

Laboratory Diagnosis of HIV Infection and Opportunistic Infections in AIDS



Project Sites Manila

1. Background of Project

According to WHO, the number of HIV infected people in the Asia-Pacific region was estimated to increase to the position of highest in the world by the start of the 21st century. However, technical skills in diagnosing HIV infection and screening methods of infection routes have not yet been established in many countries. It is important to provide health workers with education and training on the technical skills required for the identification of infection routes.

In the Philippines, the Research Institute of Tropical Medicine (RITM) was built by a Japanese Grant Aid in March 1981. From October 1980 to March 1988, a project-type technical cooperation was executed for conducting research on infectious diseases that were common to the Asia-Pacific region. From 1987 a third country training on the "Tropical Medicine" program had been carried out for ten years in order to facilitate the transfer of the skills acquired from the preceding project to neighboring countries.

Furthermore, RITM developed as the core institution for AIDS in the Philippines. It became one of the institutions implementing a project-type technical cooperation called "Project for the Prevention and Control of AIDS" since 1996. Considering the HIV/AIDS situation and needs in the Asia-Pacific region and the achievements of the Philippines, a third country training program called "Laboratory Diagnosis of HIV Infection and Opportunistic Infection in AIDS" was implemented.

2. Project Overview

(1) Period of Cooperation

FY1997 – FY2001

(2) Type of Cooperation

Third Country Training Program

(3) Partner Country's Implementing Organization

Department of Health, the Research Institute of Trop-

ical Medicine (RITM)

(4) Narrative Summary

1) Overall Goal

Techniques for diagnosing HIV infection and AIDS-related opportunistic infection in health care workers of the participating countries are enhanced.

2) Project Purpose

Opportunities are given to enhance the health care providers' knowledge and to develop their technical skills in diagnosing HIV infection and AIDS-related opportunistic infections, and international partnership among the participants are strengthened.

3) Outputs

- a) The biological nature of HIV, infection and its effect on the immune system are understood.
- b) Infection routes of HIV/AIDS and methods of prevention are understood.
- c) Opportunistic infections of AIDS patients are understood.
- d) HIV antibody screening techniques are acquired.
- e) The significance and limitations of PCR, antigen detection, and virus isolation methods in HIV diagnosis are understood.
- f) Diagnostic procedures necessary for the detection of different pathogens causing AIDS-related opportunistic infections, namely bacterial, fungal, parasitic, and viral pathogens are understood and screening techniques acquired.
- g) Antibacterial/anti-TB drug susceptibility are understood and screening techniques are acquired.
- h) Bio-safety precautions for the handling and testing of blood, body fluids and potentially infectious materials/agents in the screening laboratory are understood.
- i) Collecting, handling and processing methods of specimens necessary for diagnostic procedures used in the detection of HIV infection and opportunistic infections are understood.

- j) Specific AIDS and STD counseling strategies are understood.
- k) Some of the social, ethical, and legal issues in AIDS and STDs are clarified.

4) Inputs

Japanese Side

Short-term experts	4
Training expenses	30 million yen

Philippine Side

Equipment and Local Cost	13 million yen
Land and facility	

(5) Participant countries

Indonesia, Malaysia, Thailand, Cambodia, Laos, Vietnam, Myanmar, China, South Korea, Bangladesh, India, Nepal, Pakistan, Sri Lanka, Fiji, Papua New Guinea, Solomon Islands, Tonga and Samoa.

3. Members of Evaluation Team

Team Leader:

Takashi KURIMURA, Professor Emeritus, Osaka University

Training Evaluation;

Akiko KAMIISAKA, Southeast Asia Division, Regional Department 1, JICA

4. Period of Evaluation

13 November 2000 – 24 November 2000

5. Results of Evaluation

(1) Relevance

In the participating countries, HIV infection rates have been increasing rapidly in recent years. Improvements in the HIV diagnosing skills have been growing increasingly necessary compared to the beginning of the training course in 1997. This training program was a rare example of one that included not only lectures about AIDS-related opportunistic infections but also screening and laboratory work. Therefore many requests were made in regards to the training done in this field.

Since 1998, the Philippines has been enforcing the national AIDS countermeasure plan, and RITM has played a core role in the Japan's technical cooperation. Both RITM and the Philippines were accessible to the participating countries and were under favorable conditions such as the accumulation of actual work in English, knowledge, and experience for being the host for the training.

