent budgets of the NIAH and the RVRDCs and this became an obstacle to the research activities and operation of the project.

(2) Effectiveness

Broad research and study on the five major diseases-swine fever, cholera, tuberculosis, Johne's disease, arthropod-borne disease-was carried out and effective prevention methods were clarified from a scientific viewpoint.

In addition, through the creation of standard diagnosis manuals (approved guidelines for illnesses), the consistency and standardization of diagnosis methods at the national level was achieved at the NIAH, and diagnosis technology was established. Transfer of this technology to the RVRDCs was completed and the project purpose was fully achieved.

(3) Impact

The standardized diagnosis technology is also being reflected at farms thanks to the training of technicians of medium standing and dissemination activities. Since diagnosis technology was standardized and effective diagnoses were made possible, the actual conditions of major illnesses became clear and the formulation of prevention plans was made possible.

Through this project, counterparts also developed a sense of responsibility and independence of mind and positive attitudes. The NIAH's function improved as they set up various committees and working groups, advanced research on major issues, planned and operated seminars and training, and issued annual reports.

Due to experiment contamination from parasites, long-term JICA expert Mr. Kashiwazaki instructs on how to remove the spleen from a cow.

(4) Relevance

This project's overall goal, "To prepare an epidemic prevention plan involving Thailand's major livestock diseases," today remains consistent with policy of the Government of Thailand, as it was at the project's inception. Thus, the project remains relevant.

(5) Sustainability

The NIAH is playing a central role in animal health in Thailand as a section of the Department of Livestock of the Ministry of Agriculture and Cooperatives. The RVRDCs are working toward the nationwide dissemination of livestock illness diagnosis technologies. The outlook for sustainability is positive in terms of both organizational and institutional aspects.

However, the economic crisis that began in mid-1997 had a direct impact on subsequent budgets of the NIAH and the RVRDCs. When considering the importance of the improvement and dissemination of animal health technology, ongoing budgetary measures by the Government of Thailand toward both organizations are desirable.

6. Lessons Learned and Recommendations

(1) Lessons Learned

Through the appropriate combination and utilization of various local costs toward separate goals, greater and more effective cooperation output can be achieved.

(2) Recommendations

The project was efficiently implemented and the project purpose was achieved. While financial uncertainty lingers at the NIAH and the RVRDCs, there is high sustainability in terms of organizational and institutional aspects, neither extension of the cooperation period nor follow-up cooperation is necessary. From now on, it is desirable that contributions be made toward improving the diagnosis technology of neighboring countries through third country training programs using NIAH facilities and its technology.

Thailand

The Research Project on the Quality Development of Fishery Products

Project Sites

Bangkok

1. Background of Project

Thailand's Seventh Five Year Plan (1992-1996), along with primary industry productivity improvements, export development of agriculture and fishery products was raised as an important issue, and an increase in product quality of exported processed agricultural and fishery goods and raw materials was asked for. Also, as processed fishery products are important as food resources for Thai people, the residual harmful additives and chemicals in processed fishery products have become an issue of consumer health.

Based on this situation, the Thai government requested project-type technical cooperation from Japan in order to improve the laboratory technology for residual harmful matter, quality control technology in the processing steps, and the examination system.

2. Project Overview

(1) Period of Cooperation

April 1 1994 to March 31 1999

(2) Type of Cooperation

Project-type technical cooperation

(3) Partner Country's Implementing Organization

Ministry of Agriculture and Cooperatives, Department of Fisheries

(4) Narrative Summary

1) Overall Goal

To increase the safety of Thai-produced processed fishery goods.

2) Project Purpose

To improve quality control technology in each step of fishery processing.

3) Outputs

a) To improve the analysis technology of pollutants and additives at the Fish Inspection and Quality Control Division (FIQD).

b) To strengthen research activities concerning pollutants and additives at the Fishery Technological Development Institute (FTDI).

c) To improve the factory investigation system for quality control in Thailand.

