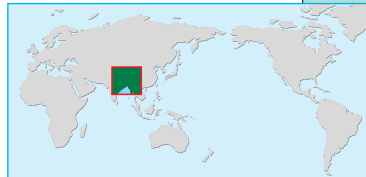


Poverty and Gender in Agriculture, Forestry and Fisheries Cooperation

Project Sites

Kathmandu, Janakpur Area,
Ramechhap District, Kaski District,
Parbat District



1. Background and Objectives of Evaluation

In formulating projects that require activities from viewpoints of poverty and gender, JICA carries out social and economic studies at the planning stage. However, JICA is still at the stage of trial and error concerning how to incorporate poverty or gender issues revealed by such studies into project implementation.

Considering this lack of experience, this evaluation study was conducted to identify the lessons learned and recommendations for future JICA cooperation activities to address poverty and gender issues, and to design projects that are effective at the local level, through evaluating completed or ongoing JICA projects in agriculture, forestry and fisheries in Nepal from poverty and gender perspectives.

2. Evaluated Projects

- **The Janakpur Zone Agriculture Development Project**
(1974-1984, Project-type Technical Cooperation)
- **The Horticulture Development Project (Phases I, II and Follow-up)**
(1984-1999, Project-type Technical Cooperation)
- **The Project for Natural Water Fisheries Development (Phase I and Follow-up)**
(1991-1998, Project-type Technical Cooperation)
- **The Community Development and Forest/Watershed Conservation Project (Phase I)**
(1994-1999, Project-type Technical Cooperation)

*The following two projects were being implemented in association with the above project and, thus, included in the subject of the evaluation study: Greenery Promotion Cooperation Project (Team dispatch of Japan Overseas Cooperation Volunteers) and Development Study on Integrated Watershed Management in the

Western Hills (Development study).

3. Evaluation Teams and Period of Evaluation

Entire period of evaluation:

10 September 1999-31 March 2000.

(1) Preliminary Survey (11 September 1999-19 September 1999)

Yoshihiko NISHIMURA, Professor, Graduate School of International Development, Nagoya University

Mutsuyo KADOHIRA, Associate Professor, International Cooperation Center for Agricultural Education, Nagoya University

Michiko YOSHIOKA, Lecturer, Graduate School of International Development, Nagoya University

(2) Agriculture Team I (14 November 1999-1 December 1999)

Jiro TATSUMI, Professor, Graduate School of Bioagricultural Sciences, Nagoya University

Morio IJIMA, Associate Professor, Graduate School of Bioagricultural Sciences, Nagoya University

Mutsuyo KADOHIRA, Associate Professor, International Cooperation Center for Agricultural Education, Nagoya University

Shigeaki HATTORI, Professor, Graduate School of Bioagricultural Sciences, Nagoya University

Minoru KONDO, Research Associate, Graduate School of Bioagricultural Sciences, Nagoya University

Tsutomu KANAZASHI, Graduate Student, Graduate School of Bioagricultural Sciences, Nagoya University

(3) Agriculture Team II (11 December 1999-26 December 1999)

Jiro TATSUMI, Professor, Graduate School of Bioagricultural Sciences, Nagoya University

Mutsuyo KADOHIRA, Associate Professor, International Cooperation Center for Agricultural Education, Nagoya University

Chisato TAKENAKA, Associate Professor, Graduate School of Bioagricultural Sciences, Nagoya University

Hidemi KITANO, Associate Professor, Graduate School of Bioagricultural Sciences, Nagoya University

(4) Law (27 December 1999-5 January 2000)

Kenji YOTSUMOTO, Associate Professor, Law Department, Nagoya Keizai University

Noriyuki ASANO, Lecturer, Seibo Jogakuin Junior College

(5) Gender (8 January 2000-19 January 2000)

Hisae NAKANISHI, Associate Professor, Graduate School of International Development, Nagoya University

Kaori TANAKA, Graduate Student, Graduate School of International Development, Nagoya University

Kenji KAWADA, Graduate Student, Graduate School of International Development, Nagoya University

(6) Poverty (13 January 2000-2 February 2000)

Aya OKADA, Associate Professor, Graduate School of International Development, Nagoya University

Kenji KAWADA, Graduate Student, Graduate School of International Development, Nagoya University

(7) Economy (22 January 2000-2 February 2000)

Shigeru OTSUBO, Associate Professor, Graduate School of International Development, Nagoya University

Hedving Rozsnoi, Graduate Student, Graduate School of International Development, Nagoya University

(8) Supplementary Survey (Fisheries) (9 March 2000-24 March 2000)

Yoshihiko NISHIMURA, Professor, Graduate School of International Development, Nagoya University

Akiya SEKO, Graduate Student, Graduate School of International Development, Nagoya University

4. Methods of Evaluation

In carrying out the evaluation study, JICA made a full

contract with a university for the first time. Nagoya University, which was commissioned, organized the Evaluation Committee for Technical Cooperation in Nepal consisting of the Graduate School of International Development as the chief, the Graduate School of Bioagricultural Sciences and the International Cooperation Center for Agricultural Education to undertake the study. The Committee discussed strategies and subjects of the evaluation and held study sessions to collect information on Nepal.

Eight teams, formed by area of research, carried out the field survey (see the above list of the evaluation teams). The teams collected information by having local consultants fill out the prepared questionnaires and by conducting interviews with farmers and other stakeholders. Sample farmer households were drawn randomly from both the project sites and control sites, where no projects were implemented. During the field survey, JICA experts and JOCVs provided advice and assistance to the evaluation teams.