These facts prove that this project was relevant.

(2) Effectiveness

According to the examinations given at the beginning and end of the training, the percentage of questions answered correctly on HIV-related knowledge improved from 71% to 82%, and on opportunistic infections, 35% to 74%, showing an increase of understanding by the participants. From the questionnaire for the trainees' supervisors, it became clear that they highly valued the trainees' inspection technology.

(3) Efficiency

Training course management (lecturers, bureau, training facilities, training equipment and accommodation) was proper in both quality and quantity.

(4) Impact

According to the results of the questionnaire, most of the training participants are continuing with work that is related to HIV diagnosis after returning to their own countries, and approximately 60% were promoted to leading positions. All of the training participants are trying to extend their technical diagnosis skills through lectures, publication of the research results, and guidance in the medical scene. Some are using the textbook from this project to do so. Therefore this project had an impact on the participating countries.

(5) Sustainability

According to the questionnaire, the needs of training in this field are very high. RITM has been managing training without any problems, and new human resources are being developed. With the exception of the financial aspects, the sustainability could be highly evaluated.

6. Lessons Learned and Recommendations

(1) Lessons Learned

The textbooks used in the lectures are useful for the participants' work in their own countries, and can also be an effective tool for extending the training contents.

As a country that has people with high communication skills, the Philippines is suitable for carrying out the third country training program that receiving participants from various countries.

(2) Recommendations

Since there still is a strong need for training in the participating countries, it is desirable to extend the training period. The RITM staff's participation in planning, publication of the training results, and discussion on utilizing methods for the results are required when extending. Effectively utilizing human resources familiar with Japanese technology cooperation and coordinating with other cooperation projects carried out in the Philippines are also important.

Project for the Prevention and Control of AIDS



Project Sites Manila

1. Background of Project

The HIV infection rate in the Philippines has remained a little less than 0.1%¹⁾, but it has been pointed out that it may rapidly worsen in the future.

The Government of the Philippines requested of Japan a project-type technical cooperation as part of the framework of the Second Medium Term Plan (1994 – 1999) of the National AIDS/Sexually Transmitted Diseases (STD) Program, which aimed at making an assessment of actual incidence of infection and preventing its further expansion at the same time.

2. Project Overview

(1) Period of Cooperation

1 July 1996 – 30 June 2001

(2) Type of Cooperation

Project-type Technical Cooperation

(3) Partner Country's Implementing Organization

Department of Health, STD and AIDS Cooperative Central Laboratory (SACCL), San Lazaro Hospital, Research Institute of Tropical Medicine

(4) Narrative Summary

1) Overall Goal

STD/AIDS prevention and control strategies are enhanced.

2) Project Purpose

National and local capacities to address STD/AIDS concern are strengthened.

3) Outputs

- Diagnostic capabilities for STD/AIDS of the SACCL are fully established.
- In accordance with the administrative order, the SACCL is incorporated into San Lazaro Hospital (SLH) of the Department of Health.
- Referral system is prepared.
- SACCL training function on STD/AIDS prevention, diagnosis, and treatment are recognized/accredited and training courses are implemented.

- SACCL Research contributions are maximized.
- Selected Social Health Clinics (SHCs) are upgraded in terms of experiments, lab testing, education/extension, and STD/AIDS management.

4) Inputs

Japanese Side

Long-term experts	11
Short-term experts	30
Trainees received	14
Equipment	243 million yen
Local cost	171 million yen

Philippine Side

Counterparts	89
Equipment	approx. 12.5 million pesos (approx. 31 million yen)
Local cost	approx. 42.6 million pesos (approx. 105 million yen)

3. Members of Evaluation Team

Team Leader:

Takashi KURIMURA, Emeritus Professor, Osaka University

Immunology:

Namiko YOSHIHARA, Chief, National Institute of Infectious Diseases

Public Health:

Norihiko YODA, Director, Division of International Cooperation, National Institute of Infectious Diseases

Evaluation Planning:

Naoyuki KOBAYASHI, Deputy Director, First Medical Cooperation Division, Medical Cooperation Department, JICA

Cooperation Planning:

Kazuhisa HIRAOKA, First Medical Cooperation Division, Medical Cooperation Department, JICA

Project Evaluation:

Kanji HOSHINO, Sowa Consultants Ltd.