4) Inputs

Japanese side

Long-term experts	6
Short-term experts	15
Trainees received	15
Equipment	176 million yen
Local cost	28 million yen

Thai side

Counterparts	25
Land and facilities	
Local cost	355 million baht (approx. 1.189 billion yen)

3. Members of Evaluation Team

Team Leader:

Mr. Akira NIWA, Director, Fisheries Cooperation Division, Forestry and Fisheries Development Cooperation Department, JICA

Quality Control:

Mr. Katsutoshi MIWA, Food Processing Technology Consultant

Investigation Technology:

Mr. Munehiko TANAKA, Professor, Department of Food Science and Technology, Tokyo University of Fisheries

Evaluation Planning:

Ms. Haruko KASE, Fisheries Cooperation Division, Forestry and Fisheries Development Cooperation Department, JICA

Evaluation Analysis:

Mr. Masanori DOI, Intem Consulting, Inc.

4. Period of Evaluation

1 October 1998-18 October 1998

5. Results of Evaluation

(1) Efficiency

Inputs of both the Japanese and Thai side were implemented according to the initial plan. In this project, for

the three long-term experts dispatched from Japan there were 25 counterparts and there were over 50 items of technology transfer covering an extremely wide range. However, technology transfer was implemented extremely effectively, since the dispatched experts held a very strict view towards analysis precision, utilizing Hazard Analysis Critical Control Points (HACCP) and the ability of the counterparts to perform activities independently was high. On the other hand, due to the influence of the economic crisis, the execution of research activity expenses on the Thai side has been limited, and research activities were therefore somewhat behind.

(2) Effectiveness

Through the activities of this project, the introduction to FTDI and FIQD of the fishery product analysis technology and quality control system used in Japan has progressed. As these technologies have been applied in the activation of many research activities at FTDI and in the improvements of factory investigation technology at FIQD, the project purpose has been met.

(3) Impact

Through the promotion of research, the disclosure of technical information, and the implementation of factory investigation conducted by FTDI and FIQD, the number of recognized fishery product processing plants that satisfy HACCP standards have increased. Also, FIQD has, at present, been recognized as the most trustworthy fishery product inspection organization in Thailand by many of the countries importing Thai processed fishery products.

(4) Relevance

Recently, it has been demanded that processed fishery products exported to developed countries meet international standards like the HACCP. Concerning the publication of examination certificates and information about quality control, the expectations of private processing companies towards the Department of Fisheries are high. Because this project accords with the needs of the beneficiaries, adequacy of this project is high.

(5) Sustainability

Because of the high fixed rate of counterparts receiving technology transfer, it is thought that the transferred technology will continue to be utilized after the end of the project. Considering the importance of fishery product exports, the Department of Fisheries intends to maintain the present state of the budget, thus sustainability can be expected.

6. Lessons Learned and Recommendations

(1) Lessons Learned

Because in this project, the number of counterparts and items of technology transfer are large compared to the number of experts, the burden on the experts was high. At the time of planning, there is a need for manpower and a detailed examinations of the items of technology transfer.

(2) Recommendations

Because the project purpose has been largely satisfactory met, it is judged that there is no particular need for an extension of the project or follow-up cooperation.

A laboratory at the FTDI

Shelves containing pharmaceuticals at the FTDI, which are appropriately managed.

Thailand

The Productivity Development Project

Project Sites

Bangkok

1. Background of Project

In 1962, in cooperation with the International Labour Organization (ILO), the Government of Thailand established the Thailand Management Development and Productivity Center (TMDPC) and had been promoting a productivity movement and management development. However, the TMDPC's facilities and human resources became insufficient to respond to the increasingly severe competition among neighboring countries and diversification in industry.

Against such a backdrop, the Government of Thailand requested technical cooperation from Japan aimed at working to enhance the functions of the TMDPC and the nationwide development of a productivity movement.

In response to this, project-type technical cooperation was begun from February 1994 for the TMDPC scheduled to last five years. In July 1995, the Foundation of Thailand Productivity Institute (FTPI) was established and the implementing organization was changed to the FTPI.

2. Project Overview

(1) Period of Cooperation

18 February 1994-17 February 1999

(2) Type of Cooperation

Project-type technical cooperation

(3) Partner Country's Implementing Organization

Foundation of Thailand Productivity Institute (FTPI)

(4) Narrative Summary

1) Overall Goal

Productivity development activities will be diffused and penetrated into in Thai enterprises through FTPI as the national productivity organization.

