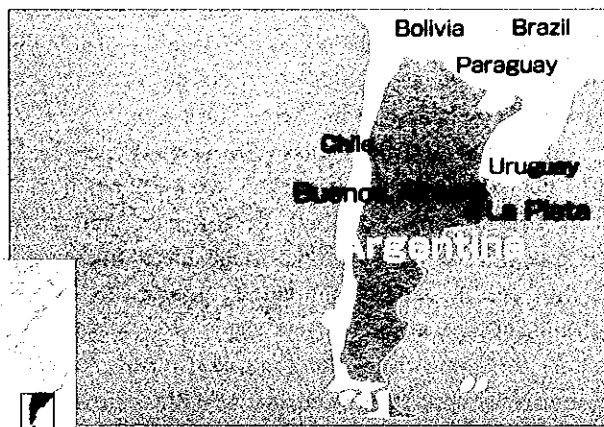
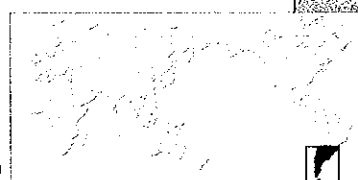


Diagnosis and Research on Domestic Animal Diseases



Project Site

La Plata City (Buenos Aires Province)



1. Background of Project

While Argentina, one of the leading stock-farming countries in the world, has been aiming to bring about economic stability by gaining foreign currency from the expansion of the export of livestock products, various domestic animal diseases have hindered attainment of this goal. Against this background, Japan implemented a project under the Project-type Technical Cooperation scheme from 1989 to 1996 in the faculty of veterinary sciences of the National University of La Plata (UNLP) aiming at the improvement of research capabilities and development of human resources concerning domestic animal hygiene for the promotion of the livestock industry in Argentina.

In this project, the technology of pathological and immunological research for diagnosis of microorganism infection was transferred. Upon completion of the cooperation period, the Government of Argentina requested Japan to implement a Third-country Training Program aiming at dissemination of skills and knowledge obtained through the project to Latin American countries.

2. Project Overview

(1) Period of Cooperation

FY1996-FY2000

(2) Type of Cooperation

Third-country Training Program

(3) Partner Country's Implementing Organization

The faculty of veterinary sciences of the National University of La Plata (UNLP)

(4) Narrative Summary

1) Overall Goal

The research level concerning domestic animal diseases in Latin American countries is improved.

2) Project Purpose

Trainees' capabilities of diagnosis and research of domestic animal diseases are improved.

3) Outputs

- a) Trainees understand the situation of diagnosis and research of domestic animal diseases in Latin American countries.
- b) Trainees understand general concepts and master skills of diagnosis and research concerning immunodiagnosis, biochemistry, laboratory animals, microbiology, virology, parasitology, genetics, physiology, as well as carry out veterinary practices.

4) Inputs

Japanese Side

Short-term experts	8
Trainees received	3
Training expenses	50 million yen

Argentine Side

Instructors and management staff
Training facilities, accommodation and training equipment
Training expenses

(5) Participant Countries

Bolivia, Brazil, Chile, Paraguay, Mexico, Nicaragua, Ecuador, Uruguay, Costa Rica, Cuba, Guatemala, Colombia

3. Members of Evaluation Team

JICA Argentina Office
(Commissioned to Mr. Guillermo Marrero)

4. Period of Evaluation

17 January 2000-15 March 2000

5. Results of Evaluation

(1) Efficiency

Providing inputs generally in line with plans during the period of project implementation, the training was operated and managed efficiently.

(2) Effectiveness

A total of 135 people participated in the training courses from 1996 to 1999. According to the questionnaire survey conducted after the completion of each annual training course, about 80 percent of the trainees said that their technology levels were raised. It can, hence, be judged that the project purpose, i.e. to improve the trainees' capabilities of diagnosis and research, was achieved.

(3) Impact

After returning home from the training, most of the trainees utilized the skills and knowledge they learned in their work. Some trainees were promoted or received higher salaries.

(4) Relevance

About 90 percent of the trainees who answered the questionnaire said that the training was useful for improving the situation of domestic animal diseases in their country. In addition, the number of applicants for the training increased from 28 in 1996 to 45 in 1999. This indicates the increasing demand for this type of training program in Latin America. Therefore, the relevance of the program was evaluated to be high.

(5) Sustainability

Implementation and management of the training courses is well organized by the faculty of veterinary sciences of the National University of La Plata (UNLP), thus institutional sustainability is considered to be strong. However, while UNLP is considering the continuation of this program, realization will be difficult without additional financial assistance from Japan.

6. Lessons Learned and Recommendations

(1) Recommendations

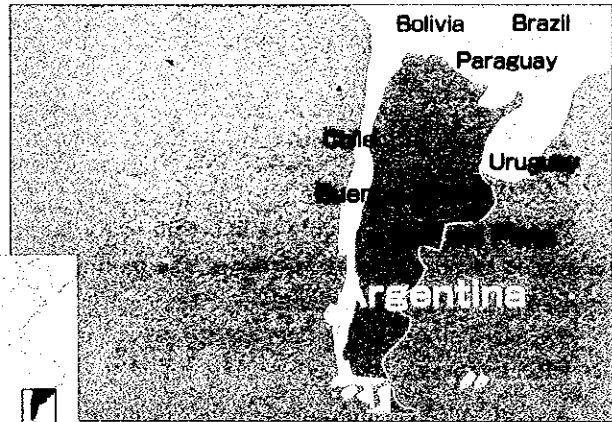
The training courses were implemented four times from 1996 to 1999. The number of applicants continued

to increase every year. Hearing the strong requests for the extension of this program from the participating countries, it is desirable to continue the training program as long as possible.

7. Follow-up Situation

Accepting the recommendation above, the training program was extended another five years until 2005. In addition, Japan and Argentina signed the Record of Discussions (R/D) of the Partnership Program, and after-care cooperation for the Project-type Technical Cooperation was started for two years from 2001, for the purpose of reinforcing the faculty of veterinary sciences of UNLP as a focal point for South-south Cooperation.

International Seminar on Fisheries



Project Site Mar del Plata

1. Background of Project

The National Fisheries School (NFS) was found in 1985 in the city of Mar del Plata, which is the center of the fishing industry in Argentina. In establishing NFS, the Japanese Government extended grant aid cooperation for the construction of facilities (FY1983) and Project-type Technical Cooperation for technology transfer (FY1984-FY1989). A Third-country Training Program was then implemented in NFS for five years from FY1992 aiming to disseminate the skills and knowledge NFS learned through the above-stated cooperation to neighboring Latin American countries.

The terminal evaluation in 1994 evaluated this training program very high and recommended an extension of the cooperation. The participating countries of the training program also assessed the program highly and strongly desired its continuation. Against this background, the Government of Argentina requested the extension of the cooperation period, and the Japanese Government decided to extend it another five years from 1996.

2. Project Overview

(1) Period of Cooperation

FY1996-FY2000

(2) Type of Cooperation

Third-country Training Program

(3) Partner Country's Implementing Organization

National Fisheries School (NFS)

(4) Narrative Summary

1) Overall Goal

Instructors and administrators who have sufficient

skills and knowledge in the field of fisheries share them with others in their respective countries. Further, networks of instructors and administrators in Latin American countries are formed for the exchange of information and human resources.

2) Project Purpose

Instructors and administrators in the field of fisheries enhance their level of skills and knowledge and become well versed in the situation of coastal waters of Latin American countries.

3) Outputs

- a) Trainees learn about fishing tackle and fishing methods.
- b) Trainees learn about fish processing.
- c) Trainees learn about modern equipment for fishing and navigation.

4) Inputs

Japanese Side

Short-term experts	6
Trainee received	1
Training expenses	41 million yen

Argentine Side

Instructors and management staff
 Training facilities, accommodation and training equipment
 Training expenses

(5) Participant Countries

Mexico, Brazil, Chile, Colombia, Ecuador, Peru, Uruguay

3. Members of Evaluation Team

JICA Argentina Office
 (Commissioned to Mr. Manuel Figueroa Garcia)

4. Period of Evaluation

7 November 1999-7 February 2000

5. Results of Evaluation

(1) Efficiency

Inputs such as lecturers and training expenses were prepared in line with plans and led to successful training. The training equipment provided by the Japanese Project-type Technical Cooperation has been effectively utilized. Since each training course was evaluated by trainees and experts at the time of completion and the evaluation results were fed back into the following years program, the content of the training improved every year.

(2) Effectiveness

By FY1999, 404 people from 10 countries applied to this training program, and of these, 70 trainees from nine countries were selected and participated.

Since the trainees and their offices evaluated the program as successful, based on their answers to the questionnaires, the project purpose was judged to be sufficiently achieved.

(3) Impact

A number of trainees shared what they learned in the training courses with their colleagues at home, thus contributing to the dissemination of skills and knowledge. In addition, the trainees have formed networks and intend to continue exchanging ideas and information.

Some networks created through the training program were developed to realize some joint projects. One example is the establishment of a postgraduate course on fishing production system management. This postgraduate course was opened at the FASTA University in Mar de Plata City (Argentina) in collaboration with the Sea Sciences School of Valparaiso Catholic University (Chile). The leading staff members are trainees of the training program from Argentina and Chile.

(4) Relevance

Most of the trainees answered in the questionnaire that the skills and knowledge they learned in the training courses were useful to improve technologies and trainings at home. The constant increase in the number of applicants also indicated the high demand for this program. Further, the attendance of personnel from various governmental agencies and local governments at the opening and closing ceremonies of this program demonstrated the high interest of the people concerned.

Considering these factors, the plans and contents of this training program were judged to be relevant to needs.

(5) Sustainability

While NFS bore a part of the training expenses, it was considered difficult for NFS to bear all of the costs after the Japanese cooperation is terminated. Japanese assistance was, therefore, expected to be continued. Besides financial matters, no other specific problems regarding sustainability were observed.

6. Lessons Learned and Recommendations

(1) Lessons Learned

The Internet was introduced into this training program in 1999. The Internet can be an extremely effective means to activate exchange among trainees and support to produce tangible outcomes utilizing skills and knowledge learned in training courses.

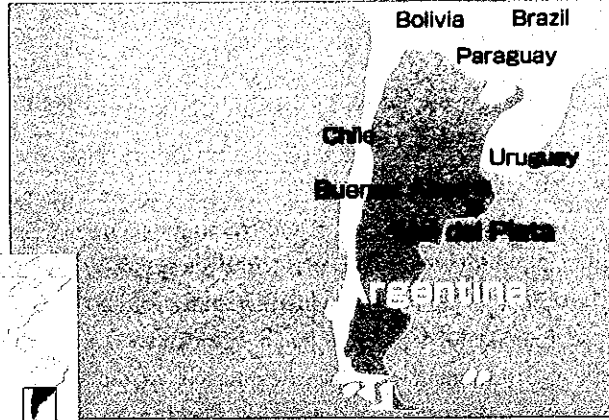
(2) Recommendations

The demand for this training program was high as stated above, and it was anticipated that further impacts would be achieved if the cooperation were continued. It was, therefore, considered desirable for Japan to extend further assistance for the continuous implementation of this training program after the year 2000.

7. Follow-up Situation

The Third-country Training Program in the same field "Seminar on Evaluation and Monitoring Method of Fishery Resources" has been implemented since 2001 based at the National Institute for Fisheries Research and Development in Argentina.

The Assessment and Monitoring of Fisheries Resources Project



Project Site Mal del Plata

1. Background of Project

The Government of Argentina prioritized the strengthening and promotion of the export of primary and processed products for the stabilization of the economy, which experienced rapid inflation following the Falkland Islands conflict in 1982. As fisheries is one of the most important export industries for the nation, fisheries policies needed strengthening based on scientific analysis. Therefore, the Government of Argentina requested the Government of Japan to implement technical cooperation to improve the capability of the National Institute for Fisheries Research and Development (INIDEP) on fisheries resources assessment, aiming to enhance the function of INIDEP, the only national fisheries research organization in Argentina.

2. Project Overview

(1) Period of Cooperation

1 December 1994-30 November 30 1999

(2) Type of Cooperation

Project-type Technical Cooperation

(3) Partner Country's Implementing Organization

National Institute for Fisheries Research and Development (INIDEP)

(4) Narrative Summary

- 1) Overall Goal
The Argentine Republic implements fisheries resources management policies based on the scientific information provided by INIDEP.
- 2) Project Purpose
The capability of INIDEP in fisheries resources assessment is improved.
- 3) Outputs
 - a) Counterparts' research methodologies and techniques for ecological characteristics/ reproduction / life cycle of target species are improved.
 - b) Counterparts' research methodologies and

techniques for determining the impact of fishing on the target species are improved.

- c) Counterparts' knowledge and skills in utilization of satellite images to analyze fisheries resources are improved.

4) Inputs

Japanese Side

Long-term experts	8
Short-term experts	15
Trainees received	15
Equipment	approx. 176 million yen
Local cost	approx. 25 million yen

Argentine Side

Counterparts	25
Building and equipment	
Local cost	

3. Members of Evaluation Team

Team Leader:

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

Fisheries Biology:

Shigeyuki KAWAHARA, Director, Oceanic Resources Division, National Research Institute of Far Seas Fisheries, Fisheries Agency

Fisheries Ecology:

Kenichi TATSUKAWA, Research Associate, Ocean Research Institute, University of Tokyo

Coordinator:

Ikuo TAKEKAWA, Fisheries Cooperation Division, Forestry and Fisheries Development Cooperation Department, JICA

Project Evaluation Analysis:

Kazuo UDAGAWA, IC Net Limited

4. Period of Evaluation

10 July 1999-24 July 1999

5. Results of Evaluation

(1) Efficiency

Though the timing of inputs was close to schedule, the dispatch of some experts in the field of fisheries technology was delayed due to the difficulty in identifying qualified experts. The provision of equipment (selection and timing) had an important positive impact on technical transfer. The equipment was registered and managed with barcodes and used effectively by counterparts and other INIDEP staff. The project finished the cooperation for fisheries technology by the end of the project, having achieved the intended outputs in that field for the first three years. Instead, for the remaining two years, the project conducted technical transfer in satellite image analysis because the needs of INIDEP were high. Thus, the efficiency of the project is judged as high.