After returning to Japan, each team confirmed and analyzed the collected data and prepared the evaluation report.

5. Situation of Poverty and Gender in Nepal**(1) Situation of Poverty**

Nepal started its efforts to modernize the nation in the mid-1950s and launched the First 5-year National Development Plan in 1956. Economic and social indicators around that time, per capita income of about \$45, literacy rate of 5 percent and life expectancy of below 35 years-were poor but not too bad compared with the level of other low-income countries at that time. After more than forty years, Nepal is currently implementing the Ninth 5-year National Development Plan (1997-2002). In 1998, per capita income, literacy rate and life expectancy reached \$210, 38 percent and 57 years, respectively.

However, these figures are far below the average of South Asia (per capita income of \$430) and low-income countries (\$520) of the same year. It could be said that over the past 40 years Nepal has lagged behind the other countries with similar income levels at the time the measurements started. Not only in income, but in other aspects too, Nepal is behind neighboring countries: for example, only 6 percent of the population have access to sewage facilities, while the figure is 30 percent in Bangladesh and India, and access rate to safe water is 59 percent in Nepal in contrast to the South-Asian average of

81 percent.

Factors behind such poor achievement in economic development are the segmentation of the country due to physical conditions (e.g., road networks are poorly developed in mountainous areas) and cultural distinctions by caste and ethnicity. The segmentation has created gaps in access to markets, information and social services: economic development has been concentrated in cities such as Kathmandu, which has widened the gap between urban and rural areas.

Regarding the situation of income poverty in Nepal, 40-50 percent of the population is still below the poverty line¹⁾. Due to the high annual average population growth of 2.5-2.7 percent, the population below the poverty line exceeds 9 million.

Most of the poor live in rural areas and are engaged in agriculture. Statistics on agricultural production and employment show little growth in per capita output (i.e., labor productivity in agriculture), and that constitutes an important factor for poverty in Nepal. According to the Living Standard Measurement Survey supported conducted by the World Bank in 1995, the population categorized as the "very poor" holds a smaller amount of land and irrigated land than other categories of the population. The very poor also have poor access to agricultural inputs such as chemicals, technical advice by agricultural extension agents or veterinarians and agricultural credits.

Under such circumstances, the ongoing Ninth 5-year National Development Plan raised poverty alleviation as

the key element of its development objectives. To that end, the Plan had a new understanding of the importance of agricultural development and, thus, placed the Agriculture Perspective Plan (APP) in the center of national development. APP aims at rural development through the improvement of agricultural productivity, thus increasing income.

(2) Gender Disparities

In addition to the aforementioned castes and ethnicity groups that constitute the social and cultural base of Nepal, social, cultural and economic gender disparities also characterize Nepalese society and culture. Women are entirely disadvantaged regarding access to the means of production and participation in decision-making at both the household and community levels. They also have fewer opportunities for education and health services and receive a lower economic reward for their labor. However, women often bear a heavier burden than men: there is a general estimate that in household and production activities, the women's workload is 40 percent heavier than that of men regardless of age.

Furthermore, gender issues are also strongly related to agricultural productivity. The literacy rate of rural women, who shoulder a large part of productive activities in rural areas, is as low as 19 percent, and that is a basic factor for low and lagging labor productivity. There is a need to reduce the time women spend daily on tasks such as collecting water and firewood so that they can spend time on literacy or technical training and productive activities. Measures for this might include the construction and maintenance of essential farm roads, mountain paths and water supply facilities²⁾.

The Ninth 5-year National Development Plan includes several measures for gender mainstreaming in development programs and reducing gender gaps as well

Table 1 Gender gap in education

	Female	Male	Female/ Male
Literacy rate (%)	19	54	0.36
Have attended school (%)	19	50	0.38
Enrolled in school now (%)	20	32	0.62
Gross enrollment rate for primary school (%)	80	108	0.74
Average expenditure for education (Rupees/year)	1,501	1,600	0.93

Source: CBS, Nepal Living Standards Survey 1995/96.

Table 2 Gender-disaggregated labor participation rate and unemployment rate (%)

	Female	Male	Total
Labor participation rate			
1971	35.2	82.9	59.3
1981	46.2	83.2	65.1
1991	45.5	68.7	57.0
1996	66.4	75.2	70.6
Unemployment rate 1995/6	19	50	0.38

Sources: CBS, Nepal Living Standards Survey 1995/96. Population Monograph of Nepal, 1995 NRB, Multipurpose Household Budget Survey, 1998

¹⁾ The poverty line is a criterion to calculate the population of the poor. It is often defined as per capita income or expenditure that is necessary for having a minimum life. In Nepal, the poverty line was defined as annual per capita expenditure of 4,404 Rupees by the Living Standard Measurement Survey conducted in 1995. The proportion of the population below this line (poverty rate) was 42%. There is also an "international poverty line" of 1 dollar per person per day (calculated using the purchasing power parity rate of 1985) that was defined by the World Bank for the purpose of international comparison. Using this international line, the poverty rate of Nepal is 53%.

²⁾ The team visited the site of a women's literacy class in the mountains. The participating women, who were engaged in long hours of hard work for household and production, walked on unlit mountain paths to attend the class after they finished the evening housework. Despite such unfavorable conditions, they seemed to have a strong desire to learn. They also seemed to be enjoying this women's group activity.

as regional and ethnic gaps. In agriculture, forestry and fishery sectors, the Plan includes such gender-related policies as guarantee of women's rights in APP for the purpose of empowerment of women and increased access of women to medical services, education and agricultural extension services.