4. Period of Evaluation

6 November 2000 – 20 November 2000

5. Results of Evaluation

(1) Relevance

The agreement on the implementation of the project was reached in 1996 when the AIDS prevention policy was taken into actual operation. These include the establishment of the Philippines National AIDS Council (PNAC) and of the HIV related legislation by National AIDS/STD Prevention and Control Program (NASPCP). This project therefore began at an appropriate time, and was consistent with the policy of the Government. Thus, the relevance of this project was very high.

(2) Effectiveness

Improvements in the inspection system were seen through the total number of samples handled in SACCL, increasing from 2,367 cases in 1997, to 8,051 cases in 1998 and 8,509 cases in 1999. The variety of inspection items had also increased from 7 types / 9 methods in 1997 to 12 types / 33 methods in 2000. The number of inspections practiced by the SACCL, without relying on the referral system increased from 282 cases in 1997, to 1,135 cases in 1998, and 2,597 cases in 1999. However, the number of inspections that were sent through the referral system had yearly fluctuations. It is therefore necessary to further strengthen the referral system.

The training courses undertaken by the SACCL, where 389 medical workers (including doctors, nurses and midwives) participated, were highly evaluated. Almost all doctors understood the method of interpreting the test results, and could perform proper treatment for STD patients. Moreover, the local SHCs came into inspecting through local labs and hospitals.

(3) Efficiency

Although there were delays in the dispatch of Japanese experts and the arrival of some equipment (due to customs clearance arrangements), the initial purpose of the project was attained. For some of the equipment, since the displays were only written in Japanese, the Japanese experts had to exert extra effort on translations.

(4) Impact

By strengthening the inspection system, diagnosis and medical treatments are now possible at an earlier stage than the conventional system, which started them only after the actual symptoms had appeared.

(5) Sustainability

This project is consistent with the Government of the Philippine's policy against AIDS. Also, the SACCL plays a significant role as the core inspection organization in its referral system, and therefore institutional sustainability will be secured. In addition, it is likely that technical sustainability to be secured when the technology transfer has



Biohazard level 3 Laboratory

been completed. If training is spontaneously held applying the technical textbooks and manuals that were prepared in this project, sustainability will also be considered achievable. As for financial considerations, however, it is necessary to consider the method such as to divert some portion of the profits of hospital allowance into the operational expenses of SLH for establishing partial independence. Otherwise, the project activities would shrink in scale, given the recent budget cuts for SLH.

6. Lessons Learned and Recommendations

(1) Lessons Learned

Since the WHO West Pacific Ocean Office is located in the Philippines, it can easily be attract attention internationally. There also are many occasions for project personnel to attend academic meetings up to representatives from many foreign countries. It is essential to advertise the importance of the project using such opportunities. Moreover, for the counterparts' training, it is necessary not to make the objective low but to set it somewhat higher for their future independence.

(2) Recommendations

To cope with the delay of technology transfer caused by the delay in P3 laboratory (biohazard level 3) construction, it would be desirable to transfer the technology as the need arises even after the project. Although training courses implemented by the SACCL have covered 50% of the SHC staff and 31.8% of the hospital and STD lab staff, many applicants still remain, and there is a necessity for continuation. Additionally, it is necessary to set up SACCL branch offices that play the core role in each district in order to establish the referral system.

1) UNAIDS Country Report 2000

The Training Services Enhancement Project for Rural Life Improvement



Project Sites Manila, Bohol, Albay, Antique and Butuan

1. Background of Project

In the Philippines, agriculture was a key sector in the 1990s, contributing to more than 20% of Gross National Product (GNP), and employing more than 50% of the labor force. More than two thirds of the population lives in rural areas and engages directly or indirectly in agriculture. In these areas, women occupy one fourth of the agricultural labor force, playing an important role in housework, agricultural production and social activities. To improve rural living standards, supporting women through the promotion of agricultural production was therefore considered important.

Under these circumstances, the Government of the Philippines recognized the necessity of providing comprehensive training courses on rural life improvement through the Agricultural Training Institute (ATI), which has 34 training centers around the country, and requested a project-type technical cooperation from the Government of Japan.