(2) Effectiveness

Newly introduced methodologies for research and surveying included six in the field of marine ecology and marine biology, and two in fisheries technology. These were all effectively utilized by the INIDEP staff, enhancing the research skills of counterparts. Results were well disseminated: 51 articles appeared in INIDEP's periodical journal, seven manuals were published by INIDEP, and an international seminar was planned and conducted by INIDEP. The effectiveness of the project was considered high.

(3) Impact

No negative impacts were found. A positive impact is that a histological study as well as age determination with otolith and statolith have been applied to the studies of other species that were not targeted by the project. In addition, satellite image analysis will benefit not only INIDEP research activities but also will be useful for other institutions such as universities and fisheries associations. A significant number of staff improved their status from temporary to permanent employment.

(4) Relevance

In 1998, the Argentine Government established the Federal Fisheries Council in accordance with the Fisheries Act, in which INIDEP is defined as the sole institute that will assess fisheries resources and recommend management measures based on its scientific research. As the role of INIDEP has been ever important, the project purpose and the overall goal were confirmed valid at the time of final evaluation.

(5) Sustainability

The sustainability of the counterpart organization was confirmed as high because the number of INIDEP staff increased throughout the project period and this was a permanent arrangement. In addition, following the enactment of the Fisheries Act, INIDEP's responsibilities expanded.

Financial sustainability was judged as relatively high



Evaluation meeting with team members and counterparts

because the budget of INIDEP will be sustained. Though there is the uncertainty of maintained revenue for expenditures due to the expansion of research activities, the budgetary problem should be overcome as the priority of fisheries management is expected to be higher, and the national wealth of Argentina is sufficient.

Technical sustainability is high because almost all counterparts have worked continuously at INIDEP and improved their skills throughout the project period. Many temporary staff became permanent staff, which increased the sustainability of the knowledge and techniques of the counterparts.

6. Lessons Learned and Recommendations

(1) Lessons Learned

Projects in highly specialized fields such as this one face difficulty in identifying qualified long-term experts. The system of cooperation of the Japanese side should be examined at the stage of planning.

Necessary equipment must be available at an early stage of the project in order to maximize technical transfer utilizing the equipment.

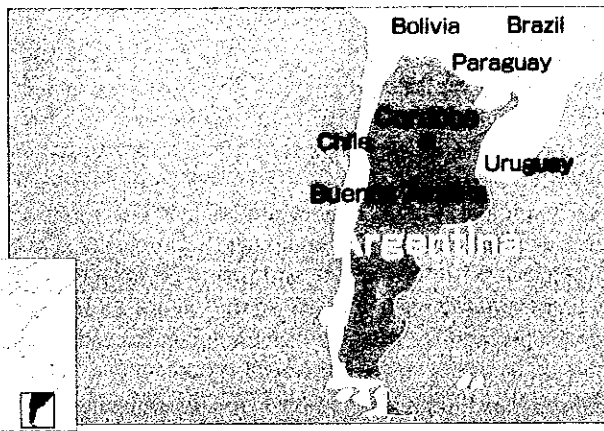
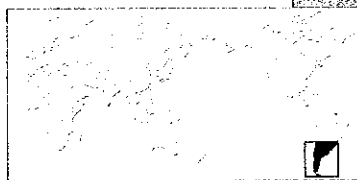
(2) Recommendations

Annual reports are to be submitted by INIDEP to JICA for the next few years. JICA should consider providing additional cooperation in the form of short-term experts, based on the above reports. Financial support should continue after the close of the project in order to maintain or improve the equipment that is necessary for research activities.

7. Follow-up Situation

In order to disseminate the positive results of this project to other Latin American countries, a Third-country Training Program on "The Seminar on Assessment and Monitoring of Fisheries Resources" has been implemented from 2001.

The Plant Virus Research Project



Project Site Cordoba

1. Background of Project

Agriculture and livestock is an important industry in Argentina, making up more than 60 percent of total exports. However, several factors inhibit further productivity and quality improvements, including the decrease of agricultural population, stagnated expansion of production areas, and extensive vermin damage. It was recognized that virus control methods and strategies were vital in order to overcome difficulties and strengthen export competitiveness. Although the Argentine Government was researching viral diseases, the issues of insufficient human resources development and lack of technical skills remained.

The above-mentioned situation led the Argentine Government to request technical cooperation from Japan. The technical cooperation aimed to contribute to the improvement of the research activities on plant virus diseases by developing the capability of the research fellows in the Institute of Plant Pathology and Physiology (IFFIVE), an experimental research institute of the National Institute of Agricultural Technology.

2. Project Overview

(1) Period of Cooperation

1 March 1995-19 February 2000

(2) Type of Cooperation

Project-type Technical Cooperation

(3) Partner Country's Implementing Organizations

National Institute of Agricultural Technology(INTA)
Institute of Plant Pathology and Physiology(IFFIVE)

(4) Narrative Summary

1) Overall Goal

To improve the productivity and quality of agricultural products in Argentina by establishing control methods for plant viral diseases.

2) Project Purpose

To strengthen the research capability of the Institute of Plant Pathology and Physiology (IFFIVE) for solving problems related to viral diseases of four crops: maize, soybean, tomato and sunflower.

3) Outputs

- a) Methods for the identification and diagnosis of plant viral diseases are developed.
- b) Epidemiological study of viral diseases is carried out.
- c) Comprehensive control methods of viral diseases are developed.

4) Inputs

Japanese Side

Long-term experts	5
Short-term experts	16
Trainees received	21
Equipment	approx. 282 million yen
Local cost	approx. 59 million yen

Argentine Side

Counterparts	23
Land, buildings and facilities	
Local cost	approx. 0.48 million pesos (approx. 54 million yen)

3. Members of Evaluation Team

Team Leader:

Ichiro FUJISAWA, Director, Department of Plant Protection, National Agriculture Research Center, Ministry of Agriculture, Forestry and Fisheries

Identification and Diagnosis of Virus Diseases:

Hiroki KOGANEZAWA, Head, Entomology and Plant Pathology Laboratory, Department of Crop Science, Shikoku National Agricultural Experiment Station, Ministry of Agriculture, Forestry and Fisheries

Development Ecology:

Akira KAWAI, Head, Entomological Laboratory, Department of Plant Protection and Soil Science, National Research Institute of Vegetables, Ornamental Plants and Tea, Ministry of Agriculture, Forestry and Fisheries

Cooperation Evaluation:

Takayuki KURIYAMA, Senior Technical Officer, Technical Cooperation Division, International Affairs Department, Economic Affairs Bureau, Ministry of Agriculture, Forestry and Fisheries

Project Management:

Akio TAKIGUCHI, Livestock and Horticulture Division, Agricultural Development Cooperation

Department, JICA

4. Period of Evaluation

12 September 1999-26 September 1999

5. Results of Evaluation

(1) Efficiency

The Argentine Government recognized that input by both Japanese and Argentine sides was adequate in terms of time, quality and quantity. Dispatching one long-term expert for the duration of the five-year cooperation period fostered a relationship of mutual trust among the experts of both sides. The dispatch of short-term experts who were members of the receiving institution of the counterpart training also enabled effective planning of the counterpart training in Japan.

All 20 counterparts who were sent to Japan for training stayed at the IFFIVE and have been contributing to the development of the research activities. In addition, INTA has made remarkable efforts to assure the necessary budget even during the budget stringency of the current administration. As a whole, the project was smoothly and efficiently implemented.

(2) Effectiveness

During the period of the Project, antisera were prepared for the detection of major viruses of four main agricultural products, and the serological and molecular biological methods for diagnosis of the diseases were established.

In addition, the basic knowledge for the development of integral control methods for maize and tomato was acquired. Some unexpected results were also found, such as the discovery of a new virus type sunflower disease. Through various project activities, IFFIVE has become one of the most important institutes in South America in the field of plant virology. The high achievement of the institute is demonstrated by the fact that eight researchers of IFFIVE were awarded monetary aid by the National Secretary of Science and Technology. As a whole, the Project purpose was achieved.

(3) Impact

As a result of IFFIVE's extension activities, the introduction of a disease-resistant variety of maize, was promoted, and subsequently maize yield losses affected by the Mal de Rio Cuarto Virus (MRCV) were reduced. IFFIVE has been contributing to the development of plant virology research in Latin America through the training of young researchers and receiving many visiting researchers from both within and outside the country.

(4) Relevance

This project is recognized to be highly relevant to the national needs of Argentina since maize, soybean, and sunflower are important products that share 18.6 percent of total exports, and the establishment of a control method for diverse diseases was considered an urgent necessity.

(5) Sustainability

IFFIVE has been receiving political and financial



An expert giving a lecture to counterparts

support from INTA, and the continuity of this support was assured by the Argentine side. INTA has also made an effort to secure their own financial resources by establishing their own funding agency. Furthermore, the research capability of IFFIVE has reached the highest level in South America; thus, sustainability is highly recognized.

6. Lessons Learned and Recommendations

(1) Lessons Learned

Dispatching the same experts throughout the project period will contribute to establishing a positive working relationship between the counterparts of the participating countries. The short-term experts should be selected from members of the receiving institution, so that they can plan the counterpart training in Japan before their short-term visit. This will make technology transfer activities more effective.

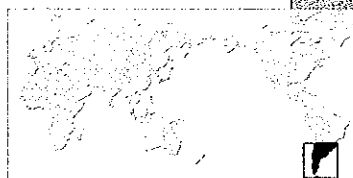
(2) Recommendations

Based on the above-mentioned evaluation, it was concluded that this project successfully achieved its purpose. Therefore, the cooperation came to an end on February 29th of the year 2000. Although the project terminates, it is expected that INTA will continue allocating the necessary budget for IFFIVE, and that IFFIVE will continue developing young researchers, as well as the extension service to farmers. IFFIVE is interested in establishing the Training Program for Third Countries, and Japan should consider additional cooperation to support this move.

7. Follow-up Situation

In order to disseminate the positive results of this project to other Latin American countries, a Third-countries training program on "the Detection Technology of Plant Viral Diseases" will be carried out from 2001 to 2004.

The Industrial Energy Conservation Project



Project Site **Buenos Aires**

1. Background of Project

In Argentina, oil accounts for half of the primary energy and the amount of oil deposits estimated to be in the country would be exhausted in about 15 years. Despite this, energy consumption has been steadily on the increase. In addition, a long economic stagnation has led to low efficiency in energy utilization in industry. The National Institute of Industrial Technology (INTI) started guiding factories and investigating their energy consumption in response to the need to conserve energy. There were many problems, however, in carrying out this role due to the lack of energy audit technology, a shortage of materials and equipment, and other constraints.

Under these circumstances, the Government of Argentina requested the Japanese Government to carry out a development study on the rational utilization of energy in industry through applying appropriate technology. Responding to the request, JICA conducted the "Study on the Rational Use of Energy in Industry" from December 1987 to January 1989. Based on the recommendations drawn from the study, the Government of Argentina established the Energy Management Training Center, whose name was later changed to the Energy Research Development Center, and requested Project-type Technical Cooperation for the center from Japan of July 1991.

2. Project Overview

(1) Period of Cooperation

1 July 1995-30 June 2000

(2) Type of Cooperation

Project-type Technical Cooperation

(3) Partner Country's Implementing Organization

National Institute of Industrial Technology (INTI)

(4) Narrative Summary

1) Overall Goal

Industrial energy conservation is promoted in Argentina

2) Project Purpose

CIPURE (Center of Investigation and Development for the Rational Use of Energy) in INTI is able to lead and promote energy conservation in the field of industry through expansion of its functions.

3) Outputs

- a) Counterparts who promote and guide energy conservation are trained.
- b) Counterparts train energy managers in industry.
- c) Counterparts promote energy conservation awareness and knowledge in industry.

4) Inputs

Japanese Side

Long-term experts	8
Short-term experts	23
Trainees received	16
Equipment	approx. 483.5 million yen
Local cost	approx. 33 million yen

Argentine Side

Counterparts	19
Land, laboratory and training building	
(part of cost is from a loan financed by the Inter-American Development Bank)	
Equipment	
Local cost	approx. 2.38 million US\$ (approx. 250 million yen)

3. Members of Evaluation Team

Team Leader:

Hiroyuki ARAI, Director, Planning and Financial Cooperation Division, Mining & Industrial Development Cooperation Department, JICA

Technical Cooperation Planning:

Kenichiro KOREEDA, International Affairs Office,
Coal and New Energy Department, Technical Agency
of Natural Resources and Energy, MITI

Technology Transfer Program:

Shinichi SHIBUSAWA, Sumitomo Management Co.,
Ltd.

Energy Conservation Technology:

Takeshi, SEKIYAMA, The Energy Conservation
Center, Japan (ECCJ)

Project Management:

Hisae OSHIKANE, Second Technical Cooperation
Division, Mining & Industrial Development
Cooperation Department, JICA

Data Compilation and Analysis:

Tomoyuki YAMASHITA, Tokyo Electric Power
Services Co., Ltd.

4. Period of Evaluation

28 March 2000-15 April 2000

5. Results of Evaluation

(1) Efficiency

The following problems were found: First, the construction of the training center building by Argentina was completed well behind schedule. Secondly, there was a shortage of qualified instructors in the field of electricity and appropriate counterparts in the field were not assigned to the project. In addition, design and delivery problems by a manufacturer delayed the initial operation of the training plant until the third year. However, since approximately 40 percent of the short-term experts, together with the long-term experts, spent a great deal of time and worked intensively on the installation and trial run, the expected outputs were obtained from the third year. The other inputs were made almost appropriately in terms of quality, quantity and timing, which efficiently lead to the gaining of outputs.

(2) Effectiveness

CIPURE became capable of independently receiving orders for factory audits in the field of energy conservation and of providing training courses. CIPURE's activities were evaluated highly by the companies that dispatched workers to the training, and the number of companies applying for the training course was steadily increasing. Therefore, the project purpose was expected to be attained by the end of the period of cooperation.

(3) Impact

The project had direct impact on the companies that received CIPURE's energy conservation audit. After receiving the audit, they started to procure energy-saving

machinery and to improve technology in order to save energy. Because there was an increasing number of companies that were trying to obtain the International Standard for Environmental Management Systems ISO14000 certification in Argentina, there was also an increasing number of requests from companies to CIPURE for assistance before energy management inspection.

(4) Relevance

The Government of Argentina regarded self-sustainability in energy as very important and showed much interest in energy conservation from the viewpoint of the policy to reduce production costs in order to enhance its ability to compete internationally. Therefore, this project was highly relevant.