The evaluation team interviewed several persons in charge to get concrete action plans corresponding to these policies, but the response gave neither clear answers nor a signal of their eagerness for such policies. It could be said that the efforts to address gender issues in Nepal's 5-year National Development Plans have just started. In comparison to Bangladesh, for instance, where gender issues have evolved over time in the process of implementing several national development plans, the Government of Nepal seems to be far behind and still a long way from eliminating gender gaps. Therefore, NGOs and development assistance agencies should be required to bring lessons learned in neighboring or other countries

into Nepal for the implementation of gender-responsive development projects as model cases.

Fig. 1 Contribution of the projects to the improvement of production and quality of life

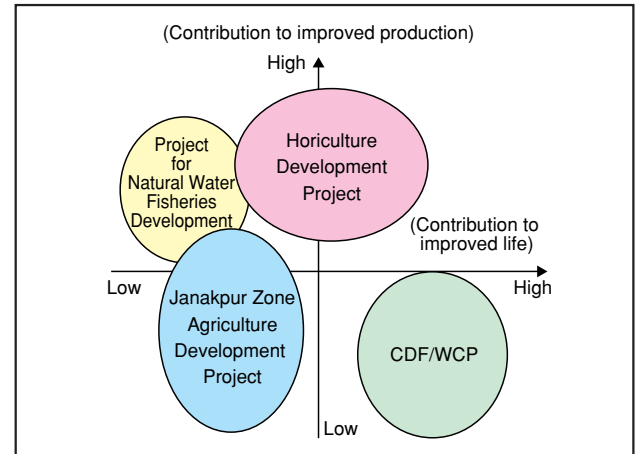


Table 3 Overview of projects studied

	Janakpur Zone Agriculture Development Project (1974-1984)	The Horticulture Development Project (1984-1999)	The Project for Natural Water Fisheries Development (1991-1998)	Community Development and Forest/Watershed Conservation Project and Greenery Promotion Cooperation Project
Project site(s)	Janakpur Area	Kathmandu, Kabhre District, Ramechhap District	Kaski District	Kaski District, Parbat District
Background of the Project	To carry out agricultural development that was ranked as high priority in the Fourth Five-year Plan, Nepal divided geographically the areas to be developed into several zones, each of which was to be assisted by a donor. Japan was responsible for carrying out cooperation activities in Janakpur District and started this project.	For the efficient use of small plots in mountainous and hilly areas, Nepal planned horticulture development in those areas and requested financial and technical cooperation from Japan for the establishment of horticulture development centers.	The government of Nepal regarded aquatic resources as a low-cost and easy to produce/supply source of animal protein that would improve the nutritional status of people, and requested cooperation from Japan in the improvement of production techniques of fry production of carp and local fresh water fish at the already existing fisheries development centers	Within the framework of the Forestry Master Plan of 1988, Japan assisted in environmental conservation activities in Nepal through the Forestry Extension Project. A study on this project proposed the idea that people-centered cooperation based on needs would lead to environmental conservation. Based on this study result, the government of Nepal requested from Japan another cooperation project that would include both a soil conservation/watershed management program and a program for the development of community environment and forest resources.
Objectives and Activities	With the ultimate aim of increasing incomes and improving the living standards of the farmers living in the project sites, Japan assisted in the establishment and management of the Janakpur Agriculture Extension Center and carried out training at the Center and extension activities at model farms and in mountainous areas.	The project aimed to utilize mountainous and hilly areas and to promote fruit growing, which was to contribute to the diversification of agriculture, increase in agricultural income, improvement of nutritional status and acquisition of foreign currency. Activities included technical development in fruit cultivation, training of technical workers and dissemination of new techniques to farmers.	With the aim of improving the research capabilities of counterparts engaged in fish culture development and thereby contributing to the development of fresh water fish culture in the central hills, the project carried out development and transfer of the related techniques.	A package of three projects (Community Development and Forest/Watershed Conservation Project, Project-type Technical Cooperation, Greenery Promotion Cooperation Project, team dispatch of JOCVs and development study) was implemented for the purpose of contributing to the improvement of land productivity and natural environment through the implementation of village development sub-projects for the improvement of living standards. Activities included the development and validation of methods of planning, implementation, monitoring and evaluation of village development sub-projects.

6. Impact of Projects on Poverty

(1) Characterization of JICA Technical Cooperation Projects in Agriculture, Forestry and Fisheries

The team developed a two-dimensional dispersion chart to characterize each project from the aspects of "contribution to production" and "contribution to improvement of life" (Fig.1), which showed the following results: 1) Janakpur Zone Agriculture Development Project had a low direct relation to production and improvement of life; 2) the Horticulture Development Project focused on the production side; 3) the Project for Natural Water Fisheries Development contributed slightly to production but had no connection with improvement of life; and 4) the Community Development and Forest/Watershed Conservation Project and the Greenery Promotion Cooperation Project (CDF/WCP & GPCP) contributed much to quality of life but had a low contribution to production.

The target group of technical transfer were: 1) extension workers in the Janakpur Zone Agriculture Development Project; 2) both technicians of the national horticultural experimental station and model farmers in the Horticulture Development Project; 3) technicians of the national fisheries experimental station in the Project for Natural Water Fisheries Development; and 4) local people in CDF/WCP & GPCP.