2. Project Overview

(1) Period of Cooperation

15 June 1996 – 14 June 2001

(2) Type of Cooperation

Project-type Technical Cooperation

(3) Partner Country's Implementing Organization

Agricultural Training Institute (ATI), Department of Agriculture

(4) Narrative Summary

1) Overall Goal

Farmers, fisherfolk, women, youths and extension agents are provided with efficient and effective training services by the ATI which will lead to the improvement of the quality of life in rural areas through efforts for human resources development, with special reference to women's participation.

2) Project Purpose

The Training Program for Rural Life Improvement (RLI) is finalized and institutionalized in ATI.

3) Outputs

- a) Participatory trials of RLI activities are implemented at the selected pilot areas by the Model Center¹⁾ of Bohol.
- b) The training Program for RLI will be formulated

at the Model Center, based on the pilot RLI activities.

- c) The ATI will be able to implement the Training Program for RLI at the Initial Expansion Centers²⁾.
- d) The cooperative relationship will be enhanced between ATI and other institutions to ensure the effective implementation of the Program at the Model Center and Initial Expansion Centers.

4) Inputs

Japanese Side

Long-term experts	12
Short-term experts	15
Trainees received	17
Equipment	23 million yen
Local cost	56 million yen

Philippine Side

Counterparts	27
Land and center facilities	
Local cost	22 million pesos (Approx. 53 million yen)

3. Members of Evaluation Team

Team Leader / Institution Building:

Ryozo HANYA, Director, Agricultural Technical Cooperation Division, Agricultural Development Cooperation Department, JICA

Community Development / Rural Life Improvement and Extension:

Tomoko ICHIDA, Chief, Europe Section, Department of Foreign Agriculture, National Research Institute of Agricultural Economics, Ministry of Agriculture, Forestry and Fisheries (MAFF)

Human Resource Development / Training:

Yuki TAKAHASHI, Researcher, Rural Life Research Institute

Plan Evaluation:

Yoshihisa MASANAGA, Staff, Agricultural Technical Cooperation Division, Agricultural Development Cooperation Department, JICA

Evaluation Analysis:

Seizo YAMADA, Katahira Engineering International

4. Period of Evaluation

4 February 2001 – 17 February 2001

5. Results of Evaluation

(1) Relevance

The objective and activities of the Project are in accordance with the "Agriculture and Fisheries Modernization Act" ³⁾, a national policy on agricultural and rural development enforced in December 1997. Efficient and effective training services have been provided based on people's needs at the Model Center and Initial Expansion Centers. Judging from the above, the Project can be considered appropriate.

(2) Effectiveness

The Training Program for Rural Life Improvement (RLI) was piloted in Bohol, based on which experience the RLI Manual (1st draft) was prepared. Based on the Manual, trial expansion was carried out at the three Initial Expansion Centers. Information and lessons learned at the IECs were fed back to revise and improve the Manual, until it was finalized in March 2001. Representative staff of all centers have already taken training courses.

In 2000, solely with the budget from the Philippine government, three additional expansion centers ⁴⁾ started to conduct the Training Program for RLI. Every year thereafter, three centers will be added until all 33 Training Centers are covered. Considering the above, the project purpose has been achieved.

(3) Efficiency

Most of the input from the Japanese side was effectively conducted with appropriate size. However, as this Project focused more on the "soft" component, such as concepts and approaches of participatory development and rural life improvement, experts were required to have adequate language and communication skills to correctly explain such concepts in words. In this sense, some inputs did not result in effective outputs.

As for input from the Philippine side, although full-time counterparts were assigned they were also loaded with their routine work and were not exclusive to the Project, which caused some difficulties to the smooth implementation of the Project. Due to financial problems after the economic crisis, there were often delays in releasing budget, which caused some delays in the activities and training courses.

(4) Impact

At the pilot sites, beneficiaries learned technical skills, community awareness of the social environment changed and regulations on life improvement were legitimized by local governments. There were also requests by government agencies, universities and local municipalities to provide training courses on participatory methods. Judging from these factors, the impact of the project was observed.

(5) Sustainability

During the project implementation, counterparts learned participatory methods and improved their capacity to provide efficient and effective training courses. With the instruction from the Department of Agriculture, the ATI plans to promote training courses on rural life improvement at all 33 training centers across the country. ATI staff will be assigned for implementation and monitoring of the project, and the budget will be included in the ATI's regular annual budget. Management will be transferred to local governments, and regular staff are also to be assigned.



San Isidro, Municipality of Duero, Bohol, Backyard gardens were prepared through program of Nutrition and House hold management Improvement

Thus, the sustainability of this Project is regarded as high.