(5) Sustainability

Since CIPURE charges for the training and factory audits, it is able to generate sufficient income to sustain its activities. Technically, the necessary skills and equipment were in place to maintain and further develop CIPURE's activities. Therefore, the project was considered to be sustainable.

6. Lessons Learned and Recommendations

(1) Lessons Learned

It was found that the type and quantity of machinery to be provided for training use should be decided only after clearly establishing the content of the technical training program.

It was also found that the project should include more stakeholders including beneficiaries in the activities and request them to cooperate in diffusing awareness and knowledge of the project with a view to maximizing the impacts.

(2) Recommendations

Since it was probable that the project purpose would be attained as planned, the Japanese Government agreed with the Government of Argentina on ending the project as scheduled.

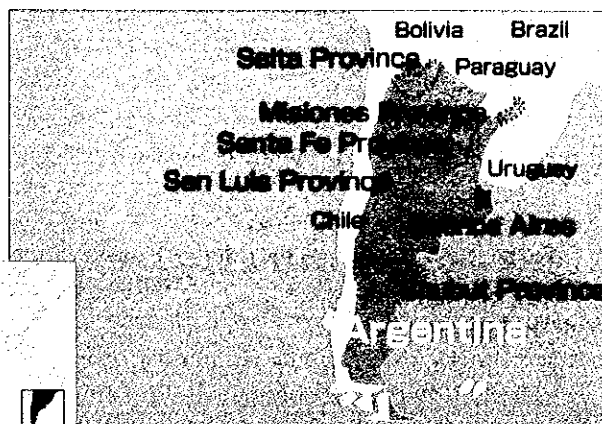
It was advised that CIPURE work together with other related agencies such as the Energy Conservation Agency, and take on the important role of executing agency for energy conservation in Argentina so that its energy conservation activities are further spread.

Argentina had the desire to extend their energy conservation activities to neighboring countries from the base of CIPURE. To this end, it was recommended that Argentina should reinforce its operating system in order to promote South-south Cooperation and training in third countries.

Population Statistics Project

Project Site

Buenos Aires, Salta Province, Misiones Province, San Luis Province, Santa Fe Province, Chubut Province



1. Background of Project

Argentina maintains considerably high economic and social standards, but at the same time, there are still a number of problems to be solved, such as the nation's fiscal deficit and high unemployment rate. The improvement of social welfare and health services are also important issues. However, the basic national statistical system especially for population statistics, which is indispensable for planning and implementation of policies in these fields, is under developed. The Government of Argentina, thus, requested Japan to provide Project-type Technical Cooperation for the purpose of improvement of population statistics at the central Government and provincial levels, which might lead to the more effective planning of national development programs and population policies.

established.

- b) Preparatory work for the 2000 population census is carried out.
- c) A staff training system is established in INDEC.

4) Inputs

Japanese Side

Long-term experts	5
Short-term experts	12
Trainees received	16
Equipment	approx. 230 million yen
Local cost	approx. 60 million yen

Argentine Side

Counterparts	20
Land and facilities	
Local cost	approx. 30 million yen

2. Project Overview

(1) Period of Cooperation

15 September 1995-14 September 2000

(2) Type of Cooperation

Project-type Technical Cooperation

(3) Partner Country's Implementing Organizations

National Bureau of Statistics and Census (INDEC), Secretariat of Economic Policy, Ministry of Economy

(4) Narrative Summary

- 1) Overall Goal
 - A population statistics system useful for the formulation of social welfare and health policies is established.
- 2) Project Purpose
 - A population statistics system is developed.
- 3) Outputs
 - a) A population statistics information system is

3. Members of Evaluation Team

Team Leader:

Hirohiko KOYAMA, Northern Territories Issue Association

Population Statistics:

Masato AIDA, Director, Management and Planning Office, Population Census Division, Statistics Bureau, Ministry of Public Management, Home Affairs, Posts and Telecommunications

Cooperation Planning:

Seiji KATO, Deputy Director, Planning Division, Medical Cooperation Department, JICA

Participatory Planning:

Seizo YAMADA, Katahira & Engineers International

4. Period of Evaluation

11 March 2000-26 March 2000

5. Results of Evaluation

(1) Efficiency

Inputs were mostly implemented in an efficient manner. The timely dispatch of short-term experts familiar with the development of computer technologies particularly contributed to high efficiency. Also, the training of counterparts in Japan, executives first and then a gradual shift of target to working-level officers, enhanced overall awareness of the project.

(2) Effectiveness

The outputs (the establishment of the population statistics information system, the preparation of the 2000 population census and the establishment of the training system for INDEC staff) were all achieved. With regard to the building of the database, in particular, the introduction of GIS (Geographical Information System) enabled municipality boundaries to be shown on maps on a nationwide scale, which made demarcation of census tracts and sampling easier. Also, for the smooth and efficient conduct of the 2000 population census, a systematic test survey was conducted for the first time. Considering these facts, it was judged that the project purpose was fully achieved.

(3) Impact

Through the project, the central and provincial governments made joint efforts in the discussion and preparatory work for the 2000 population census, and that strengthened their cooperative relationship. Also, the database developed by the project was used not only within INDEC but also by administrative organizations in charge of infrastructure development projects, private firms, research institutions and students, and was highly valued by organizations and people using population statistics.

(4) Relevance

The overall goal of the project, "A population statistics system useful for the formulation of social welfare and health policies is established" was consistent with the "enrichment of social welfare and health services", a basic policy of Argentina. Therefore, relevance of the project was evaluated to be high.

(5) Sustainability

Few problems were found regarding the retention rates of the trained staff in INDEC and provincial statistical offices, as well as regarding their technical and management capabilities. The facilities and equipment were also well maintained. Thus, institutional and technical sustainability were judged to be high. In terms



Trainees from Branch office of Bureau of Statistics and Census

of the financial aspects, there was some concern about securing a large enough portion of the national budget to cover necessary expenses in the future.

6. Lessons Learned and Recommendations

(1) Recommendations

Since conducting a regular population census is an indispensable activity for a nation, the Argentine authorities must work to maintain and further develop the established systems such as the population statistics information system and the staff training system through their own efforts.

The population census scheduled for 2000 was postponed to the year 2001 due to the domestic situation in Argentina. In conducting the 2001 census, the Argentine side expressed their need for cooperation by Japanese experts. It was expected that upon submission of an official request, Japan would respond positively as early as possible.

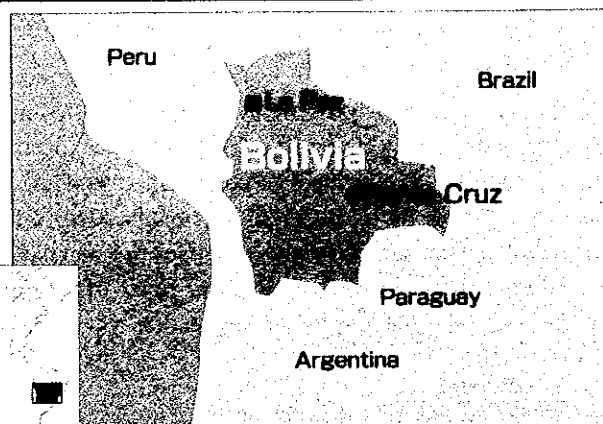
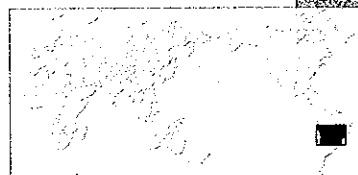
The Argentine side also requested cooperation in conducting a Third-country Training Program. However, it was recommended that this be considered later.

7. Follow-up Situation

The population census was scheduled for mid-November 2001. Two Individual Experts are to be dispatched to verify the contribution of the project outputs to the census and to provide advice on the census evaluation.

With regard to the possibility of a Third-country Training Program, the Japanese side is planning to assess the needs on the Argentine side based on the performance of the census.

Health and Medical Care Delivery System in Santa Cruz



Project Site Santa Cruz

1. Project Overview

Japan has supported the Santa Cruz General Hospital, a core provider of health and medical-care services in Eastern Bolivia, through Grant Aid for the construction of hospital buildings; and Project-type Technical Cooperation for five years from 1987 with the aim of enabling the hospital to provide basic health and medical-care services, establishment of its functions as a tertiary hospital that practices advanced medicine and the improvement of hospital management. The cooperation mostly achieved the initially planned objective and thus was terminated in November 1992. However, issues such as strengthening the emergency outpatient unit, which has become increasingly important every year, and expanding hospital activities related to community medicine remained to be addressed in the future.

Against this background, the Government of Bolivia requested Japan to provide Project-type Technical Cooperation based in the Santa Cruz General Hospital with the aims of upgrading the emergency outpatient system and the provision of primary-care services as well as strengthening the hospital administration section for further financial sustainability and expansion of clinical divisions.

2. Project Overview

(1) Period of Cooperation

15 December 1994-14 December 1999

(2) Type of Cooperation

Project-type Technical Cooperation

(3) Partner Country's Implementing Organizations

Ministry of Health and Social Prevision
Santa Cruz General Hospital (Hospital Japan)

(4) Narrative Summary

1) Overall Goal

Functioning of the health and medical-care system in the city of Santa Cruz is improved for better service to citizens, especially the poor.

2) Project Purpose

Santa Cruz General Hospital, as part of the regional health and medical-care system, provides appropriate health and medical care services to the citizens of Santa Cruz, especially the poor.

3) Outputs

- a) Management of the Hospital is improved.
- b) Health and medical-care services provided by the Hospital are improved.
- c) Human resources development is promoted.
- d) The health and medical-care delivery system of the City of Santa Cruz is improved.

4) Inputs

Japanese Side

Long-term experts	12
Short-term experts	45
Trainees received	21
Equipment	approx. 260 million yen
Local cost	approx. 40 million yen

Bolivian Side

Counterparts	32
Land and facilities	
Local cost	

3. Members of Evaluation Team

Team Leader:

Takafumi FUKUHARA, Director, Medical Cooperation Department, JICA

Community Medicine:

Seiki TATENO, Bureau of International Cooperation, International Medical Center of Japan

Hospital Management:

Yoshio IDE, Deputy Director, St. Mary's Hospital

Nursing Education:

Yoko KONISHI, Deputy Director, Nursing Department, International Medical Center of Japan

Evaluation Planning:

Akihiro MATSUMOTO, Deputy Director, Second Medical Cooperation Division, Medical Cooperation Department, JICA

Participatory Planning:

Kaoru IWAKAWA, PADECO, Co., Ltd.

4. Period of Evaluation

10 July 1999-22 July 1999

5. Results of Evaluation**(1) Efficiency**

Although there were some problems in project implementation such as a delay in the expansion of the building accommodating the emergency outpatient section, other inputs by both Japanese and Bolivian sides were implemented as planned, and led to the achievement of outputs. However, since the health-related data of the target area was not adequately collected in advance, making it necessary to construct the project's plan of operations during the implementation period, the start of some activities and the achievement of some outputs were behind schedule.

(2) Effectiveness

The Hospital was well managed even with 52 percent of the inpatients being poor. Outputs such as the improvement of the quality of health and medical-care services, human resources development through residency and the improvement of the health and medical-services delivery system in Santa Cruz were all achieved. As a result, the Hospital strengthened its expected function as the central hospital in federal area in such aspects as emergency care, referral system and operation and maintenance of equipment in comparison with the situation before the project. Therefore, it was judged that effectiveness of the project was high.

(3) Impact

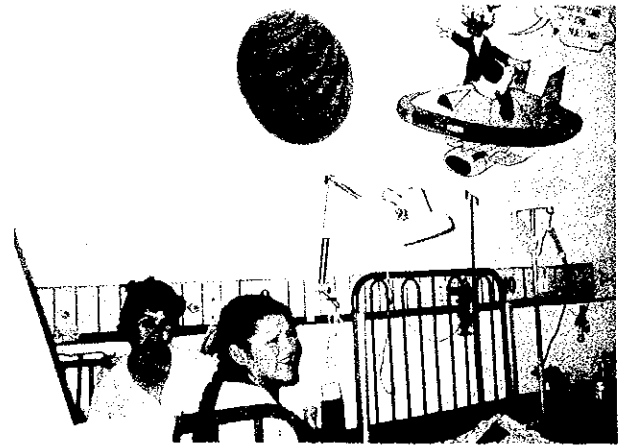
Through accepting a number of residents, the Hospital contributed to the improvement of health and medical care throughout the country. Also, the Hospital supported the city of Santa Cruz in the implementation of the pilot project for strengthening the referral system and the establishment of the emergency medical-care system in the city in coordination with prefecture health services and municipal health directions and thus contributed to the upgrading of the regional health and medical-care system.

(4) Relevance

The overall goal of the project was consistent with the national health policy aimed to provide equitable health-care services to the poor, and thus relevant.

(5) Sustainability

With regard to hospital administration and management, since the Hospital came to improve its financial status, sustainability would likely be ensured. Meanwhile, most of the medical equipment provided through earlier grant aid was becoming obsolete, and thus



Pediatrics ward in ward Santa Cruz General Hospital

sustainability in this aspect would depend on how the Bolivian authorities would upgrade the equipment. Also, although the Hospital was in the process of establishing a cooperative structure with the province and the city of Santa Cruz in delivering health and medical-care services, further efforts would be necessary to improve the regional health and medical-care system.

6. Lessons Learned and Recommendations**(1) Lessons Learned**

When designing a project that intends to expand activities to the region (e.g., strengthening of the referral system), the planners should conduct thorough research not only on the target hospital but also on the situation of the health-care system in the region prior to project implementation.

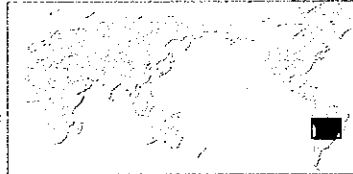
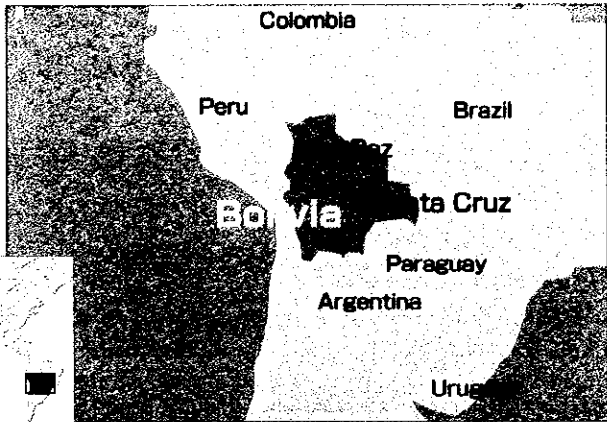
(2) Recommendations

It was considered desirable that further actions to improve the regional health-care system be carried out by the Bolivian side through its own efforts. However, considering that the improvement of regional health care systems is a high priority of the Bolivian government, the Japanese side could also consider a continuation of cooperation in this field based on needs.