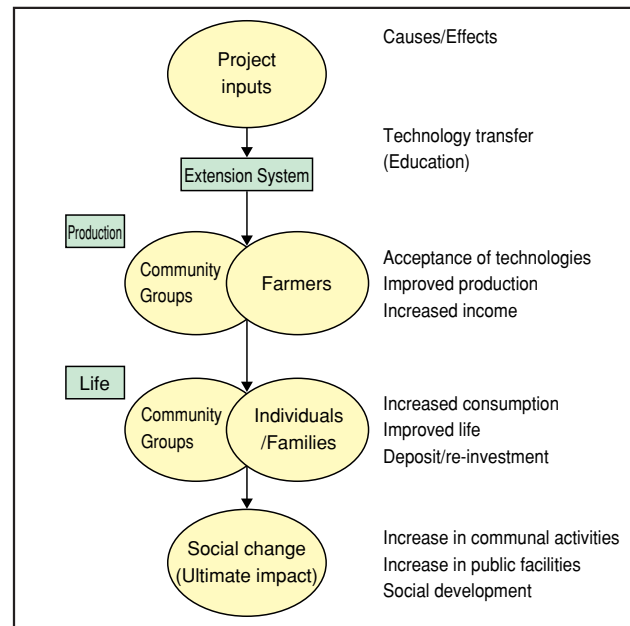
It was found that the greater variety of cooperation schemes added to a project, the greater the categories of recipients of technical transfer. For example, the Janakpur Project established the link with farmers after it introduced pump irrigation free of charge. In the case of the Horticulture Development Project, the construction of laboratory facilities (the Horticulture Development Centers) by free of charge enabled middle-level technicians to receive training there. JOCV activities targeting local fishers preceded the NWFP Project. Above all, it was noteworthy that CDF/WCP & GPCP could address the various needs of rural communities through the combined cooperation schemes, namely, development study, JOCVs and Project-type Technical Cooperation, in one comprehensive program.

(2) Impact of Agriculture, Forestry and Fisheries Projects and Poverty and Gender Issues

Under any circumstance, a project in primary industry such as agriculture, forestry and fisheries is designed to target production. It could be confirmed from experience that such a project impacts "production" first, then "quality of life," and finally "society" (Fig. 2).

A technical cooperation project targeting poverty or

Fig. 2 Flow of impact on agriculture / forestry / fisheries project



gender issues might have certain impact if it approaches such issues directly. However, it may take time for a production-oriented project to have impact on poverty and gender, and a large part of impact might become watered down and fade away with the progress of the project. Moreover, such a project might even have a negative impact such as widening the gap between the rich and the poor and as a consequence, emergence of a new problem of distribution of the profits generated by the improvement of production.

For example, the Janakpur Agriculture Development Project had two components: those that did not directly target farmers, such as development of agricultural extension techniques and training of extension workers; and those directly targeting farmers, such as the introduction of irrigation. Underlying the extension-related components was the belief that farmers would ultimately benefit from the training of extension workers once these trained workers were back in the extension system carrying out their work. However, if the organizations and the system of agricultural extension in Nepal do not function, the outcomes would not reach to the end beneficiaries-the farmers.

As for the irrigation components, on the other hand, the inputs for a new farming system (i.e., irrigation) benefited farmers in a way that it increased their income, but only when they had farmland and access to credit. That is to say, the project might have had no impact on tenant farmers and agricultural laborers. In some cases there might even have been a negative impact such as

creating a heavier workload.

A project could be said to have had positive impact if poverty of the village as a whole was viewed as the target, but when looking at a social aspect, the project impact would not necessarily be positive due to the widening of the gap between rich (those who benefited from irrigation) and poor (those who did not). In this manner, it would be the social system of division of profits that determines impact of the output brought by the production-oriented inputs on the target (farmers and communities). Therefore, whether a project would apply the traditional social system of division of profits or aim to bring about a more equal social system is an important factor to consider at the planning stage. And in either case, the planners must assume as the project impact a social change in the end.

(3) Evaluation on poverty and gender issues using agricultural indicators

The evaluation team selected indicators commonly used in the field of agriculture (e.g., agricultural production) and prepared questionnaires based on them. Questions about the rural community and economic situation were also included. By conducting a field study including interviews, the team collected information on the life and agricultural production of 382 households.

Through the study, the team assessed the impact of agriculture, forestry and fisheries projects on the improvement of poverty and gender issues. The following are some results of the impact assessment.