6. Lessons Learned and Recommendations

(1) Lessons Learned

It is important to secure experts who have appropriate ability in language as well as in their field of expertise.

Although the mandate of the ATI was to provide training, the initial stage of the Project focused more on extension, and it took some time afterwards to redirect the Project toward training. For the project's sustainability, the framework and objective of the project should be considered at the planning stage, taking into account the mandate and staff availability of the counterpart organizations.

A baseline survey of this Project took about two years before formulating action plans, but it should be conducted effectively in a shorter period.

(2) Recommendations

The ATI should regularly submit progress reports to the Department of Agriculture and the JICA Philippines office, and conduct monitoring for ex-post evaluation. For the project's further sustainability, it is also desirable that workshops on Training Programs for RLI are regularly offered to all ATI staff.

The Operational Guideline shall be prepared based on a Training Program for RLI and be authorized by the Department of Agriculture to encourage local governments to take initiative in the project implementation.

¹⁾ Six pilot activities targeting four sites were conducted at the ATI center in Bohol during the first three years of the project.

²⁾ For the last two years of the project, training programs for RLI, systematized by the Model Center, were implemented at the ATI centers in Albay, Antique and Butuan.

³⁾ This act aims at the reasonable and effective provision of administration service for the modernization of agriculture and fisheries.

⁴⁾ These centers are located in Isabella, Pangasinan and Eastern Samar.

Improvement of Health System for the Province of Benguet



Project Sites La Trinidad

1. Background of Project

In the Philippines, the number of sickbeds and doctors are small for a certain population. Also, the facilities and medical equipment of the national and public hospitals are still at a low level.

The Benguet General Hospital, which plays the core role in the referral system¹⁾ in the province of Benguet, could not fully meet the demand for both inpatient and out-patient medical treatment. The inadequate capacity of the hospital hindered the provision of medical treatment; 2,000 patients per year were transferred to the National Baguio General Hospital. Also, provision of minimum medical treatment at the local hospitals and RHUs (Rural Health Units) scattered in the province was needed.

Based on such conditions, the Philippine Government formulated "the Project for Improvement of Health System for the Province of Benguet" for the purpose of upgrading the quality of medical services by improving the health care service system in the province of Benguet by 2003. For implementation of this plan, the Government of the Philippines requested Grant Aid from the Government of Japan, for the construction of a new ward in the Benguet General Hospital, upgrading of the medical equipment, and provision of equipment to cover the insufficiencies in local hospitals and RHUs.

2. Project Overview

(1) Period of Cooperation

FY1997 – FY1999

(2) Type of Cooperation

Grant Aid

(3) Partner Country's Implementing Organization

Provincial Government of Benguet

(4) Narrative Summary

1) Overall Goal

The health conditions of the people are improved by upgrading the referral system of the province of Benguet.

2) Project Purpose

Necessary medical facilities and equipment are installed for the establishment of the referral system in the province of Benguet placing the Benguet General Hospital as the core.

3) Outputs

- Medical equipment is improved considerably in the Benguet General Hospital, five local hospitals, and 13 RHUs.
- A new ward is built at the Benguet General Hospital.
- The advanced medical materials that are necessary for the top referral hospital²⁾ are provided to the Benguet General Hospital.
- A radio vessel is installed for strengthening the connection and the contact system among the Benguet General Hospital, local hospitals, and RHUs.

4) Inputs

Japanese Side

Grant	2,788 million yen (E/N amount)
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Philippine Side

Local cost	13.29 million pesos (approx. 33.3 million yen)
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3. Members of Evaluation Team

Administration Investigation:

Junji ISHIZUKA, Director, Follow-up Division, Regional Department I, JICA

Procurement Investigation:

Toru TAKAGI, Japan International Cooperation System

4. Period of Evaluation

14 February 2001 – 23 February 2001

5. Results of Evaluation

(1) Relevance

The Benguet General Hospital selected and procured the medical equipment and facilities necessary for the top referral hospital, which could be fully utilized by the existing operational ability of the staff. Also, by installing the medical equipment and communication devices supplied to the local hospitals and RHUs, the conditions were improved for the establishment of the referral system, the objective of this project. Based on these results, the project aims for improving the health conditions of people in the province, thus the relevance of the project was confirmed.