2) Project Purpose

Productivity development activities will be effectively performed for Thai enterprises by the counterparts of FTPI.

3) Outputs

a) Project operation unit will be enhanced.

b) Counterparts in FTPI will acquire knowledge of consulting skills.

c) Counterparts in FTPI will acquire knowledge of Human Resource Development and Labor-Management Relations to conduct productivity development.

d) Counterparts in FTPI will acquire knowledge of Productivity Promotion and Survey techniques.

e) The machinery and equipment necessary to implement AV activities will be installed and maintained properly.

4) Inputs

Japanese Side

Long-term experts	8
Short-term experts	35
Trainees received	42 (including participants in country-focused group training courses)
Equipment	69 million yen
Local cost	17 million yen

Thai Side

Counterparts	52
Research facilities	
Equipment	300,000 baht (approx. 2 million yen)
Local cost	5.64 million baht (approx. 19 million yen)

3. Members of Evaluation Team

Team Leader:

Mr. Takeshi USAMI, Special Technical Advisor to the President, JICA

Technical Cooperation Program:

Mr. Masayoshi WATANABE, Deputy Director, Technical Cooperation Division, Economic Cooperation Department, International Trade Policy Bureau, Ministry of International Trade and Industry

Technology Transfer Program:

Mr. Ko KASUGA, Executive Director, International Division, Japan Productivity Center for Socio-Economic Development

Human Resource Development:

Ms. Mikiko MUSHA, Project Officer, International Division, Japan Productivity Center for Socio-Economic Development

Evaluation Management:
Mr. Susumu KATSUMATA, First Technical Cooperation Division, Mining and Industrial Development Cooperation Department, JICA
Evaluation Analysis:
Mr. Koichi HYOGO, PADECO Co., Ltd.

4. Period of Evaluation

25 October 1998-11 November 1998

5. Results of Evaluation

(1) Efficiency

Under this project, Thailand's implementing organization was changed in 1995 from TMDPC to FTPI. It was planned from the very start that this transfer would take place, and when the implementation survey was carried out, transfer of the counterparts from TMDPC to FTPI was also confirmed following the transfer of the Thai side's implementing organization to FTPI. However, given that FTPI would be privatized five years after its founding, almost none of the counterparts at TMDPC actually transferred because there were misgivings that their status as government officials would be lost when they made the move to FTPI. As a result, almost all the counterparts were replaced, essentially rendering it a three and half year technology transfer period to FTPI.

However, the project was able to recover this lag in technology transfer due to the instruction from enthusiastic, highly experienced experts, highly capable counterparts, and the fact that the supporting system in Japan was appropriate. Collaborative attempts with other aid schemes, such as dispatching short-term experts from the Asian Productivity Organization, have also proved effective.

(2) Effectiveness

At FTPI, a total of 46 personnel have been nurtured in the three fields of consulting skills, human resource development and labor management relations, and promotion surveys. Given that these human resources are currently actively involved in productivity activities, this project is highly effective.

(3) Impact

Human resources trained under this project are introducing productivity development activities to many private enterprises and steadily achieving results. The holding of seminars and the promotion of Productivity Week, enable the FTPI to strive to promote the dissemination of productivity to private enterprises. Through such activities, the role of FTPI has become widely acknowledged across the nation and at present member companies of FTPI totals 646 companies.

Furthermore, owing to these results, in 1999 the FTPI was allowed to participate in the process of formulating national productivity policy and strategies with the National Economic and Social Development Board.

(4) Relevance

The Government of Thailand has been promoting productivity development in order to enhance the international competitiveness of small and medium sized enterprises, and the FTPI represents the core organization of these activities. Furthermore, in relation to the economic crisis of 1997, the Government of Thailand has implemented an Industrial Restructuring Plan. The FTPI has been charged with an important mission in this Plan of coordinating and acting as the implementing organization in the field of productivity development.

Seeing as the transfer of technology to FTPI matches perfectly with these policies, this project is highly relevant.

(5) Sustainability

Until 2004, FTPI receives government financial assistance subsequent to which it has been counting on ensuring its financial resources through income raised from activities, including projects subsidized by the government. Given that the FTPI's income from its activities is increasing, it is thought that the necessary financial resources will be secured.