7. Follow-up Situation

Japan has contributed, through Grant Aid and Project-type Technical Cooperation, to the strengthening of the advanced-medicine functions of the Santa Cruz Central Hospital as a tertiary health institution. However, since there is a growing need for the strengthening of the functions of primary health institutions in the city and the upgrading of administrative capacity of the provincial and city organizations in charge of health care, Project-type Technical Cooperation "the Project for Strengthening Regional Health Network for Santa Cruz Department" is going to be implemented for five years from 1 November 2001.

Public Health Improvement in Warnes Province, Prefecture of Santa Cruz



Project Site

Warnes Province (Prefecture of Santa Cruz)

1. Background of Project

The Government of Bolivia regarded development in the health sector as one of the most important policies, but progress at the provincial level was slow due to the lack of human and financial resources and public health education.

Considering the problem, the Government of Bolivia requested the Government of Japan to provide cooperation in order to disseminate public health information, including diarrhea and parasite control, to residents in the rural areas of Warnes Province, near the second biggest city in the country, Santa Cruz, and to enhance the capacities of the health administration focusing on Maternal and Child health (MCH) and infectious disease control.

Because many Japanese Bolivians reside in Santa Cruz, the sister city of Okinawa Prefecture, the project was formulated as a community cooperation project with support from Okinawa Prefecture.

2. Project Overview

(1) Period of Project

1 November 1996-31 October 1999

(2) Type of Cooperation

Experts Team Dispatch Program

(3) Partner Country's Implementing Organization

Health Service Department of Santa Cruz

(4) Narrative Summary

- 1) Overall Goal
Public health in Warnes province is improved.
- 2) Project Purpose
The system of Primary Health Care (PHC) focusing on MCH is established.
- 3) Outputs
 - a) Dynamic statistics of population are utilized.

- b) A permanent health education and counseling system is established.
- c) Community Organization Activities are promoted.
- d) MCH Handbook is utilized.
- e) Project implementation is properly achieved.

4) Inputs

Japanese Side

Long-term experts	4
Short-term experts	8
Trainees received	5
Equipment	28 million yen
Local cost	

Bolivian Side

Counterparts

3. Members of Evaluation Team

Team Leader:

Takeshi TAKANO, Director, Planning Division, Regional Department III, JICA

Health Administration:

Masako KINJO, Deputy Director of Health and Welfare Department of Okinawa Prefecture

Nursing:

Atsuko SHINZATO, Okinawa Prefectural Nursing Association

Clinical Examination:

Zensho UKUDA, Director of Health and Welfare Policy Division, Department of Health and Welfare, Okinawa Prefectural Government

Evaluation Planning:

Katsutoshi FUSHIMI, Program Division, Okinawa International Center, JICA

4. Period of Evaluation

30 August 1999-13 September 1999

5. Results of Evaluation

(1) Efficiency

The scale of inputs from Japan was appropriate. But at the beginning of cooperation, the project did not progress smoothly because the team leader among the experts was not appointed and counterpart personnel were transferred, including the Director of the Department of Health service in Warnes Province, because of the change of the regime in the government of Bolivia.

Okinawa Prefecture provided the total support system by dispatching experts and accepting the trainees, and the Japan-Bolivia Association of Okinawa in Okinawa colony of Warnes Province cooperated in home vegetable gardening, while Warnes Province and Santa Cruz shared the costs for toilet building and drug provision. These contributions led to the achievement of the outputs. Moreover, collaboration with the Project-type Technical Cooperation titled "Health and Medical Care Delivery System in Santa Cruz" which started from December 1994, led to the development of the MCH handbook and information dissemination also enhanced the efficiency of the project.

(2) Effectiveness

Five project sites were selected to implement the project activities. In each pilot site, based on the health posts, the collection of the health information of the residents, recording of the family register book, and nutrition and health education on the basis of the total infant medical check and its results were achieved. Thus, the project purpose of "To establish a system of Primary Health Care (PHC) focusing on MCH" was achieved. A total of 2,229 residents in the five pilot sites were the direct beneficiaries.

(3) Impact

Through the project, the local administration recognized the importance and efficiency of PHC. As a result, it was decided that the Department of Health Service in Warnes Province continue the activities in the five project sites and would also start new activities in another nine pilot sites. In the pilot sites, children no longer went barefoot, and every household built a toilet on their own with the support of the Grant Assistance for Grassroots Projects by the Government of Japan. According those involved, the residents in the pilot sites became more active regarding their health compared with people in other communities, and thus the residents were sensitized and changed their behavior.

(4) Relevance

As the improvement of public health in rural areas of Bolivia has been one of the most important issues since the initiation of the project, the project had relevance to

the policy above. Also, the fact that the project got several types of support from Okinawa Prefecture was a significant example of "CoHaboration with local governments in overseas technical cooperation projects" promoted by the Ministry of Foreign Affairs and JICA.

(5) Sustainability

As mentioned above, the PHC activities introduced by the project continued to be implemented and expand to new areas. However, the Japan side continued to play a leading role, so there was uncertainty about self-reliance on the Bolivian side. Also, unless the frequent transfer of counterpart personnel who received training ends, the techniques and know-how will not be built up, and thus, it will be difficult for them to be self reliant institutionally and technically. Financially, as the activities of PHC can be implemented with little cost, sustainability from this aspect did not seem to be a problem.

6. Lessons Learned and Recommendations

(1) Lessons Learned

In the Experts Team Dispatch Program, it was not always specified who the team leader was at the time experts were dispatched. In order to implement the project smoothly, it is necessary to appoint the leader before the dispatch.

(2) Recommendations

It is expected that Bolivia will continue to expand the activities in the future. But as there was no clear initiative of activities by the Bolivian side, and uncertainty about the establishment of techniques transferred, it was thought that additional time was required for Bolivia to become self-reliant, and therefore, additional cooperation was recommended. For the time being, it was suggested to dispatch Individual Experts and short-term volunteers of JOCV.

7. Follow-up Situation

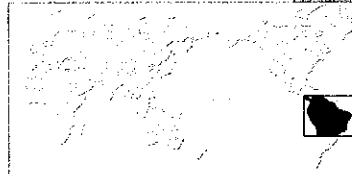
A joint study team for project formulation in collaboration with Okinawa Prefecture was dispatched in February 2001 in order to develop another community health project. In response to the results of the study team, the Project-type Technical Cooperation "The Project for Strengthening the Regional Health Network for Santa Cruz Department" has been implemented from 1 November 2001 to 31 October 2006. This project includes introduction of the MCH handbook which was developed for experimental use in former project.

Tropical Diseases



Project Site

Recife City (Pernambuco State)



1. Background of Project

In Brazil, basic and applied research in tropical diseases have been carried out extensively, particularly on the main endemic diseases such as Chagas' disease, leishmaniasis, schistosomiasis and malaria. Among a number of universities and research institutes, Keizo Asami Laboratory of Immunopathology (LIKA) of the Universidade Federal de Pernambuco (UFPE), which had been supported by Japanese assistance under Project-type Technical Cooperation for eight years (May 1984-May 1992), is preeminent in the field of tropical diseases and immunopathology in terms of degree of experience, scholarly achievements and technology.

Against this background, in order to disseminate the vast technologies and experience of LIKA to 16 Latin American and Portuguese-speaking African countries, the government of Brazil requested Japan to implement a Third-country Training Program for medical professionals in the field of tropical diseases and immunopathology.

2. Project Overview

(1) Period of Cooperation

FY1996-FY2000

(2) Type of Cooperation

Third-country Training Program

(3) Partner Country's Implementing Organizations

Universidade Federal de Pernambuco (UFPE)

Keizo Asami Laboratory of Immunopathology (LIKA)

(4) Narrative Summary

1) Overall Goal

The latest knowledge of tropical diseases is

disseminated in the countries participating in the training.

2) Project Purpose

Participants of the training program improve their knowledge in the field of tropical diseases and immunopathology.

3) Outputs

- Trainees can properly interpret the typical morphological and physiopathological findings caused by tropical diseases.
- Trainees can prepare biological assays to investigate tropical diseases according to the latest methodological guidance.
- Trainees can appropriately process the data obtained from the studies in tropical diseases.

4) Inputs

Japanese Side

Short-term experts	5
Trainees received	61
Training equipment	
Training expenses	90 million yen

Brazilian Side

Instructors	
Training facilities	
Training equipment	
Training expenses	

(5) Participant Countries

Angola, Mozambique, Sao Tome and Principe, Bolivia, Colombia, Ecuador, Paraguay, Peru, Uruguay, Venezuela, Honduras, Nicaragua, Guatemala, El Salvador, Panama, Dominican Republic

3. Members of Evaluation Team

JICA Brazil Office
(Commissioned to Dr. Liana Lauria Pires)

4. Period of Evaluation

20 October 1999-31 December 1999

5. Results of Evaluation

(1) Efficiency

Training facilities such as classrooms and laboratories were equipped with the necessary items for lectures and practicals. The equipment was high quality and well maintained. The researchers and professors of LIKA, who gave lectures were not only had a wealth of experience, professional accomplishments and technical and academic capabilities, but also took an active interest in the implementation of the training program. The number of lecturers was also suitable for the number of trainees. Considering these factors, it was judged that the inputs had efficiently brought about outputs.

(2) Effectiveness

A total of 48 trainees from 17 countries including Brazilians participated in the courses over four years by 1999. Out of 21 trainees who answered the questionnaires, 85 percent expressed satisfaction with the training courses and answered that the training was useful and improved their skills and knowledge. In addition, some trainees replied that since the training content could be applied in various ways, it awoke their spirit of challenge to carry out research and projects related to tropical diseases at home. From these results, the effectiveness of the program was evaluated high as a whole.

(3) Impact

According to the results of the questionnaires, while there were disadvantages such as the shortage of medical equipment and funds at home, the trainees utilized in daily works the skills and knowledge learned in the training, which contributed to the improvement of diagnosis as well as planning, implementation and evaluation of medical management. Further, all of the trainees who answered the questionnaires were in occupations related to the field of tropical medicine (medical doctors, chemists, bacteriologists, veterinarians, hygienists, etc.) as professors, managers of research institutes or the like, and are engaged in health, education, research and so forth.

Many of these trainees were positive about disseminating the knowledge learned in the training. Specifically, they shared the knowledge with colleagues, focused on themes concerned with tropical diseases in lectures or in seminars, and produced publications.

(4) Relevance

Since the main diseases of the trainees' countries were covered in the training courses, the needs of the trainees were fulfilled. The skills and knowledge the trainees gained have been applied in their countries as stated above. From these, it was concluded that the training courses were relevant to the needs of participating countries.

(5) Sustainability

Since LIKA's operation and management system concerning the training program was well established, and since it maintained a good relationship with UFPE, the sustainability of LIKA as an implementing institution was judged to be sufficient.

6. Lessons Learned and Recommendations

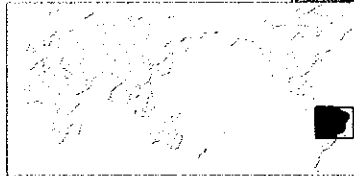
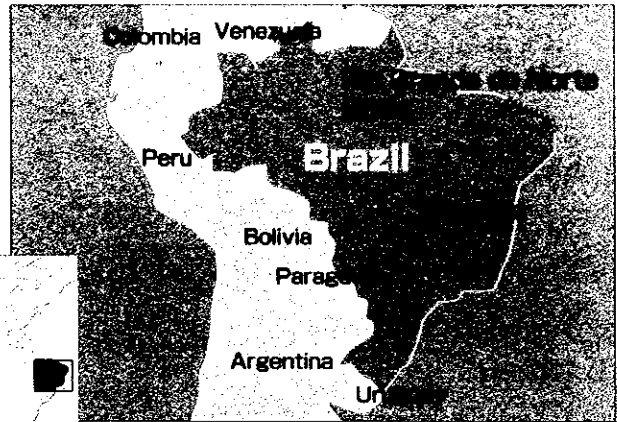
(1) Recommendations

This training program was of great significance from the academic and educational point of view. Japanese experts also highly evaluated the program, particularly the fact that the contents of the training courses were improved each year. From these, it is considered to be effective to implement cooperation program that meets the needs with well-established organization, and hence, it is recommended to continue this training program.

7. Follow-up Situation

Since the demand for this training program was high, and the results were highly evaluated, a new Third-country Training Program entitled "International Course on Tropical Diseases" was started in 2001 for five years.

Conservation of Sand Dunes and Desertification Control of Semi-Arid Areas in Rio Grande do Norte State



Project Site

Rio Grande do Norte State

1. Background of Project

On the Atlantic coast of the northeastern region of Brazil, especially in Rio Grande do Norte State, sand dunes had been encroaching on urban areas due to destructive development and tourism exploitation. They were also encroaching on suburban and rural areas, and causing considerable harm to small-scale farming. In addition, in the semi-arid areas lying within the interior of Rio Grande do Norte State, overgrazing, the brickwork industry's prolonged and indiscriminate excavation, and other developments had caused damage to vegetation and soil, leading to desertification. As a result, farmers gave up agricultural work and sought jobs in the brickwork industry, which resulted in a vicious spiral of indiscriminate deforestation and poor vegetation and soil. With a view to improving the situation, the Brazilian Government requested technical cooperation from Japan in order to develop techniques to restore and conserve sand dunes and prevent desertification.

2. Project Overview

(1) Period of Cooperation

1 April 1997-31 March 2000

(2) Type of Cooperation

Expert Team Dispatch Program

(3) Partner Country's Implementing Organization

Institute of Economic Development and Environment in Rio Grande do Norte State (IDEMA)

(4) Narrative Summary

1) Overall Goal

To provide better living conditions for the local people by making the land arable through

conserving sand dunes and preventing desertification.

2) Project Purpose

Vegetation conditions in the sand dunes and semi-arid areas of Rio Grande do Norte State are improved.