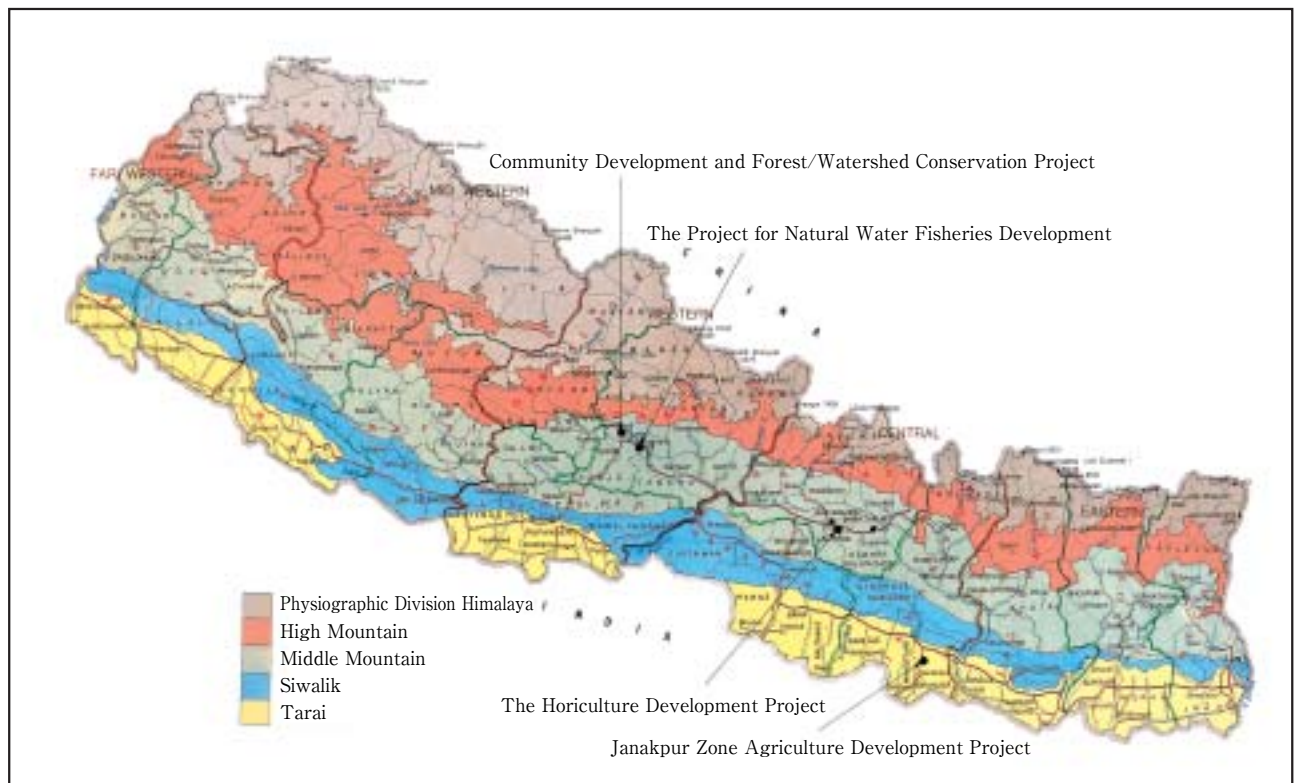
1) The Janakpur Agriculture Development Project

Regarding the means of production, the project site showed more active use of irrigation facilities than the control site. This could be a reflection of the impact of the dissemination of techniques including water management. Although the team did not see an increasing trend for rice and wheat (main crops), some indicators showed an increase in the cultivated area of wheat in the dry season. Also, the proportion of farmers who felt the production of such crops had increased was higher in the project site than in the control site. However, this might have reflected the production increase due to the expansion of cultivated area rather than the increase in yield: the yields of both rice and wheat in the project site were on the same levels as the national averages, and it was considered that the impact of the project had not reached the improvement of productivity of farmers yet.

2) The Horticulture Development Project

This project covered geographical areas with different natural and social conditions and, thus, its impact was also different from area to area.

Fig. 3 Location map of subjected projects



In Kathmandu District, despite the low cultivation rates of rice and wheat, the yield levels were high for hilly areas, which indicated the practice of intensive crop production including management of fertilizer application. In addition, vegetable production was active in the same area. The team considered this was due to the introduction and extension of fruit trees by the project, which must have stimulated interests of farmers in new technologies and more production, and thus brought the increase in production of other crops. The project had not yet achieved remarkable outputs in fruit production, since extension agents and farmers have only limited experience in fruit production.

In the Kabhre District, too, there were higher yields of rice and wheat in the project site than in the control site, which was considered due to the increased inputs such as fertilizer and chemicals. The project had introduced pear, persimmon and chestnut trees in this site, but the team did not find any of these trees in farmyards. It seemed that the groundwork for establishing new crops was not yet fully completed. On the other hand, the team found one family with a guava tree planted on the boundary between their terraced fields as one of their fodder trees. The fruit was a food for the family as far as the team could tell. Perhaps a guava tree would not contribute to cash income, but it enriches children's diet, and might play an important role in assessing the possibility of dissemination of new technologies, and moreover could serve well as an indicator of poverty.

The Ramechhap District was the site where productivity of grain production was the lowest among the project sites. However, regarding the introduction of fruit trees, junar, a variety of oranges that was being promoted by the project, was considered likely to

spread in Ramechhap because natural conditions were well suited to the growth of citrus trees and wild citrus trees were found in the area. There are still challenges for the establishment of junar production on a commercial basis: the production process must be closely controlled, and access to town markets must be improved, for at present the product must be carried by humans on mountain paths over ten kilometers.

3) The Community Development and Forest/Watershed Conservation Project and Greenery Promotion Cooperation Project (CDF/WCP & GPCP)

Phase I of the Community Development and Forest/Watershed Conservation Project focused on infrastructure development activities initiated by local people such as riverbank protection work, improvement of footpaths and rehabilitation of irrigation canals for conservation of living and natural environments. Also, an organizational system involving government, Japanese experts, JOCVs and villagers was established in order to support the project, which was characterized as participatory, and better reflect people's needs and opinions.

As the afforestation activities of Phase I intended only small-scale expansion of forest areas and rehabilitation of forest resources, it was difficult at the time of this study to assess the impact of the project on people's relation to forests. The team confirmed from the villagers' responses that the information provided by the project had reached farmers and that they were getting information about the functions of forests from JICA and foreigners. At the same time, however, there was an area where more than 40 percent of the people had never been taught the functions of forests, which suggested that many villagers were still not receiving information.

(4) Case study of the impact of the Project for Natural Water Fisheries Development

In Nepal, the fisheries has developed in the southern part of the country since the 1960s. Production dramatically increased through the transformation of irrigation ponds into fishponds. In the early 1990s, since the production of the existing fishponds had peaked, the development of natural and artificial lakes in the central hilly areas was planned for the purpose of a steady increase of fish production.