(2) Effectiveness

The facility construction and equipment procurement were executed as planned. Just after the construction of the new ward in the Benguet General Hospital, the practical operation started smoothly. Regarding utilization of the communication devices and the medical equipment supplied to the local hospitals and the RHUs, there are no problems in the operation at the point of evaluation.

(3) Efficiency

When the construction started, subterranean water discharged and led to a reformation of the design. Therefore, construction was delayed for about one and a half months. Just before completion of the construction, the drainage pipe construction up to the site boundary was also delayed, which was the responsibility of the recipient country. However, each delay was rectified, and construction was placed back on schedule.

At the early stage of the project, delivery of the equipment was behind schedule as the provincial government, the execution organization, had difficulty in custom clearance of the equipment. The problem was solved by exempting a tax duty to the provincial government by the President's Office. For the following deliveries, a similar measure was applied, therefore no further problems occurred.

(4) Impact

By the supply of equipment and construction of the new ward in Benguet General Hospital, the number of outpatients increased to 68,173 in 2000, up 11.8% from 1999. It became possible to treat the 2,000 patients who used to be transferred to the National Baguio General Hospital every year prior to the project, and the number of transfers reduced by half.

Sense of security and confidence in the medical services has increased among people in the province. That is because the medical service has improved at the local hospitals and RHUs, and the geographical handicap of the people in the rural and the mountain areas, has been dissolved by the installation of the medical equipment.

(5) Sustainability

The Benguet General Hospital depends mostly on the



Benguet General Hospital

province for its operating budget. In 2000, only approximately 15% (7 million pesos, approximately 17 million yen) of the operation and management cost (44 million pesos, approximately 110 million yen) was covered by the self-attained income of the hospital, with the rest being covered by the provincial government. The provincial government's support in 2000 was 37 million pesos (approximately 91 million yen), which accounts for about 14% of the total budget of the province. In the future, increase in administration costs can be anticipated from the increase of the personnel cost due to staff increase, or increase in expenses for light and fuel. Therefore, more efforts are required to raise the self-attained income of the Benguet General Hospital.

6. Lessons Learned and Recommendations

(1) Lessons Learned

Although some of the medical staff tend to request advanced medical equipment such as CT (Computed Tomography), its necessity should be carefully considered.

If the implementing organization is not at national but at local government level, it is necessary to conduct detailed coordination in advance among the persons concerned in the central government about the tax exemption of the imports.

1) The referral system refers to the division and coordination of the functions among the medical institutions in a certain area in order to improve regional medicine and to achieve an efficient medical service system. The referral system of the province of Benguet is as follows: 13 RHUs and 4 local hospitals serve as primary hospitals, 1 district hospital serves as the secondary hospital, and above this, as the tertiary hospital, the Benguet General Hospital is established.

2) As for emergency life saving medical treatment, each medical institution adopts the system of sharing roles depending on its function, and they divide the patients into the following: primary hospitals deal with emergency patients who can return home with outpatient medical treatment, the secondary hospital deals with emergency cases which need hospitalization, and emergency cases that are life-threatening are serviced at the tertiary or top referral hospital.

The Enhancement of Practical Works in Science and Mathematics Education at the Regional Level

Project Sites Manila, Davao, Iloilo and Legazpi



1. Background of Project

In accordance with the expansion of the industry in the Philippines, there is a pressing need for a basic education with quality for the development of human resources. The improvement of basic education in science and mathematics is recognized as being especially essential for fostering mid-level technicians. For the Filipino attempt to shift from math and science classes used to focus on rote learning to a more practical approach, Japan provided grant aid cooperation to build elementary schools and math and science laboratories in 1987. To further enhance effects of these attempts, Japan implemented the "Package Cooperation to Improve Elementary and Secondary Math and Science Education" in March 1994. This cooperation is a combination of JICA projects such as country-focused training and dispatch of individual experts and Japan Overseas Cooperation Volunteers (JOCV).

The JOCV members were dispatched to the Regional Science Teachers' Centers (RSTCs) in three regions. They were to follow up the teachers who had received trainer's training for math and science in Manila in order to extend the result of the training in a regional level.