In terms of technology, excellent human resources have been developed through this project. In order to further build the capacity of the FTPI and carry out the above mission charged to FTPI, however, it will be necessary to enrich the quality and quantity of its staff.

6. Lessons Learned and Recommendations

(1) Lessons Learned

It is vital that the period for starting cooperation be appropriately established when a change in the partner country's implementing organization is predicted.

(2) Recommendations

Owing to the 1997 economic crisis, Thai companies became aware of the importance of productivity, and FTPI was also called upon to enhance leadership in productivity development. The initially conceived project purpose has been achieved, but in order to advance the FTPI's human resource development and enhance its organization, it is desirable that follow-up cooperation be implemented.

7. Follow-up Situations

Based on the above recommendations, follow-up cooperation is being implemented for a period of two years until February 2001 in the dual areas of human resources development and labor management relations.

Viet Nam

The Cho Ray Hospital Project

Project Sites

Ho Chi Min City

1. Background of Project

In the health and sanitation climate of Viet Nam, medical services were lacking both quantitatively (medications and medical care equipment) and qualitatively (experienced doctors and nurses).

Under these circumstances, the Government of Viet Nam requested project-type technical cooperation from Japan in order to upgrade the capacity of the Cho Ray Hospital, to which Japan implemented technical cooperation between 1966 and 1976 to improve neurosurgery techniques, as a key hospital in southern Viet Nam.

2. Project Overview

(1) Period of Cooperation

1 April 1995-31 March 1998
1 April 1998-31 March 1999 (extension)

(2) Type of Cooperation

Project-type technical cooperation

(3) Partner Country's Implementing Organization

The Cho Ray Hospital

(4) Narrative Summary

1) Overall Goal

The upgrading of health services in Ho Chi Min City and the Southern Provinces of Viet Nam.

2) Project Purpose

The function of the Cho Ray Hospital, as the top referral hospital in the southern region of Viet Nam is improved.

3) Outputs

a) General hospital management in the Cho Ray Hospital is upgraded.
b) Hospital information network in the Cho Ray Hospital is upgraded.
c) Nursing services and nursing management in the Cho Ray Hospital is upgraded.
d) Clinical training skills (neurosurgery, digestive diseases, renal diseases, ICU) in the Cho Ray Hospital are upgraded.

4) Inputs

Japanese Side

Long-term experts	4
Short-term experts	17
Trainees received	6
Equipment	3 million yen
Local cost	5 million yen

Vietnamese Side

Counterparts	11

Facilities (hospital, offices, experiment rooms)
Local cost (hospital operating expenses)

3. Members of Evaluation Team

Team Leader:
Prof. Oichiro KOBORI, Vice Director, International Medical Center of Japan

Cooperation Planning:
Mr. Ryuji MATSUNAGA, Deputy Director, First Medical Cooperation Division, Medical Cooperation Department, JICA

Project Evaluation:
Ms. Chiaki NAKAMURA, Global Link Management Inc.

4. Period of Evaluation

20 December 1998-25 December 1998
20 December 1998-25 January 1999 (Ms. NAKAMURA)

5. Results of Evaluation

(1) Efficiency

Long-term experts were dispatched according to plan for the most part. The efficient implementation of technology transfer was conducted through preparing a detailed technology transfer schedule by long-term experts and counterparts in related fields prior to arrival of short-term experts. The provided equipment was appropriate in terms of quantity and timing and there were sufficient conditions for its use.

Regular meetings between experts and counterparts were held once a week. The close mutual understanding developed the efficient implementation of the project.

(2) Effectiveness

This project worked to upgrade the health services at the Cho Ray Hospital through improvement of its hospital management, patient's management and medical record, diagnosis techniques, etc. Referrals to this hospital from the Southern Provinces increased from 7,155 cases in FY1994 to 9,482 cases in FY1998 (in FY1997 the number of referrals was 14,445). The number of cases referred to medical specialists in the Southern Provinces rose from one in FY1994 to 436 in FY1998. In addition, the number of patients admitted to the hospital from the Southern Provinces reached 28,154 in FY1998.

The Cho Ray Hospital provided training each year from FY1994 to FY1997 to approximately 150-170 persons engaged in medical-related work in the Southern Provinces, and in FY1998 this figure reached 333.