Japan had been engaged through technical cooperation in small-scale fish culture in net-enclosed areas through JOCV activities in Pokhara City and its



Small village on a mountain slope

neighboring areas since the 1970s. Fishermen accepted this technology because the areas were naturally rich in fish feed such as plankton and the cost of introducing net-enclosed fish raising was low.

In 1991, Project-type Technical Cooperation started as an expanded form of the said JOCV cooperation. Fish production increased remarkably as the supply system was well established through the achievement of one of the project objectives, which was the introduction of appropriate technology for the production of fries in the hatchery center. The terminal evaluation of the project highlighted this good result in terms of production, though it pointed out that the center had a problem regarding financial sustainability.

It could be said that the aquaculture, which started in the south, developed in a stable manner, having been introduced to the central hilly areas, although not without problems.

With regard to the impact of the increased production, both the southern areas and the central hilly areas had benefited economically. However, from the viewpoint of poverty reduction, the team found the following differences between the impacts of fisher in the two areas:

- 1) In the southern areas, those who benefited economically were owners of the irrigation ponds (land). Therefore, it was considered that the economic disparity between owners and non-owners of ponds became wider.
- 2) In the central hilly areas, the beneficiaries were fishers who are in a lower caste than farmers. This fact largely contributed to a bottom-up reduction of the poverty gap between farmers and fishers.

What was noteworthy from the viewpoint of sustainability-focused aid was the "continuity" of poverty reduction in the central hilly areas. "Continuity" here meant that individual beneficiaries improve economic and social status of their families while not wasting their income and paying back their debt, and that the number of such beneficiaries increases.

The team considered that such continuity would grow out of the improvement of fishers' self-organizational capacity. An aquaculture union existed before the project, but credits were given to fishers regardless of whether they were members of the union or not. Because the repayment rate was very low, credits came to be given through the union. This helped to improve the organization's membership rate, but it was not a factor that directly contributed to the improvement of the self-



Rice paddy on a mountain slope

organizational capacity of fishermen: It could be seen many cases around the world where a person becomes a union member to acquire credits but does not repay the money.

In this study, the team regarded self-organizational capacity as the capability of beneficiaries to continuously make repayment for loans, return profits to their families and invest profits in new businesses. The process in which the beneficiaries expand the scale of groups they belong to was then taken as the improvement of self-organizational capacity.

Based on this recognition, the team analyzed the entire aquaculture activities, including the evaluated project, to identify factors that bring continuity by using the idea of "sustainability", one of the five evaluation principles put forward by the Development Assistance Committee (DAC) of the Organisation for Economic Co-operation and Development (OECD), as the framework of the analysis. As a result, the team found a factor that should not be overlooked. It was the cooperative shipping system of the catch established with the introduction of aquaculture. Having been established for convenience of distribution and accepted by fishers, the system provided fishers who had changed their lifestyle from moving to settled with an opportunity to further promote the group formation. In general, fishers have a strong disposition to individualism and independence due to their eagerness to secure their own fishing grounds. The aquaculture activity changed this characteristic, and the establishment of shipping centers functioning as a place of information exchange caused a social change towards group formation (i.e., the emergence of fishers' networks)

that had never happened before. This fact was considered to be the main factor of continuity.

(5) Impact of the Community Development and Forest/Watershed Conservation Project and the Greenery Promotion Cooperation Project (CDF/WCP & GPCP) on the poor

The team selected CDF/WCP & GPCP as the subject of the study, and analyzed the impact of the project activities on the poor. The major components of the project activities were the various sub-projects such as ginger growing, bee keeping, goat raising, improvement of footpaths, construction of water supply facilities, improvement of kitchen stoves and literacy classes.

For analytical purposes, the team set seven dimensions to measure impact of a development project in rural areas: 1) resources, 2) capital, 3) skills, 4) decision-making capability/empowerment, 5) organizational capacity, 6) infrastructure and 7) gender. The team defined these seven issues as the necessary components for the capacity building of the poor in both aspects of production and life, and proposed to analyze the project's impact on poverty reduction by examining the seven issues for each of the aspects of production and life.

Among the above seven issues, the issue of "gender" is not discussed in detail here as it will be thoroughly analyzed under the theme of "impact assessment from viewpoint of gender" (see the next section). Also, since

CDF/WCP & GPCP focused on forest conservation and there had been increasing discussions on poverty and environment, the team replaced the seventh item with "forest conservation" for this study.

Overall, the team found little significant impact of the projects on poverty reduction in economic terms, but did find some notable positive effects on the lives of the poor. Indeed, the projects brought positive impacts on the poor in terms of improvement in their knowledge, access to technology, decision-making capabilities/empowerment, organizational skill and in economic and social infrastructure in their surrounding environment.

For example, women who participated in the literacy sub-project³⁾ not only acquired the ability to read and write but also gained experience in group activities, and new knowledge contained in the textbook developed by the Nepalese government such as public health and conservation of environment, that was of great use for rural women in improving their village lives. In addition, as this sub-project targeted women, it helped empower women participants by giving them an opportunity to organize themselves as a group, and maintain and manage their group activities.

Also, sub-projects for constructing drinking water supply and sanitary facilities had direct positive impacts on the improvement of the lives of the poor, and also seemed to have contributed to the improvement of their health and nutrition status. It was noteworthy that in the drinking water sub-project, user groups, which were formed by villagers specifically for the project activities, voluntarily set the rules for the members, undertook operation and maintenance of the constructed facilities, established group funds and distributed the profit of the fund. It was considered to be the largest impact of the project that villagers had such experiences of organizational management.