3) Outputs

- a) Counterparts gain knowledge of meteorological observation techniques using necessary machinery and materials.
- b) Vegetation survey techniques are established.
- c) Experiment techniques on sand fixation are established.
- d) Techniques of surveying the amount of sand dune shift are established.
- e) Survey techniques related to the improvement of semi-arid soils are established

4) Inputs

Japanese Side

Long-term experts	1
Short-term experts	10
Trainees received	5
Equipment	30 million yen
Local cost	8 million yen

Brazilian Side

Counterparts	
Experiment site and research facilities	
Local cost	50 million yen

3. Members of Evaluation Team

JICA Brazil Office

(Commissioned to Mr. Arnaldo Roarelli, Junior)

4. Period of Evaluation

25 Sept. 1999-20 Dec. 1999

5. Results of Evaluation

(1) Efficiency

There were a few problems such as delays in the delivery of machinery and materials caused by disorder springing from the Brazilian Government's devaluation of the currency, which had not been expected at the time of planning; however, in general, the inputs from the Japanese side were made smoothly as scheduled and project activities were carried out efficiently. Nonetheless, there were some problems in transferring techniques because IDEMA could not provide a full-time counterpart and because IDEMA was not well informed of what the short-term expert was doing due to communication problems. As far as the component of sand dunes fixation is concerned, the efficiency was lower than that of preventing desertification due to the fact that the machinery installed at the experiment site was vandalized several times, and the topographical survey and installation of the well for irrigation, which were inputs on the Brazilian side, were delayed.

(2) Effectiveness

Generally speaking, technical transfer was carried out efficiently and most outputs were obtained. However, it is too early to evaluate the extent to which the project purpose was attained because the improvement of vegetation in the sand dunes area and semi arid areas started only recently due to the severe drought the area experienced for two of the three years of the project.

(3) Impact

The largest impact made by this project was that the implementing agency, IDEMA, became quite conscious of environmental protection and restoration. It was considered that this would probably benefit the local people a great deal in several years.

Some of provided machinery is utilized by other organizations, as well. This would provide benefits not only to the project site, but to the entire State.

(4) Relevance

Encroaching sand dunes on the coast and desertification in semi-arid areas of Northeast Brazil was not solely an environmental problem but also an economic problem causing serious damage to the local economy. Since solving these problems had been a long-

standing urgent issue for the Brazilian government, the relevance of this project was considered to be high.

(5) Sustainability

IDEMA has sufficient human resources and machinery to carry out activities in this field. Also, additional support is expected from organizations such as the Mossoró Superior School of Agriculture and the Brazilian Institute of Environment and Renewable Natural Resources, which were interested in and provided a great deal of support to the project during the implementation stage. On the other hand, there are some problems such as the decrease in the budget allocated from the state government to IDEMA due to the recession in Brazil, and the scarcity of spare parts in Brazil for the machinery provided through the project.

6. Lessons Learned and Recommendations

(1) Lessons Learned

At the planning stage, both governments should have discussed and confirmed the placement of a full-time counterpart and the activities that Japanese experts would carry out.

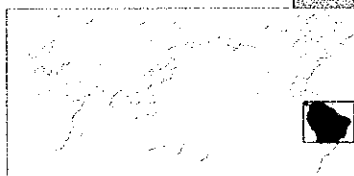
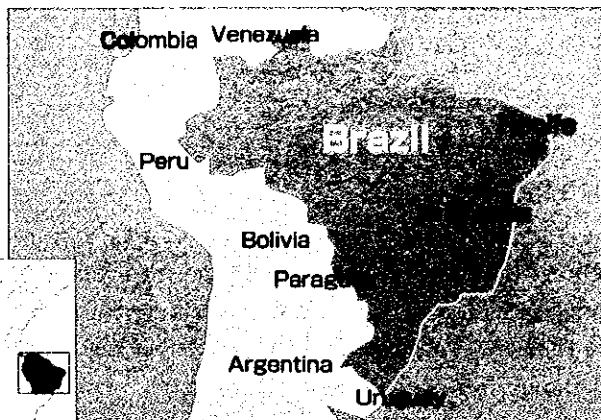
(2) Recommendations

It was recommended that environment education targeting local people be included so that the project could be more sustainable. IDEMA was strongly expecting continued assistance from Japan for the maintenance of machinery and ongoing monitoring activities.

7. Follow-up Situation

It is probable that an Expert Team Dispatch Program "Technology Development for Revegetation and Utilization of Degraded Areas in the Semi-Arid Region (Caatinga) of the Northeastern Brazil" will be conducted by IDEMA as the implementing agency.

The Public Health Development Project for the Northeast Brazil in Pernambuco



Project Site

Recife City (Pernambuco State)

1. Background of Project

The Government of Brazil introduced an Unified Health System (SUS) under the new constitution proclaimed in 1988, and the two areas of 'prevention' and 'treatment' that had been divided between the Ministry of Social Security and the Ministry of Health were integrated under the Ministry of Health. Also, it was decided to promote decentralization whereby the federal, state and municipal governments each determine their roles and responsibilities.

With this background, and in order to promote the SUS in Pernambuco State in the northeast region where people could not access basic health and medical services, the Government of Brazil requested Project-type Technical Cooperation from the Government of Japan. The aims of the assistance were to establish a public health center (NUSP) at the faculty of medicine of the Federal University of Pernambuco and to improve public health and medical services through collaboration with the state health administration.

2. Project Overview

(1) Period of Cooperation

10 February 1995-9 February 2000

(2) Type of Cooperation

Project-type Technical Cooperation

(3) Partner Country's Implementing Organizations

Public Health Center at Federal University of Pernambuco (NUSP: Núcleo de Saúde Pública)
Pernambuco State Health Secretariat

(4) Narrative Summary

1) Overall Goal

New methods for improvement of public health in the pilot areas are applied in Pernambuco State and other states in northeast Brazil.

2) Project Purpose

Through the activities of NUSP, the university and health administration form ties to strengthen SUS,

and the health condition of community people in the pilot areas is improved.

3) Outputs

- a) NUSP is established and collaboration among organizations such as the university, state, municipality and NGOs is promoted.
- b) Public health and medical services (medical staff, facilities and equipment) in the pilot areas are improved.
- c) Improvement program for infant mortality in the state hygiene department is supported.
- d) The capacities of health and related staff in Pernambuco State are enhanced.
- e) The public health services in the pilot areas (65 municipalities) in Pernambuco state for infant-care projects are improved.
- f) Effective study and research activities are implemented to address health issues in the pilot areas.

4) Inputs

Japanese Side

Long-term experts	10
Short-term experts	29
Trainees received	21
Equipment	245 million yen
Local cost	110 million yen

Brazilian Side

Counterparts	117
Land and facilities	
Local cost	US\$ 4 million (444 million yen)

3. Members of Evaluation Team

Leader:

Takefumi KONDO, Professor of School of Medicine, Keio University

Public Health:

Kiyoshi TANAKA, Director of the Bureau of International Cooperation, International Medical Center of Japan

Public Health:

Seiki TATENO, Director, Second Expert Service Division, Bureau of International Cooperation, International Medical Center of Japan

Nurse:

Yoko KONISHI, Deputy Director of Department of Nursing, International Medical Center of Japan

Evaluation Planning:

Harumi KITABAYASHI, Second Medical Cooperation Division, Medical Cooperation Department

Evaluation Analysis:

Takaharu IKEDA, IC Net Limited.

4. Period of Evaluation

23 August 1999-6 September 1999

5. Results of Evaluation**(1) Efficiency**

The inputs from the Japanese side were for the most part provided as planned. On the Brazilian side, the posting of officials in the NUSP administration was delayed until January 1999, so a lot of work was carried over to the final year of the project. In addition, local funds were delayed due to the economic crisis, but the majority of inputs were arranged considering the constraints. Also, regarding the project implementation, there was good team spirit with Brazil taking ownership, and smooth information sharing among related people.

(2) Effectiveness

In the pilot areas, the infant mortality rate decreased by more than 30 percent compared with the time when the project started, and the infectious disease rate, a cause of infant mortality, decreased from 27 percent to 10 percent on average in the pilot areas. A similar trend was identified in the areas for the improvement program of the infant mortality rate which was part of the collaboration activities between NUSP and Pernambuco State. From these results, it was concluded that the project purpose was achieved.

(3) Impact

NUSP played a model role in the expansion of health services into other rural areas, and through the SUS promotion, contributed to the progress of decentralization in the pilot areas. Also, the training methods and curriculum developed by the project for training community health workers were applied in many municipalities, and thus a large impact was realized.

(4) Relevance

Pernambuco State was still tackling problems to improve public health, and the health department of the state was continuing the decentralization process in the health administration and the program for improvement of infant mortality. Considering this, the project purpose was



Interview in low income area

deemed relevant to the government policy.

(5) Sustainability

On the institutional side, the basic infrastructure of NUSP was in place, and collaboration was strengthened among the university, state, municipality, cities and NGOs. Financially, NUSP developed a system to secure funds for research and education on its own by establishing a master's course in the faculty of health. From this point of view, the NUSP had high sustainability.

6. Lessons Learned and Recommendations**(1) Lessons Learned**

NUSP played a key role to promote SUS in cooperation with the state and municipality and this type of cooperation emphasized the importance of coordinating among different organizations. It is important for projects like this not to limit activities to individual technical training by experts but also, as a coordinator, to promote joint work among the different organizations.

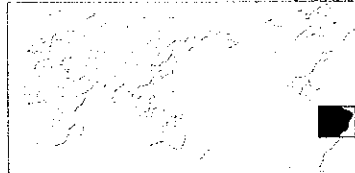
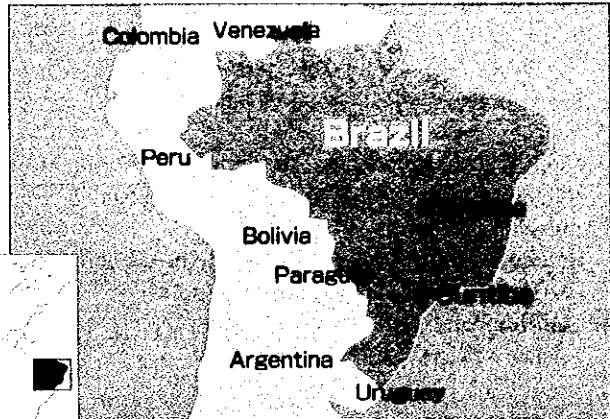
As a result of the positive application of PCM, the project staff always achieved activities with common ideas and created outputs. On the other, it was desired to develop more efficient methods of planning, monitoring and evaluation as considerable energy was spent for implementation of the workshops and consensus building.

(2) Recommendations

As this project mostly achieved its purpose, it was completed in February 2000 as planned.

In order to disseminate the project outputs into all municipalities across the state, it is desirable that the health department of the state provides instruction and assistance in order to apply the improvement of the health system in the pilot areas.

Brazilian Institute of Quality and Productivity



Project Site Curitiba (Paraná State)

1. Background of Project

In June 1990, the Collor Administration (March 1990 to September 1992) started the Brazilian Program for Quality and Productivity (PBQP) with the aim of upgrading quality and productivity of industries of the country, while promoting deregulation such as import liberalization and introduction of foreign capital, and privatization of government-owned enterprises. A number of organizations participated in the Program under which 16 states initially developed their own programs.

Furthermore, the Brazilian Government planned to establish in five states the Brazilian Institutes for Quality and Productivity (IBQP), which carry out specialized activities for improving quality and productivity, and requested from the Japanese Government Project-type Technical Cooperation.

2. Project Overview

(1) Period of Cooperation

1 June 1995-31 May 2000

(2) Type of Cooperation

Project-type Technical Cooperation

(3) Partner Country's Implementing Organization

Brazilian Institute for Quality and Productivity in Paraná (IBQP-PR)

(4) Narrative Summary

1) Overall Goal

The concept and technology of productivity improvement are disseminated among Brazilian society through IBQP-PR.

2) Project Purpose

IBQP-PR is able to upgrade and develop the technology and knowledge for productivity improvement.

3) Outputs

- a) The management system of the Project is established.
- b) The equipment necessary to implement activities in the said field is provided, operated and maintained properly.
- c) The technical capacity of the counterpart personnel is upgraded in the said field.

- d) Seminars and training courses are established and managed.
- e) Consultation services are implemented systematically.
- f) Public relations and promotion for productivity improvement are implemented systematically.

4) Inputs

Japanese Side

Long-term experts	12
Short-term experts	22
Trainees received	40
Equipment	0.84 million real (approx. 53 million yen)
Local cost	approx. 910 million yen

Brazilian Side

Counterparts	20
Land and facilities	
Equipment	0.32 million real (approx. 20 million yen)
Local cost	12 million real (approx. 742 million yen)

3. Members of Evaluation Team

Team Leader:

Norinobu HAYASHI, Managing Director, Mining & Industrial Development Cooperation Department, JICA

Technical Cooperation Planning:

Yoko KATO, Specialist for Technology Cooperation, Technical Cooperation Division, Economic Cooperation Department, International Trade Policy Bureau, Ministry of International Trade and Industry

Technical Transfer Program:

Koh KASUGA, Executive Director, International Division, Japan Productivity Center for Socio-Economic Development (JPC-SED)

Human Resources Development:

Takeshi FUJITA, International Division, JPC-SED

Evaluation Management:

Hironori KIMURA, First Technical Cooperation Division, Mining & Industrial Development Cooperation Department, JICA

Evaluation Analysis:

Wataru TAKADA, CRC Overseas Cooperation Inc.

4. Period of Evaluation

26 March 2000-15 April 2000

5. Results of Evaluation

(1) Efficiency

Counterparts were not allocated as planned and that affected the technical cooperation process. As a gap between the needs of the Brazilian side and those of the Japanese side was revealed at an early stage of project implementation, the means of technology transfer were revised following a series of discussions, to put more emphasis on practical on-the-job training. Such a shift from knowledge-oriented to a more practical approach promoted the smooth implementation of the project.

(2) Effectiveness

Technical transfer proceeded in IBQP-PR in such fields as promotion of a productivity movement and human resource development through the project activities including the increase in the number of the staff (there were 35 staff members at the time of evaluation), establishment of a management system, and utilization of computers and other information technology devices. By the end of February 2000, IBQP-PR held 56 seminars on productivity and accepted 234 trainees to 17 productivity agent capacitating courses. Also, consultation services were provided to 37 enterprises, and the number of publications including brochures and bulletins reached a total of 28. Based on these factors, it was concluded that the project purpose would likely be achieved within the planned cooperation period.