In this way, the Cho Ray Hospital is playing an important role as the top referral hospital in southern Viet Nam, and the project purpose has largely been achieved.

(3) Impact

The Cho Ray Hospital is functioning as the top referral hospital in southern Viet Nam, which is centered around Ho Chi Min City. The expertise and skills acquired by medical staff that have undergone training are being utilized by other hospitals, contributing to the improvement of health services in the region.

(4) Relevance

The Strategy for Socioeconomic Stabilization and Development up to the Year 2000 formulated by the Government of Viet Nam cites qualitative improvement of health services as one of its overall goals. This project's purpose is consistent with this national policy, and therefore the project is deemed highly relevant.

(5) Sustainability

As this project accords with government policy, it is possible that it will continue to receive assistance from the government. Diagnosis technology and hospital management techniques have also been fully transferred to counterparts and maintenance of medical equipment is being carried out appropriately. In these ways, this project is considered highly sustainable in institutional, organizational and technical aspects. However, financial issues remain, including the inability of patients to pay hospital fees and the failure of the government to increase insurance expenditures.

6. Lessons Learned and Recommendations

(1) Lessons Learned

In order to clarify the roles of short-term experts on brief dispatches and to realize efficient technology transfer, it is important to formulate detailed schedule of technology transfer prior to arrival of short-term experts.

(2) Recommendations

The project purpose has for the most part been achieved and it is appropriate that the cooperation be terminated. However, in order to further revitalize the activities of the Cho Ray Hospital as the top referral hospital in southern Viet Nam, it is hoped that the Vietnamese side will make self-help efforts, including the strengthening of the hospital's educational and research functions and the development of its hospital information network.

7. Follow-up Situations

In order to support the Cho Ray Hospital's educational and training functions, and also use the fruits of this project to strengthen the functions of hospitals in the Southern Provinces of Viet Nam, JICA's in-country training program was initiated at the Cho Ray Hospital under the Five Year Plan from FY1999.

Viet Nam

The Project for the Improvement of the Facilities of Primary Schools (Phase I and II)

Project Sites

Thai Binh Province, Nam Ha Province, Ninh Binh Province, Thanh Hoa Province, Nghe An Province, Ha Tinh Province

1. Background of Project

In Viet Nam, under the slogan "Education for All," the improvement and enrichment of primary education had become a priority issue, and the government was aiming for full implementation of elementary school education by 2000. However, due to the deterioration of school buildings and the damage to them as a result of typhoons, there was a remarkable shortage of primary education facilities and it was therefore extremely difficult to conduct adequate lessons.

Under these conditions, the Government of Viet Nam requested grant aid from Japan in order to construct 30 primary school facilities in the Red River Delta area and 40 primary school facilities in the North central coastal area.

2. Project Overview

(1) Period of Cooperation

FY1994 and FY1995

(2) Type of Cooperation

Grant aid

(3) Partner Country's Implementing Organization

Ministry of Education and Training

(4) Narrative Summary

1) Overall Goal

To fully implement elementary school education in Viet Nam by 2000

2) Project Purpose

To improve the primary education environment in Viet Nam's northern and central coastal regions.

3) Outputs

a) Thirty primary school buildings in three Red River Delta provinces (Thai Binh, Nam Ha, Ninh Binh) are constructed.

b) Forty school buildings in three North central coastal provinces (Thanh Hoa, Nghe An, Ha Tinh) are constructed.

c) Educational materials (desks, chairs, blackboards, etc.) are provided.

4) Inputs

Japanese Side

Grant total	3.106 billion yen (E/N amount)

Vietnamese Side

Land for construction

Local cost

3. Members of Evaluation Team

Facilities Evaluation:

Mr. Masaru TAKIMOTO, Development Specialist, JICA

Management Conditions Evaluation:

Mr. Go SHIMADA, Follow-up Division, Grant Aid Project Management Department, JICA

4. Period of Evaluation

14 July 1998-24 July 1998

5. Results of Evaluation

(1) Efficiency

In this project, 30 school buildings were constructed in Phase I and 40 school buildings were constructed in Phase II. In both cases, the project covered a wide range, spanning three provinces. It was thought that on-site management, transportation of materials, procurement of construction equipment and construction management in such a short construction period would be difficult tasks, but through the efforts of those involved, the elementary school facilities were completed as scheduled.