2. Project Overview

(1) Period of Cooperation

24 March 1994 – 31 May 1999
(1 June 1999 – 31 May 2001 (extension))

(2) Type of Cooperation

JOCV Team Dispatch Program

(3) Partner Country's Implementing Organization

Bicol University RSTC
West Visayas State University RSTC
Ateneo de Davao University RSTC
Ministry of Science and Technology, Ministry of Education, Culture and Sports

(4) Narrative Summary

1) Overall goal

The performance of the elementary and secondary school students on science and mathematics is upgraded in the targeted regions.

2) Project purpose

High quality science and mathematics classes with practical works are conducted by the teachers.

3) Outputs

- RSTC's training programs and trainings related to the system of retraining teachers are held as appropriate.
- RSTC counterparts and teachers including trainers have gained knowledge and acquired skills on practical works and experiments.
- Laboratory equipment and tools are managed properly and used effectively.
- Science and mathematics teachers acquired skills on making low cost tools and materials to use in science experiments.
- Both teachers and students become more interested in science and mathematics.

4) Inputs

Japanese side

Senior members	3
Senior short-term emergency dispatch members	1
General members	34
Trainees received	7
Equipment	23 million yen
Local costs	10 million yen

Philippine side

Counterparts	17
Administrative employees, laboratory assistants, driver	15
Local costs	79 million yen

3. Member of Evaluation Team

Team Leader:

Kazuo SUDO, Recruitment and Domestic Affairs Division, Secretariat of JOCV, JICA

Education:

Nobuhiro SETOBUCHI, former Saint Lucia senior JOCV member

Cooperation plan:

Kiyoka TAKENAKA, Second Overseas Assignment Division, Secretariat of JOCV, JICA

Plan analysis:

Mieko URAMOTO, RECS International Inc.

4. Period of Evaluation

26 February 2001 – 17 March 2001

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

Because industrial development has created a greater need for engineers in the Philippines, the improvement of basic education in science and mathematics has been prioritized. The project purpose is in accordance with the government's policies and local needs, thus the project retain relevance.

(2) Effectiveness

The RSTC staff recognizes that the project outcomes have been virtually achieved. The RSTCs were revitalized, training was appropriately implemented and the participants have gained knowledge and acquired technical skills on practical works. Questionnaires given to ex-participants of RSTC training indicate that 92 out of the 109 teachers (84%) conduct experiments in classes more frequently than before the training. Therefore, the project purpose has been achieved.

(3) Efficiency

Since there were difficulties in recruiting FY1998 was the only year in which JOCV members were dispatched for all subjects of the three universities. It was particularly difficult in dispatching JOCV members in the mathematics field to the RSTC of Bicol University.

It was pointed out that some of the newly installed equipment did not match the local needs and capabilities because they were neither selected by the JOCV members nor Filipino teachers who actually use them.

Since the project purpose, output and member activities were not clarified at the early stages, the coordination did not work very effectively. On the other hand, coordination between the individually dispatched experts and the experts and JOCV members of project-type technical cooperation was generally good, facilitating communication between central and outlying areas.

(4) Impact

Since it takes time before results can be seen in the field of education, it is not possible at this time to validate the improvement of the academic abilities of the students. However, the questionnaire given to ex-participants of RSTC training showed that 80% felt that more students were good at or liked science and mathematics. Thus, the impact of this project should be observed in the future.

Furthermore, it is highly evaluated that the implementation of this project strengthened the links between the RSTC and the regional offices of the Ministry of Education, Culture and Sports.

(5) Sustainability

There will be difficulties in continuing training Conducted by JOCV members at Bicol University where the



(a class of) Science and mathematics education

number of RSTC staff was limited.

The budget for training is likely to be secured for the Ministry of Science and Technology, due to its emphasis placed on pursuing training programs for science and mathematics teachers.

While the counterparts and teachers obtained many skills and knowledge on practical works through the project and they are willing to continue their training activities, their involvement in training is likely to decrease. This is because they have a very heavy workload in their universities and high schools. Support should be provided to reduce their teaching load so that they could continue their training activities as well.

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

The equipment and materials should be chosen by the JOCV members who will actually use them. A guideline should be formulated for the maintenance, promotion of utilization, and usage report of the equipment and materials.

In future package cooperation projects, the roles of JOCV members should be clarified in advance and coordination with related JICA departments should be strengthened.

(2) Recommendations

JOCV members need to hand over their roles of continuing the project and maintaining equipment to the local staff. The Ministry of Science and Technology and the Ministry of Education, Culture and Sports should monitor the practical works introduced in this project to sustain and strengthen this project's approach.