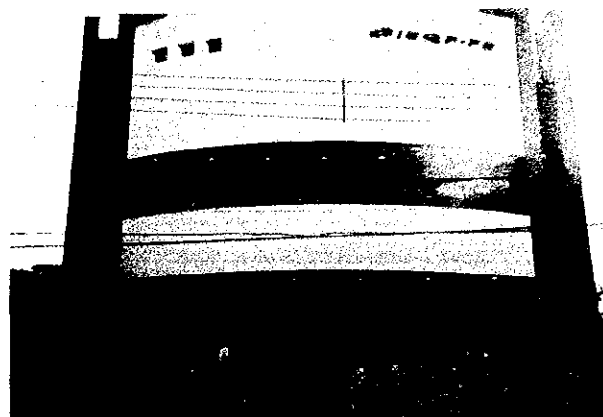
(3) Impact

As the concept of productivity that IBQP-PR proposed was comprehensive, authorities such as the Brazilian Service for the Support of Micro and Small Enterprises (SEBRAE) and the Ministry of Development, Industry and International Trade (MDIC), entrusted IBQP-PR with projects and national policies including reinforcement of competitiveness of enterprises and export promotion. Also, in the Latin America Productivity Seminar organized by IBQP-PR with participation of eight guest countries from Central and South America in January 2000, it was agreed to create the "Latin America Productivity Network" in order to have regular meetings and to exchange information.

(4) Relevance

The overall goal of the project was in conformity with the objectives of PBQP, the national policy under which the project was planned. At the same time, the fulfillment of PBQP required the implementation of activities including dissemination of the concept and technology of productivity, support of enterprises and human resources development in industrial communities through the improvement of productivity organizations such as IBQP-PR. Therefore, it was felt that the project purpose met with the national policy as well.

In addition, the shift of the technology transfer approach from lectures to a more practical manner effectively enhanced the technical capability of IBQP-PR and was thus appropriate.



Brazilian Institute for Quality and Productivity in Paraná

(5) Sustainability

In 1999, the unification of IBQP-National, the central organization of IBQPs, and IBQP-PR was agreed. IBQP-PR was widely recognized as a productivity organization operating nationwide, not only in Paraná State, and therefore its activities should be further strengthened. In terms of financial aspects, the necessary budget for sustaining IBQP-PR's activities was thought likely to be secured considering that closer links with SEBRAE (which was through MDIC to fund most of IBQP-PR's operating expenses) were expected, and that IBQP-PR would increase its self-income from consulting services and other projects. Technical sustainability was also plausible: through the project activities, the counterparts' technical level reached the extent capable of continuing and further improving the ongoing activities.

6. Lessons Learned and Recommendations

(1) Lessons Learned

In cases where an implementing organization is newly established at the start of the project, organizational and institutional weaknesses are likely to impact management of the project. The project design must, therefore, be flexible and regularly monitored in order to make adjustments based on the actual project environment.

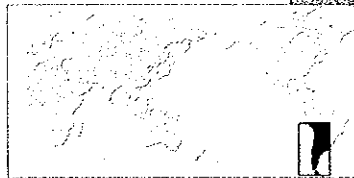
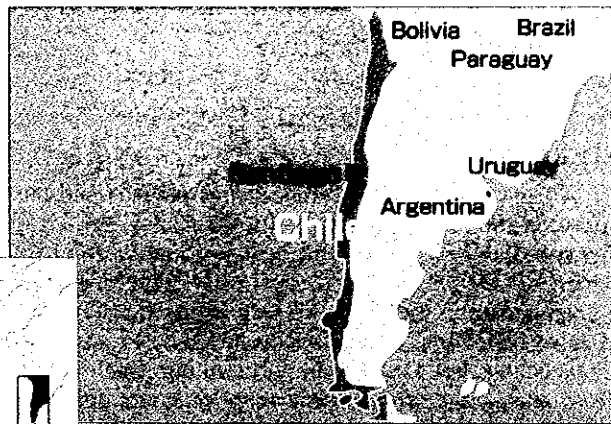
(2) Recommendations

As it was believed that the project purpose would likely be achieved within the cooperation period, it was considered appropriate to terminate the project as initially planned.

7. Follow-up Situation

Two Individual Experts, one in productivity promotion (June 2000-May 2002) and the other in management consulting technology (October 2000-October 2002), have been dispatched to IBQP-PR. Also, a Third-country Training Program titled "Productivity Integrated Management" is being conducted for five years from 2001/2002.

The National Center for the Environment



Project Sites Santiago

1. Background of Project

In the Republic of Chile, environmental pollution such as air pollution caused by vehicle exhaust gases, water pollution from factories and households, and general waste, became a significant problem accompanying industrial and economic development as well as the population concentration in the Santiago Metropolitan area.

Due to the situation, the Chilean Government sought to establish a center to conduct training, research and development relevant to environmental matters, as well as environmental information. They requested Project-type Technical Cooperation from the Japanese Government to achieve this goal.

2. Project Overview

(1) Period of Cooperation

1 June 1996-31 May 2000

(2) Type of Cooperation

Project-type Technical Cooperation

(3) Partner Country's Implementing Organization

National Commission for the Environment (CONAMA), The University of Chile

(4) Narrative Summary

1) Overall Goal

To formulate and implement appropriate environment protection policies in the Republic of Chile.

2) Project Purpose

To enable the center to conduct training, research and development relevant to environmental matters, as well as to provide environmental information.

3) Outputs

- a) To develop methods to simulate and forecast air pollution episodes in order to alleviate heavy air contamination over the Metropolitan Region.
- b) To develop methodologies for water quality evaluation and treatment techniques.
- c) To develop methodologies for the analysis of industrial solid wastes and to evaluate the current

methods of disposal.

- d) To develop methodologies for the analysis of air pollution as well as methods to monitor air quality.
- e) To contribute to the establishment of an environmental information system in both the Metropolitan region and the national level.
- f) To facilitate human resources development.
- g) To enhance environmental impact assessment and environmental management systems.
- h) to establish the facilities and equipment necessary to conduct the activities of the project.

4) Inputs

Japanese Side

Long-term experts	11
Short-term experts	31
Trainees received	26
Equipment	approx. 496 million yen
Local cost	approx. 35 million yen

Chilean Side

Counterparts	79
Buildings and facilities	
Equipment	288 million pesos (approx. 60 million yen)
Local cost	3.4 billion pesos (approx. 710 million yen)

3. Members of Evaluation Team

Team Leader:

Kenichi TANAKA, Development Specialist, JICA

Forecast of Air Pollution Episodes:

Masanobu HIRASAWA, Head, The Third Research Laboratory, Meteorological Research Institute, Japan Meteorological Agency

Water Quality and Industrial Liquid Wastes:

Toro NAKAHARA, Senior Researcher, National Institute of Bioscience and Human-Technology, Ministry of International Trade and Industry

Management of Industrial Solid Wastes:

Kiyoshi KAWAMURA, Director-Engineer and Manager, Osaka City Government

Air Quality Control:

Takashi UEHIRO, International Coordination Researcher, National Institute for Environmental

Studies, Environment Agency

Evaluation Analysis:

Atau KISHINAMI, PADECO Co., Ltd.

Evaluation Planning:

Takashi MIZUNO, Deputy Director, Second Technical Cooperation Division, Social Development Cooperation Department, JICA

4. Period of Evaluation

1 November 1999-13 November 1999

5. Results of Evaluation

(1) Efficiency

Inputs from the Japanese side, such as the dispatch of both long-term and short-term experts, the training of counterparts, and provision of facilities, as well as the allocation of operational costs on the Chilean side were carried out on schedule. However, reconstruction of the Center was delayed due to the change of the head of the National Commission for the Environment and some counterparts were not assigned in the planned positions for the first three years. These negative factors disrupted the progress of some of the activities.

(2) Effectiveness

Continuous trainings by both long- and short-term experts leading to the realization of the project purpose as well as counterparts' strong desire to acquire techniques enabled the technology transfer in various areas including the air pollution forecast. In particular, inventory activities that are conducted in order to detect the source of pollution were found to have achieved a higher performance than planned. However, other activities, such as experimentation, and information gathering and analysis, progressed slowly because the reconstruction of the Center was completed one and a half years after the beginning of the project. Some training courses were also delayed. Therefore, the project purpose had not yet been achieved.

(3) Impact

It is difficult to judge the achievement of the overall goal when the project purpose is not completely accomplished. However, some impacts of the project could be observed in the University of Chile in which The National Center for the Environment (CENMA) was established. Various disciplines and departments, such as agriculture, pharmacology, medicine, economy and architecture, started to give technical advice to the center and an inter-disciplinary exchange of opinions among these departments became active.

(4) Relevance

The project matched the needs of the current environmental policy of the Chilean Government, which sought to measure the level of air and water pollution and reflect the results to public services. Following the previous administration, the Frei administration, which began in March 1996 after the project commenced, continued to actively tackle environmental issues. Thus, the relevance of the project was considered high.



An evaluation meeting

(5) Sustainability

The organizational structure of CENMA was strengthened since a representative from CONAMA, who was appointed by the Ministerial Committee, joined the Board of Directors of CENMA and is involved in its management. In terms of financial sustainability, the allocation of the budget focused on achieving the goals of the project, and the budget is expected to remain at the same level after project completion. However, it was recommended that the Center secure its own sources of revenue by charging fees for technical services, as well as reform its financial structure in order to strengthen sustainability. Further technical improvement of the CENMA through the development of human resources is also needed.

6. Lessons Learned and Recommendations

(1) Lessons Learned

It is essential that buildings and facilities that serve as the base for the activities be established prior to the project implementation in order to carry out the project as planned. It is also vital to consider the budgetary procedures of the beneficiary country in the process of planning when the cost of fundamental facilities is to be covered by them.

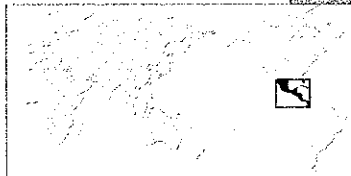
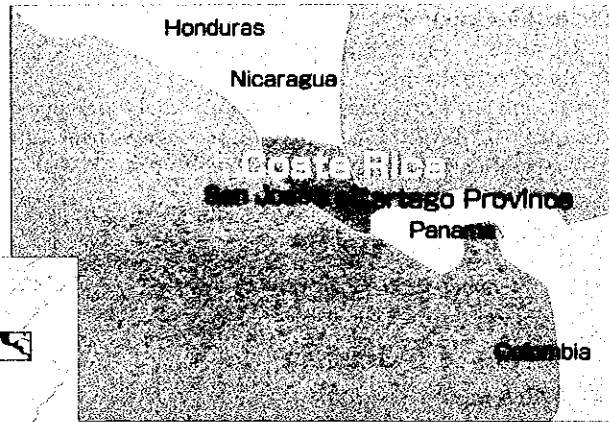
(2) Recommendations

Although impacts of the technology transfer appeared, the project purpose was not achieved satisfactorily due to the delay in the reconstruction of CENMA. On the other hand, it was viewed that the Chilean side fulfilled the institutional and financial conditions required by Japan in that the University of Chile established an executive committee and advisory council for the project. Considering this, a two-year extension of the cooperation was recommended based on the specific components that were not completed.

7. Follow-up Situation

Following the above-mentioned recommendation, a two-year Follow-up cooperation ending 31 May 2001 was implemented in order to improve analytical skills in the laboratory and establish an information network enabling the center to disseminate the results of cooperation.

Project for Early Detection of Gastric Cancer



Project Site Cartago Province

1. Background of Project

Costa Rica was a country with one of Latin America's highest health standards, but diseases such as cancer and cardiac infarction were increasing. In particular, the death rate from gastric cancer was high due to the poor rate of early diagnosis. Under these circumstances, the Government of Costa Rica completely renovated the gastric cancer detection center of Dr. Max Peralta Hospital (MPH) in Cartago Province under the Grant Assistance for Grassroots Project of Japan. Following this, the Government requested Project-type Technical Cooperation from Japan aiming at establishment of a mass screening, detection, and treatment system (hereafter referred to as the "System") of gastric cancer.

2. Project Overview

(1) Period of Cooperation

1 March 1995-28 February 2000

(2) Type of Cooperation

Project-type Technical Cooperation

(3) Partner Country's Implementing Organization

Costa Rican Social Security System

(4) Narrative Summary

1) Overall Goal

The death rate of gastric cancer is reduced in Costa Rica.

2) Project Purpose

A mass screening, detection and treatment system for gastric cancer in the service areas of Dr. Max Peralta Hospital is established.

3) Outputs

- A mass screening system of gastric cancer is established in the model areas in Cartago City.
- A database information system on gastric cancer is established.
- Research and epidemiological study of gastric cancer are strengthened.
- Personnel in charge of diagnosis and treatment of

gastric cancer are developed.

- Hospital administration and health attention related to mass screening, detection, and treatment of gastric cancer are improved.
- Cost-effectiveness study on mass screening, detection, and treatment system of gastric cancer is carried out.

4) Inputs

Japanese Side

Long-term experts	12
Short-term experts	21
Trainees received	17
Equipment	approx. 312 million yen
Local cost	approx. 40 million yen

Costa Rican Side

Counterparts	27
Land and facilities (The detection center of gastric cancer)	89 million colons (approx. 30 million yen)
Local cost	125 million colons (approx. 43 million yen)

3. Members of Evaluation Team

Team Leader:

Tetsuro KAJIWARA, Professor and Director, Department of Surgery, Tokyo Women's Medical University Daini Hospital

Radiology:

Tomohiko OKAWA, Professor, Department of Radiology, Tokyo Women's Medical University

Nursing:

Fumiyo MORITA, Chief nurse, Tokyo Women's Medical University Daini Hospital

Evaluation Planning:

Akio OKAMURA, Second Medical Cooperation Division, Medical Cooperation Department, JICA

Evaluation Analysis:

Yasushi WADA, IC Net, Ltd.