In designing the facilities, aspects of sanitation, lighting and ventilation, typhoon and flood resistance, and reducing maintenance expenses were all carefully considered. However, lessons learned from Phase I of the project were not adequately applied to Phase II; for example, concerning intake pumps for flush toilets, it was revealed that the manual pumps which broke often during Phase I were also procured for Phase II. Also, in this project, the scale of the facilities was determined based on the number of enrolled children at the time when the basic design study was carried out. Since Viet Nam is showing signs

of a declining child population brought about by the permeation into society of its declining birth rate policy, some schools have not attained the number of pupils originally estimated. Therefore, considerations such as the calculation of the number of entering students through population census counts and the birth rate must have been taken for determining the scale of the facilities.

(2) Effectiveness

Through the construction of 70 elementary school facilities and the provision of educational materials, far-reaching improvements have been made in the primary education environment in six provinces in the Red River Delta and North central coastal regions. Before the implementation of this project, there was such a shortage of classrooms that some schools conducted lessons in three shifts, but this problem has now been completely resolved.

(3) Impact

Although still awaiting future studies on the effect of the change in the enrollment rate and quality of education and its effect on families and local society, due to the resolution of the shortage of classrooms, some schools are moving towards a full-time school system and the educational environment has consequently become more enriched. Furthermore, since the school buildings constructed under this program were designed to hold up well against typhoons and floods, residents are also able to use them as shelters in times of natural disaster.

(4) Relevance

Because this project is in accordance with the Government of Viet Nam's priority measures, and because it directly meets the needs of the children, the teachers, and other concerned parties, its relevance is high.

(5) Sustainability

The Ministry of Education and Training and concerned parties from each school are aware of the necessity of maintenance of the facilities and equipment. However, daily cleaning and repair of educational equipment varies between schools. Because school operation depends a great deal on the capability of the school principal, it will be necessary in the future to consider training for principals.

6. Lessons Learned and Recommendations

(1) Lessons Learned

In school construction projects, it is preferable to determine the scale of the facilities through the calculation of the estimated number of children based on population census data.

In projects with multiple phases, such as this one, it is essential to improve cooperation planning by applying lessons learned in previous phases to following phases.

(2) Recommendations

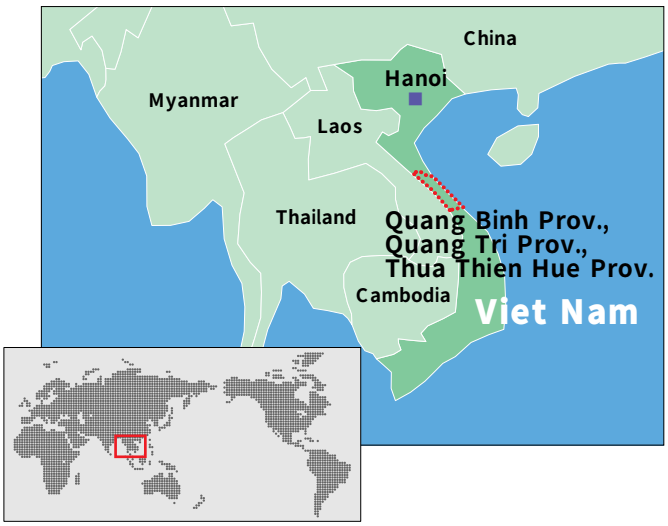
As there are plans to implement a third and fourth phase of this project, it will be necessary to apply to them lessons learned in the first and second stages of cooperation.

Viet Nam

The Project for the Improvement of the Facilities of Primary Schools (Phase III)

Project Sites

Quang Binh Province, Quang Tri Province, Thua Thien Hue Province



1. Background of Project

Emphasizing the development of human resources driven by the transition to a market economy, Viet Nam had highlighted "Education for All" as a national objective. However, as the lack of primary education facilities and the superannuation of existing facilities had compelled Viet Nam to undertake two-shift or three-shift lessons, which had in turn created an impediment to improving enrollment and graduation rates, the Vietnamese government formulated a plan for the rapid enhancement of 610 schools in 30 provinces.