7. Impact Assessment from the Viewpoint of Gender

The study took up CDF/WCP & GPCP as a case study again and discussed the projects' impact on participants. The team carried out separate evaluations of the impact that was quantifiable and that which was not. Examples of the quantifiable impact include income generation and shortening of time spent for some activities. To mention a few examples, the team found that the sub-projects such as ginger production, goat raising and orange production did not contribute to income generation because productivity did not improve



A woman transporting straw

or the sub-project had been just started, but bee-keeping activities made an average monthly income of 150 rupees. Also, some informants pointed out that the sub-project to improve footpaths shortened their traveling time to the fields, which used to be 1.5 to 2 hours, by about 30 minutes.

On the other hand, the non-quantifiable impact included 1) the improvement of "self-development capability" (e.g., villagers gained the confidence and skills to express themselves or became able to manage time efficiently), 2) the improvement of "group-development capability" (e.g., user groups gained ability to make decisions and put them into practice by teamwork) and 3) "entertainment opportunities" (e.g., by joining user groups, women gained interaction with other women and enjoyed singing and dancing in their spare moments). Such qualitative impact was considered to be larger than the quantifiable one and, thus, very important in evaluation from gender viewpoint.

At the same time, some impact was considered negative. For example, women came to bear a heavier workload by joining user groups and their participation in distribution of income or decision-making at household level rather decreased.

Based on the above-mentioned findings, the team discussed "sustainable development" from a gender viewpoint. A merit of a project that adopts a participatory approach is that the people could acquire management skills with ownership through participation in the project, which might eventually contribute to the cultivation of the spirit of self-help within people. On the other hand, there are some limitations of a participatory project, namely the problems of maintenance of facilities constructed for the project and fund-raising of user groups. For example, in CDF/WCP & GPCP, the drinking water tanks and other facilities constructed by the projects will need continuous support from JICA for maintenance since it is difficult to obtain the necessary skills and materials locally. With regard to funding, a group fund was introduced to maintain each sub-project, but the low income of the people did not allow the deposits to reach a sustainable level. Management of the funds should be reviewed.

In addition, attention should be paid not only to whether the impact of the sub-projects was "sustainable" but also to an "inter-connection" of the sub-projects implementation of a sub-project might, even if it failed, provide a chance to create another sub-project. For example, the success of bee keeping prompted the women participants to start raising goats next.

The team also found that recognizing the cultural

values and working with established user groups in the project sites may lead to better results in terms of project management and sustainability.

8. Legal Systems with Regard to Gender and Poverty Issues

The Constitution of the Kingdom of Nepal has the following articles that are related to this report: 1) the "subject of rights and equality before law," which prohibits discrimination by caste in public facilities and stipulates the principle of equal wages for comparable for men and women, 2) "economic freedom," guaranteeing freedom of occupation and business continuation, and 3) "social rights," including improvement of education and health facilities, expansion of job opportunities and improvement of the national living standard through adjustment of regional disparities in wealth allocation.

However, the "National Law" has some articles that put more constraints on women than men. For example, in the provision on "distribution and inheritance of property," there is a punishment clause directed towards women alone, property rights are limited for widows or divorced women, and daughters have fewer rights than sons.

The projects evaluated by this study, however, were not directly related to the provisions that are disadvantageous to women. For example, lawsuits were considered unlikely over property distribution or inheritance under such sub-projects as income generation or joint-ownership forestry of CDF/WCP & GPCP.

The land law is more significantly related to the projects. Basically, this law is the base for land reform. What is noteworthy is the abolition of the Zamindari system (traditional land tax collection) as well as a rule on limitation of land-holding and leased land. The land law is applied when a dispute about land arises in carrying out a project. It is important that this law as well as related organizations are well understood when designing projects that require land.

In carrying out a development project, legal problems such as rights of property, infringement on rights of water and so forth, and the means and procedures in settling

³⁾ As one of the village-level sub-projects, six-month literacy classes were held for the caste to which many illiterate women and the poorest people belong. According to a survey conducted in this study, the literacy rate of the site of this sub-project was 23%, which was higher than both the averages of the control sites and the nation as a whole (both were 19%). The proportion of literate women to men in the sub-project site was higher at 4:10 (4 women:10 men) while in the control sites the rate was 3:10.

these disputes and organization of unions must be considered. However, the projects studied did not experience any conflicts related to land issues.

9. Relations Between Education and Poverty/Gender in Nepal

This section discusses the influences that three of the studied projects had on the education of farmer's household (couples and children) in the project sites in comparison with the situation of non-project sites.

In Janakpur Zone Agriculture Development Project, the team did not find any differences in farmers' educational status such as history of schooling and literacy rates between the project site and the controlled site. The effects of the project on education were rather indirect. Two types of indirect effects were considered: one was that the project provided farmers an opportunity for learning and acquisition of knowledge (opportunity effects) and the other was that farmers improved their living standard by accepting the agricultural project and consequently gained interest in learning and education (economic effects).

Similarly, CDF/WCP & GPCP had only indirect effects on education. The project tried a variety of activities calling for women's active participation, but improvement of the status of women in terms of education was not observed.

On the other hand, the Horticulture Development Project proved to have had consistent impact on the aspect of education. Ten years of training and extension activities provided farmers with valuable educational opportunities. In the survey of farmer households, a higher proportion of husbands and wives in the project sites responded that they were taking part in distance learning, literacy classes or seminars or self-learning

programs than those in the control sites, which proved that the project implementation had a consistent impact on education. The most important factor for such success was that fruit-growing technology was transferred to individual farmers at the grassroots level, thereby enabling farmers to access new technologies directly. As fruit growing was an activity in which women could take part directly, the project brought about educational effects on women as well.