4. Period of Evaluation

18 August 1999-30 August 1999

5. Results of Evaluation

(1) Efficiency

The inputs on the Japanese side were carried out generally on schedule, although the project leader and the experts on medical databases were dispatched late. On the other hand, the Costa Rican side took two years to complete the allocation of the counterparts, and the establishment of the Computerized Axial Tomography (CAT) was also delayed. Furthermore, diagnosis activities were suspended for eight months due to the reconstruction of MPH. However, the basic activities of this project were implemented thanks to the efforts of both parties.

(2) Effectiveness

It was recognized that transfer of technology was completed except for operation of the CAT system which was installed late and the system for early diagnosis and treatment of gastric cancer was established. At the time of this evaluation study, the Center had carried out more than 8,000 examinations and almost 50 surgeries. In terms of mass screening activities in particular, a set of activities, such as transporting community people, examination, and notification of examination results, were now a routine part of the system, and it was expected that all 8,793 people in the target communities could receive health checks by the time of termination of the project. Also, collection of data from examinations was thorough and this contributed to epidemiological studies.

(3) Impact

Fifty-six gastric cancer patients out of fifty-eight patients returned to their normal way of life. Medical treatment cost was also reduced as the hospitalization period was shortened through the project, and this brought an economic benefit to patients. In addition, early gastric cancers, expected to develop into progressive cancer in a few years time, were found; therefore, the reduction of the cases of death by gastric cancer was expected to decrease in the project sites.

(4) Relevance

Gastric cancer was a high-priority issue in the countermeasures for cancer plan of the government of Costa Rica. Therefore, the overall goal of reducing the death rate from gastric cancer in Costa Rica as initially planned was relevant.

(5) Sustainability

In terms of financial sustainability, the Costa Rican Social Security System declared their commitment to provide financial assistance. Also, the outcome of the project was considered to be developed at a national level and, thus, a certain level of organizational sustainability



Expert giving a lecture on CT scanner technique

was also expected. Concurrently, although the Center was considered technically sustainable as well, assistance to transfer the technology of CAT system operation and diagnostics should be continued as it was behind schedule.

6. Lessons Learned and Recommendations

(1) Lessons Learned

Availability of the basic facility for project activities should be a condition for commencement of a project.

In the case where cooperation covers several technical fields, sufficient numbers of counterpart personnel should be allocated for each field, and an existence of a system should be confirmed for correct dissemination of technique to counterpart personnel.

(2) Recommendations

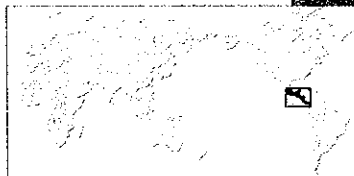
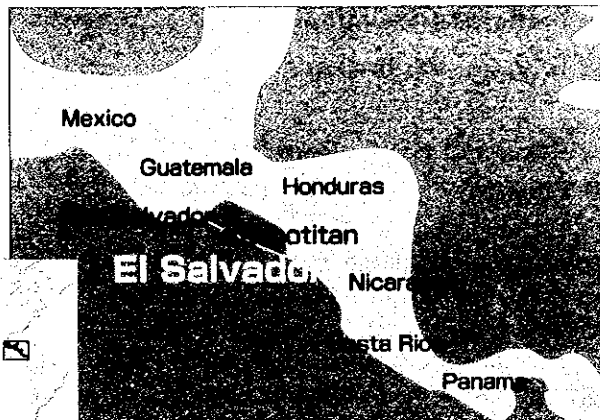
In order to diffuse project achievements in other parts of Costa Rica, it was recommended that the Costa Rican authorities develop a strategy plan which would be feasible from the viewpoint of financial, human resources, and equipment allocation.

It was also recommended that the cooperation through the experts in radiology be continued for a fixed period of time after completion of the project to ensure complementary technical guidance concerning the CAT system.

7. Follow-up Situation

Based on the recommendations made above, cooperation through the dispatch of two experts in radiology was continued after termination of the project until 18 December 2000.

The Project for the Restoration of Rural Areas in Zapotitan



Project Site

Zapotitan (La Libertad Province)

1. Background of Project

In January 1992, in El Salvador, a peace agreement was concluded between the government and antigovernment rebels and twelve years of civil war ended. During the war, the highway system, socio-economic infrastructure and agriculture-related facilities were destroyed. As a result, agricultural productivity in the major agricultural areas established during the 1970s declined dramatically. Under these circumstances, the Government of El Salvador formulated a restoration plan for agricultural infrastructure and facilities in Zapotitan, one of the major agricultural areas, for the revitalization of suburban agriculture, and requested Grant Aid from Japan.

2. Project Overview

(1) Period of Cooperation

FY1995-FY1997

(2) Type of Cooperation

Grant Aid

(3) Partner Country's Implementing Organization

Directorate General of Natural Resources, Ministry of Agriculture and Livestock

(4) Narrative Summary

1) Overall Goal

Domestic Agricultural Community Model is established through diversification of agricultural products (promotion of import-substitution crops and expansion of cash crop production) and the establishment of farmer's production cooperatives.

2) Project Purpose

Agricultural infrastructure is established in Zapotitan.

3) Outputs

- a) Irrigation facilities are constructed.
- b) Small-scale bridges are constructed.
- c) An agricultural marketing center is constructed.
Equipment for the operation and maintenance of facilities is procured.

4) Inputs

Japanese Side

Grant	Total 1.03 billion yen (E/N amount)
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El Salvador Side

Land

3. Members of Evaluation Team

Facilities Study:

Narihide NAGAYO, Development Specialist, JICA

Operation and Maintenance Study:

Norio YONESAKI, Project Monitoring and Coordination Division, Grant Aid Management Department, JICA

Interpreter:

Aki HIGUCHI, Japan International Cooperation Center

4. Period of Evaluation

18 March 2000-27 March 2000

5. Results of Evaluation

(1) Efficiency

It was necessary to revise the construction schedule due to adverse weather conditions resulting from El Nino in 1997, and damage and theft of equipment and resources were frequent. However, it was evaluated that the project was completed within the project period as initially planned.

(2) Effectiveness

As planned, irrigation facilities and related equipment were established including 18 wells and pumps, three diversion weirs, a 12-kilometer irrigation channel, two small-scale bridges for access of circulation, and the agricultural marketing center. As such, the agricultural infrastructure was established in Zapotitan, and it was considered that the project purpose was achieved.

(3) Impact

As a result of the project, the amount of water nearly doubled in the areas where renovation work of the irrigation canal was carried out and this enabled farmers to secure sufficient water for irrigation in the dry season. However, the definition of Domestic Agricultural Community Model set in the overall goal was unclear, reflecting that the government had not considered concrete measures to achieve this goal. In terms of volume of agricultural production, the government had not made concrete plans for establishing and extending the cultivation technology system for expansion of production volume, enhancing the activities of farmer's organizations or establishing a circulation system. As such, there were few impacts recognized as relating to the overall goal.

(4) Relevance

The project was considered relevant in the respect that the purpose corresponded to the national policy as it was based on the agriculture sector plan in the Five-Year Economic and Social Development Plan (1989-1994). The plan was aimed at diversification of the production base, improvement of the self-sufficiency ratio of agricultural production, food security, stable provision of products to the domestic market, production of export crops, and expansion of third-country markets. However, the agricultural policy of the government of El Salvador lacked a concrete, effective strategy as it did not indicate target crops nor set numerical indicators for the expansion of production. Therefore, it was difficult to identify in detail the relevance of the project plan to the concrete policy of the partner country.

(5) Sustainability

It was difficult for the evaluation team to confirm whether the budget and personnel of the implementing organization of the project, the Ministry of Agriculture and Livestock, were secured, as the government of El Salvador promised, since the collection rate for water fees was low at 40 percent and the government staff in the agricultural sector was reduced as a result of the World Bank's structural adjustment. In addition, there were some

problems regarding operation and maintenance, such as an irrigation pump whose operation was temporarily suspended in the first year after the delivery of facilities in 1998/99 because the budget for electricity fees was not allocated by the government of El Salvador, and the theft of one vehicle. Furthermore, although the construction of the marketing center proceeded despite there being no concrete measures on the part of the government of El Salvador for the long-term issues, such as organization of farmers and increase of vegetable production, and the fact that a plan for utilizing the marketing center had still not been prepared two years after delivery. Also, most of the maintenance activities of the constructed irrigation facilities, wells and bridges as well as construction equipment were left to the water user's associations without clarifying the sharing of responsibilities. As such, many issues remained in terms of sustainability.

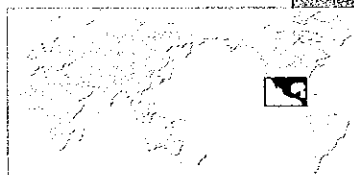
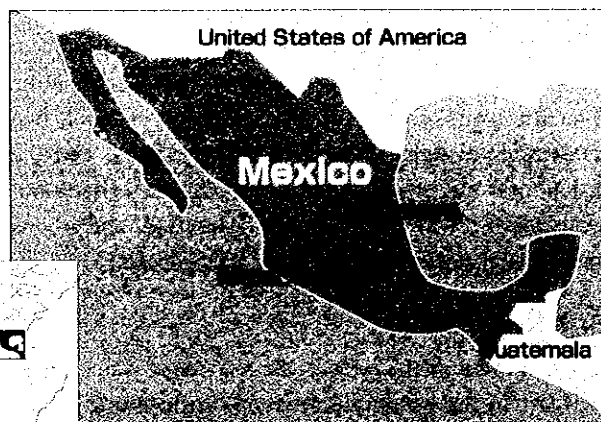
6. Lessons Learned and Recommendations**(1) Lessons Learned**

In this project, there were problems, such as the reduction of personnel due to the structural adjustment of the World Bank, and constructing a marketing center without having any plan for its use. Therefore, it is important to set the scale of cooperation in consideration of the future use of facilities and the condition of the partner country. Expected external factors should be also taken into consideration and a feasible and highly relevant plan formulated accordingly.

(2) Recommendations

The definition of "model agricultural community" and national irrigation area should be clarified in the agricultural policy. Also, further direct and indirect assistance by Japan is recommended. Direct assistance might include the continuation and enhancement of guidance by JOCV, which had been assisting the activities of farmer's cooperatives and vegetable cultivation. Indirect support might take the form of allowing the members of water user's association to attend the training and seminars of the Project-type Technical Cooperation project on Strengthening of Agricultural Technology Development and Transfer, implemented in Zapotitan as a model area.

Electronic Control for Teachers



Project Sites Celaya

1. Background of Project

Since automation of industries was considered a significant issue in Mexico, the demand for re-education and training of teachers who were engaged in vocational training in the field of electronic control had been increasing. According to this background, the Mexico-Japan Technology Education Center (CETMEJA) was opened with the support of Japanese Project-type Technical Cooperation for five years (1982-1987). And thus, a system for securing the continuous development and supply of middle-level engineers was established. Since its opening, as a vocational training school in the field of electronic control, CETMEJA had sent out about 100 graduates annually mainly to the industrial circles of Central Mexico. CETMEJA also became an organization providing training and technical guidance to local industries.

Under these circumstances, the Government of Mexico requested Japan to assist the implementation of a Third-country Training Program aiming to disseminate accumulated experience and technologies to other Latin American and Caribbean countries.

2. Project Overview

(1) Period of Cooperation

FY1996-FY2000

(2) Type of Cooperation

Third-country Training Program

(3) Partner Country's Implementing Organizations

Dirección General de Educación Tecnológica Industrial (DGETI)
Mexico-Japan Technology Education Center (CETMEJA)

(4) Narrative Summary

1) Overall Goal

The capability of vocational training organizations in the field of electronic control in Latin American and Caribbean countries including Mexico is

improved.

2) Project Purpose

Trainees of the training program improve their vocational training capabilities in the field of electronic control.

3) Outputs

- a) Trainees acquire knowledge, skills and teaching methods of control circuits for basic electronic devices.
- b) Trainees acquire knowledge, skills and teaching methods of digital circuits for motor control and pneumatic system control.
- c) Trainees acquire knowledge of applications of support software for designing electronic control circuits.
- d) Trainees acquire knowledge, skills and teaching methods of applications of process control devices such as a programmable logic controllers (PLCs).
- e) Trainees acquire knowledge, skills and teaching methods of peripheral equipment control using personal computers.

4) Inputs

Japanese Side

Short-term experts	5
Training equipment	9 million yen
Training expenses	38 million yen

Mexican Side

Instructors and management staff	30
Training facilities and training equipment	
Training expenses	11 million yen

(5) Participant Countries

Belize, Colombia, Costa Rica, Cuba, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Peru, Dominican Republic, Venezuela

3. Members of Evaluation Team

JICA Mexico Office
(Commissioned to Y.I.T. Asociados, S.C.)

4. Period of Evaluation

15 October 1999-15 March 2000

5. Results of Evaluation

(1) Efficiency

Training equipment was supplied on time and well utilized. Particularly, the equipment brought by short-term experts, which was indispensable to construct circuits and to program, played an important role in the training. Since the training courses were conducted in Spanish with Spanish textbooks, trainees could better grasp electronic control technologies and were highly motivated to learn in their native language. Therefore, the training program was evaluated as highly efficient.

(2) Effectiveness

A total of 52 people from 11 countries participated in the training courses during a period of four years until FY1999. According to the course reports, most of the trainees mastered skills and knowledge on five subjects, such as digital control of basic electronic devices and motors. All trainees earned high average marks, over 80 percent in achievement examinations conducted by CETMEJA three times per training course. In addition, according to the results of the questionnaires, all 25 trainees who answered the questionnaires were engaged in teaching electronic engineering at home. From these, the effectiveness of this training program was evaluated to be high.

(3) Impact

Trainees from 8 out of 11 countries answered that even though they want to utilize the skills and knowledge learned in the training courses in their countries, they could not because the necessary equipment was unavailable. Still, the industry need for electronic control specialists was increasing throughout the world. There were some cases of trainees whose organizations improved their equipment by their own efforts. Also, the content of training courses were modified to better meet needs based on the suggestions and proposals of trainees.

(4) Relevance

In the industrial sector in Latin America and the Caribbean, there was a high demand for human resources with the ability to construct, operate and maintain electronic control systems. The number of applicants to this training program was always more than three times as many as the capacity, and it continued to increase. The relevance of this training program was, therefore, judged to be high.

(5) Sustainability

DGETI acknowledged the significance of this training program, and CETMEJA's implementing system was well established. However, it was difficult for them to cover the necessary expenses of the training courses. From this



Exercise in designing electronic control circuits.

uncertainty, the sustainability was not evaluated as high.