In response to the plan, Japan provided grant aid to enhance primary education facilities in three provinces in the Red River Delta region (Phase I) and three provinces in the North central coastal region (Phase II). To extend this project, the Vietnamese government requested grant aid from Japan to enhance primary schools in three provinces in the North central coastal region (Quang Binh, Quang Tri, Thua Thien Hue) that were not included in Phase II of the project.

2. Project Overview

(1) Period of Cooperation

FY1996

(2) Type of Cooperation

Grant aid

(3) Partner Country's Implementing Organization

Ministry of Education and Training, Department of International Relations

(4) Narrative Summary

1) Overall Goal

To develop human resources necessary for Viet Nam's transition to a market economy.

2) Project Purpose

To improve the elementary education environment in three provinces in the central coastal region (Quang Binh, Quang Tri, Thua Thien Hue).

3) Outputs

a) To construct 514 classrooms in 45 primary schools.

b) To provide educational resources (desks, chairs, blackboards, textbooks, etc.).

4) Inputs

Japanese Side

Grant 2 billion yen (E/N amount)

Vietnamese Side

Land for construction

Local cost (tree planting for school garden, construction of a gate and wall)

3. Members of Evaluation Team

JICA Viet Nam Office
(Commissioned to Nhat Viet Co., Ltd.)

4. Period of Evaluation

1 October 1998-15 December 1998

5. Results of Evaluation

(1) Efficiency

In this project, a large number of educational facilities that were provided for the minimum necessary function and that have secured a fixed quality were constructed in about a year. This plan was an appropriate consideration of the great need for the enhancement of elementary education facilities in Viet Nam.

Also, during construction, consultants and contractors from Japan worked to ensure construction quality by preparing illustrated guidelines for each kind and process of construction, and providing guidance on construction methods for the Vietnamese foremen.

Added to these efforts of the Japanese side, the proper implementation of construction undertaken by the Vietnamese side (the planting of trees for the school gardens and the building of gates and walls) enabled this project to be completed on schedule.

(2) Effectiveness

The facilities and educational materials provided were fully

utilized as soon as they were handed over to the Vietnamese side, and in some districts, three-shift lessons have been abolished. In this way, improvements in the educational environment, the objectives of this project, have been perfectly accomplished.

(3) Impact

The enhancement of elementary educational facilities has naturally led to a desire amongst the children to keep their schools clean and has affected their manners. Also, because both the children's and the teachers' desire for education has increased, it is expected that the quality of elementary education will improve. The birth of a conscious desire among parents and local communities to support the schools with their own efforts is also contributing to a steady advancement in human resources development for the purpose of nation-building.

In terms of technology, through this project, construction technology and educational resource producing technology were transferred from Japanese consultants and contractors to Vietnamese engineers. This will contribute to an improvement in the level of construction particularly in rural areas.

(4) Relevance

In Viet Nam, where the lack and/or superannuation of elementary educational facilities are a serious concern, this project met the needs of the three targeted provinces. Because there is a great demand from the Vietnamese side for the construction of more facilities even after the completion of this project, the need for utilizing the educational facilities enhanced by this project is high. It is thought that the facilities will continue to be fully utilized in the future.

(5) Sustainability

In the areas where elementary schools were enhanced, the conscious desire of the parents and local communities to support the schools is high and various self-help efforts are being undertaken to keep the schools clean and attractive. However, one issue that remains is the securing of funds for future necessary repair costs and other expenses for the purpose of maintaining and further enhancing the educational environment.

6. Lessons Learned and Recommendations

(1) Lessons Learned

In projects like this one, which construct a great number of facilities over a large area, it is effective for process management and quality management to lead many people by preparing visually easy-to-understand materials and manuals and holding class meetings, though they take much time and effort. It is also efficient from the perspective of the whole project.

(2) Recommendations

Phase IV grant aid for the enhancement of primary school facilities in Viet Nam has already been implemented and is soon to be handed over. At this time, it is necessary to grasp and analyze the effects cooperation and lessons, not as a single part of a continuing process, but as a whole, and then to reexamine the suitability of future cooperation on the enhancement of primary school facilities in Viet Nam.

A lesson taking place in a classroom provided by the project

A primary school building provided by the project. The school playground is being developed through donations from the children's parents.