6. Lessons Learned and Recommendations

(1) Lessons Learned

In order to enhance the Sustainability of a Third-country Training Program, it must be examined from the planning stages whether it is possible to have a system which lets the implementing country and/or the participating countries bear expenses relevant to trainees such as air fares and accommodation, which have been borne by the Japanese side. Or, it may be possible to invite trainees within the framework of the South-south Cooperation conducted by the Mexican government.

(2) Recommendations

While there were requests from the trainees to introduce mechatronics into the training as a new theme, it was considered difficult for CETMEJA to accommodate them soon in terms of human resources and facilities. On the other hand, having heard requests from the participating countries to continue the training program, DGETI and CETMEJA desired to continue this Third-country Training Program in one way or another.

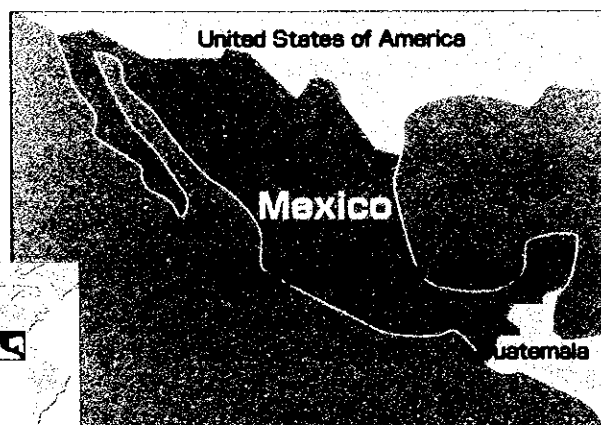
It was recommended, therefore, to extend the program to the second phase by linking it to the Third-country Training Program (FY2000-FY2004) conducted in the National Actualization Center for Teachers (Centro Nacional de Actualización Docente: CNAD) in which the government of Japan implemented a Project-type Technical Cooperation program.

7. Follow-up Situation

Based on the above recommendation, and taking into account the high demand for the training program and CETMEJA's positive stance, the Third-country Training Program "Advanced Electronics Control" is being conducted from FY2001 to FY2003.

The Third-country Training Program "Mechatronics" is also being conducted in CNAD from FY2000 to FY2004.

Shipping and Port Management



Project Sites Veracruz

1. Background of Project

Since 1986, JICA had dispatched experts to Mexican Seamen's Education Fund (FIDENA), Merchant Marine Academy of Veracruz, and transferred technology concerning shipping and port management on a continual basis. Also from 1990 to 1995, JICA accepted nine participants from the Academy to group training courses in Japan. JICA has thus supported development of specialists who play leading roles in shipping and port management in Mexico.

Against this background, the Government of Mexico requested Japan to implement a Third-country Training Program, intending to make the Merchant Marine Academy of Veracruz the stronghold of education and research of shipping and port management in Latin America and the Caribbean.

2. Project Overview

(1) Period of Cooperation

FY1996-FY2000

(2) Type of Cooperation

Third-country Training Program

(3) Partner Country's Implementing Organizations

Mexican Seamen's Education Fund (FIDENA)
Merchant Marine Academy of Veracruz

(4) Narrative Summary

- 1) Overall Goal
The capabilities of organizations engaged in shipping and port management are improved in Latin American and the Caribbean countries, including Mexico.
- 2) Project Purpose
Shipping and port management capabilities of the training participants are improved.
- 3) Outputs
 - a) Trainees acquire knowledge of shipping

management and fleet planning.

- b) Trainees acquire knowledge of shipowner's liability and marine insurance (including for oil pollution) on the carriage of oil and other cargo.
- c) Trainees acquire knowledge of the many types of contracts regarding carriage by sea.
- d) Trainees acquire knowledge of port organizations and their management.

4) Inputs

Japanese Side

Short-term experts	4
Training equipment	1 million yen
Training expenses	43 million yen

Mexican Side

Instructors	68
Operations staff	15
Training facilities and training equipment	
Training expenses	13 million yen

(5) Participant Countries

Argentina, Bolivia, Costa Rica, Cuba, Chile, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Jamaica, Nicaragua, Panama, Peru, Uruguay, Venezuela

3. Members of Evaluation Team

JICA Mexico Office
(Commissioned to Y.I.T. Asociados, S.C.)

4. Period of Evaluation

15 October 1999-15 March 2000

5. Results of Evaluation

(1) Efficiency

The previous contribution of the long-term expert dispatched to the Merchant Marine Academy of Veracruz in 1989, was extremely large and vital in this training

program. At the beginning of the program, about 70 percent of lecturers were counterparts who had been trained by the expert (the number of visiting lecturers gradually increased later), and the sixteen volumes of textbooks made by the expert and his counterparts were adopted in the training and highly useful. With the exception of the personal computers provided by Japan at the beginning of the program, the Mexican side prepared the rest of the training equipment, and the timing of its preparation was adequate.

(2) Effectiveness

During the cooperation period of five years from 1996, 97 people participated in the training courses. Judging from the achievement of the trainees in the examinations, the information was transferred effectively as average marks were always above 80 percent. In addition, 46 of the 48 trainees who responded to the questionnaires or interviews in this evaluation survey answered that their present job was related to the training program, and the knowledge they learned in the courses was of good use. Considering these factors, the effectiveness of the program was evaluated to be high.

(3) Impact

The majority of trainees (38/48) who answered the questionnaires or interviews made efforts to disseminate the knowledge gained by presenting it in seminars, lectures, or in publications, or by making textbooks modifying the contents to suit the situation of their country. Furthermore, based on the Japanese expert's activities which extended over a long period of time and the outcomes of this training program, a master course in management of shipping and port enterprises was opened in the Merchant Marine Academy of Veracruz in 1999. Further, in the Panama Institute of Technology, to which one of the trainees belonged, the port and shipping operations course was promoted from the junior college level to the college level on the advice of the above mentioned Japanese expert. Multi-modal policy¹⁾ had been brought into practice by trainees from Bolivia. Overall, several educational and administrative impacts can be observed as stated above.

(4) Relevance

Carried forward by the waves of globalization, Latin American and Caribbean countries were aiming towards export-oriented economic development. As a key sector in this movement, the shipping and port sector was in the process of modernization. Since both carrier nations and non-carrier nations were pushing ahead with the privatization of port operations, human resources development for the post-privatization system was an urgent necessity. Under these circumstances, the high need for this training program was indicated by the number of applicants, which had been double the capacity



Training course

every year. The relevance of this program at the time of the evaluation was therefore assessed to be high.

(5) Sustainability

The training implementation capabilities of the Merchant Marine Academy of Veracruz, were judged to be sufficient as demonstrated by the opening of the new master course on shipping and port management. However, there was uncertainty regarding financial sustainability, since it was considered difficult for FIDENA to continue implementing this training program using its own funds.

6. Lessons Learned and Recommendations

(1) Lessons Learned

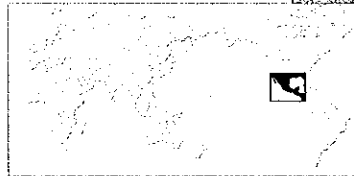
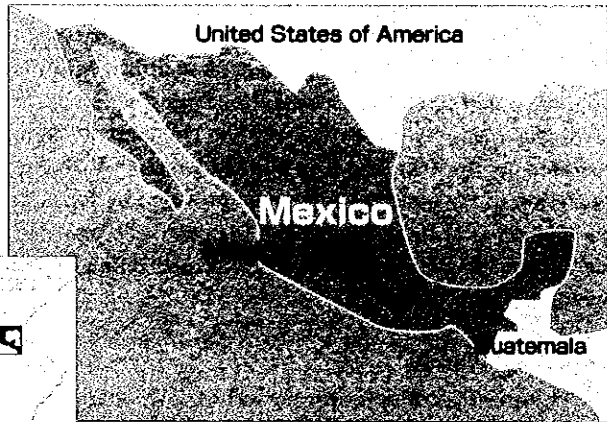
The prospect of the Sustainability of a Third-country Training Program must be assessed at the planning stage. Generally in Mexico, it is difficult for the government to allocate funds to cover the travel and accommodation expenses of trainees; therefore, the expectation in this regard must be low. As a countermeasure to this constraint, it was suggested to implement a Third-country Training Program within the framework of the South-south Cooperation conducted by the Mexican government, or to combine the program with fee-charging training programs.

(2) Recommendations

The governmental port services were in the process of privatization under the export-oriented economic development policy. With the technology transferred by the 10-year guidance of the Japanese Individual Expert, it was then possible for the Mexican side alone to implement training programs as far as technical aspects are concerned. These factors must be considered when the second phase of this training program is requested.

¹⁾ A method to achieve a convenient and smooth total urban transportation system by the systematic combination of several means of transportation such as air traffic, marine, water carriage and railways.

The National Center for Environmental Research and Training (Phase II)



Project Sites Mexico City

1. Background of Project

In the United Mexican States, environmental pollution is becoming a serious national issue. Hazardous waste and air pollution due to the population density in urban areas, particularly Mexico City, has reached a dangerous level. The lack of human resources in the field of environmental protection is a related issue. Considering these circumstances, the Mexican Government sought to establish the National Center for Environmental Research and Training (CENICA) to conduct research and training relevant to environmental protection, and requested Project-type Technical Cooperation from the Japanese Government. Responding to the request, the Japanese Government carried out Phase I of the project for two years during which the organization system of CENICA was established and the basic technologies to deal with air pollution, hazardous waste and industrial pollution were transferred. Phase II of the cooperation started in July 1997 and continued for three years. It aimed at strengthening the structure and activities of CENICA, which were established in the first phase.

2. Project Overview

(1) Period of Cooperation

1 July 1997-30 June 2000

(2) Type of Cooperation

Project-type Technical Cooperation

(3) Partner Country's Implementing Organization

National Institute of Ecology (INE)

(4) Narrative Summary

- 1) Overall Goal
Environmental protection in the United Mexican States is improved.
- 2) Project Purpose
The structure and activities, in particular those addressing air pollution and hazardous waste, of the National Center for Environmental Research and Training (CENICA) are strengthened.
- 3) Outputs

- a) Management of CENICA is improved
- b) Facilities and equipment necessary for environmental research and training are effectively used by counterpart personnel.
- c) Technical information related to the establishment of environmental protection standards is provided to relevant Mexican authorities.
- d) Knowledge and techniques of federal government officials, local authorities and industry personnel on environmental protection are improved.
- e) The role of CENICA in data collection and publications related to environmental matters (particularly in the field of air pollution and hazardous waste) is improved.

4) Inputs

Japanese Side

Long-term experts	7
Short-term experts	11
Trainees received	12
Equipment	464 million yen

Mexican Side

Counterparts	31
Land and facilities	
Local cost	approx. 360 million yen

3. Members of Evaluation Team

Team Leader:

Hiromi CHIHARA, Development Specialist, JICA

Air Pollution:

Shinji WAKAMATSU, Investigator, Urban Air Quality Research Team, PM2.5&DEP Research Project, National Institute for Environmental Studies

Hazardous Waste:

Takeo URABE, Chief Researcher, Tokyo Metropolitan Research Institute for Waste Management

Industrial Public Pollution:

Ikuo TAMORI, Technical Advisor, Japan Quality Assurance Organization

Evaluation Planning:

Hiroshi TANABE, Deputy Director, Second Social

Development Cooperation Division, Social
Development Cooperation Department, JICA
Evaluation Analysis:
Koichi HYOGO, PADECO Co., Ltd.

4. Period of Evaluation

11 January 2000-21 January 2000

5. Results of Evaluation

(1) Efficiency

In general, inputs from both the Mexican and Japanese sides were carried out efficiently for achieving target outcomes. The counterpart training and provision of necessary facilities matched the Mexican needs and contributed to strengthening the personnel and physical resources of CENICA. However, technology transfer was disrupted by the delayed establishment of facilities, particularly the power distribution system, on the Mexican side and late dispatch of the long-term experts in hazardous waste due to the absence of appropriate personnel.

(2) Effectiveness

The basic structure, management capability, and technologies of CENICA were established during the first phase. Building on this foundation, in Phase II, technologies to establish and operate the monitoring station and the experimental facilities in the field of air pollution were transferred. CENICA has been involved in formulating and revising more than eight national environmental standards, including the official standard for automobile exhaust fumes. Therefore, the project purpose of strengthening the basic structure and activities of CENICA was deemed to be achieved. However, some problems remain such as the delay in the Dispatch of Experts in practical analysis techniques and hazardous waste and the slow development of measures for waste disposal.

(3) Impact

Improvements were found in the area of environmental public administration. Some outputs of the project were reflected in the administrative level discussions at the Exploratory Committee on the formulation of official standards. However, it is often difficult to carry out specific environmental protection activities in the short-term for the government, local governments and public enterprises. More time is needed for CENICA to establish concrete environmental measures, which would demonstrate the impact of the support.

(4) Relevance

This project was implemented in accordance with the Six-Year National Environment Plan. The significance of the project has not been modified, thus the relevance of the project is deemed to be high.



An expert lectures counterparts in a laboratory

(5) Sustainability

Institutional sustainability is considered to be high since it is expected that CENICA will be promoted to the level of department in the Ministry for the Environment, Natural Resources and Fisheries. Furthermore, allocation of the budget will also be more secure subsequent to the promotion, and thus CENICA is expected to become financially sustainable. While the basic technical capability of CENICA was established, the level of technology is still not high enough for CENICA to become a leading institution at the time of the evaluation.

6. Lessons Learned and Recommendations

(1) Lessons Learned

It is effective to carry out a project in phases when the pre-conditions for the implementation of the cooperation are not met yet but early project start is needed. When the Phase II cooperation is formulated it is necessary to establish clear targets and indicators in order to define goals precisely and monitor the progress of achieving goals.

In projects aiming at capacity building and strengthening of research institutions, it is important that new knowledge and skills are applied through research to problem-solving in the real world. For this purpose, it is necessary to strengthen the partnership among the various sectors, such as research, experiment, training, and information dissemination, and to ensure that practical skills and techniques are gained through the project.

(2) Recommendations

An extension of the project was recommended for further enhancement of the organizational structure, clarification of the operation plan, and improvement of the research capacity of CENICA.

7. Follow-up Situation

Following the above-mentioned recommendation, a two-year Follow-up cooperation ending 30 June 2001 was implemented.