All three projects also had indirect effects on improvement of the children's educational environment, namely the proportion of pupils who have textbooks, dropout rate and alleviation of their workload.

At the same time, the analysis revealed that most women were illiterate, except at some project sites. It seems that any project will have difficulty in establishing a sustainable and strong development base under such circumstances. From this fact, the importance of literacy education in agricultural projects could be reconfirmed.

10. Lessons Learned and Recommendations

(1) Increase in agricultural productivity and importance of economic development in rural areas

The team confirmed that technical cooperation projects in agricultural development in Nepal, where agriculture is the basic industry, played important roles in improving the living standard of farmers and in developing rural areas through the pursuit of their aims of improving agricultural productivity and increasing the income of farmers. At the same time, since non-agricultural livelihood activities are important as well for the development of rural economies, more job opportunities must be created.

The study on the Horticulture Development Project and Janakpur Zone Agriculture Development Project revealed that the projects had large impact on the productivity of farmers and fishers when they targeted them directly. Also, as seen in CDF/WCP & GPCP, disadvantaged groups such as the low caste improved their status in the society by accepting the intervention.

In this way, the impact of the improved production has a long-range influence on social status. Therefore, it is necessary to set the timing of evaluation and questions to be asked (e.g., income, social status, etc.) in accordance with its purpose. In addition, when the project does not necessarily target disadvantaged groups, impact assessment for all constituents of the society beyond the intended target groups should be carried out, because the



A literacy class

project might have widened the gap between the rich and the poor in the project sites.

(2) Land problems and the necessity of more inputs into the agricultural sector

A close observation of poverty in Nepal from the viewpoint of macroeconomics revealed that poor farmers lack funds to buy production inputs and lack access to the means of production (land). The scale of landholding in particular has much to do with the disparity in wealth among farmers: those with small landholdings are poor and cannot access inputs. From this, it can be concluded that the low labor productivity in agriculture leads to poverty in Nepal and thus an expansion of landholding, increase in production inputs and a review of the land system are required.

However, as the traditional landowning system is deep-rooted, rapid development will be difficult even if democratization and economic liberalization are promoted. In terms of the law, people rarely seek arbitration and, thus, it will take some time for them to seek legal intervention in the process of agricultural development.

(3) Measures for gender from the aspects of education and law

Survey results showed that when implementing a project, it is necessary to provide education for transfer of technology and knowledge. Among others, implementation of a literacy class as a sub-project proved to be an effective means of involving women in project activities. As such, a project that addresses Women in Development (WID) or gender issues requires education-related inputs. Other types of education such as mathematics and science are also considered necessary for agriculture development projects. In this way, education plays an important role in the process of technology transfer, improving incomes and quality of life.

With regard to law and gender, there arise few legal disputes over gender-related issues despite the articles of the Constitution and the National Law that are disadvantageous to women. This shows that the traditional customs still remain in the society, but they will gradually change in the process of development. In order to deal with these issues, human resources to develop the legal environment will be needed in the first place.

(4) Importance of targeting

A technical cooperation project in agriculture does



A woman fetching water. She must walk farther during the dry season.

not always target the most appropriate farmers. Even a project that is supposed to be poverty/gender responsive sometimes does not target the right groups, namely, poor farmers and/or women. An approach to select proper target groups is required. For that purpose, precision of targeting should be improved by strengthening base-line surveys using social analysis methods at the planning stage of the project. Also, the relation between target groups and ultimate beneficiaries (i.e., impoverished farmers) must be clarified. As development at the grassroots level faces diversified societies, planners need to be careful to deal with it.

For example, few projects that address poverty/gender directly target landless farmers or smallholders. Instead, many projects target an upper level such as middle-class farmers extension agents and then expect spillover effects of so-called model businesses or trickle-down effects. This is because the projects are designed to show outputs early on. However, one should understand that it takes time to produce outputs for a project which must be accompanied by change in social structure such as gender and poverty.

(5) Flow of project impact

When conducting an impact assessment, one should confirm where, when and of what kind the project inputs brought about impact on the society, and this will define the evaluation criteria. It is also necessary to grasp the flow of inputs and outputs until they reach the ultimate beneficiaries. Therefore, the project effects/ impact that might be brought about in a short-term and that might need long-term cooperation must be distinguished prior to the project implementation. When evaluating the project, it is important to address such a gap in timing of appearance of impact as much as possible.

(6) Indicators for impact assessment and project evaluation

To assess the impact of a project on poverty reduction in rural areas (from the viewpoint of capacity-building of the poor), the study team proposed to look at two aspects, namely, "improvement of capability in production" and "improvement of capability in various aspects of life," each of which should be evaluated using the following seven parameters: 1) resources, 2) capital, 3) technology, 4) decision-making power, 5) organization, 6) infrastructure and 7) gender.

When considering indicators for impact assessment from the viewpoint of gender, one should be aware that qualitative impacts such as those measured by self-development capability and group development capability are often more important than quantitative ones. It would be impossible to quantify impact on gender in the absence of measures. In such a case that there is no "absolute measure," a preliminary study is necessary to compare the situation of the target groups before and after the project implementation on groups which implemented project activities and those which did not. A detailed base line study focusing on social analysis is particularly needed.

(7) Extending the effects of increased yields to beneficiaries

The mainstream of technical cooperation projects in agriculture, forestry and fisheries take a yield-oriented approach, but it usually takes time for such projects to impact farmers. For example, extension services do not bring farmers tangible benefits immediately. In such a case, the intensity of impact on farmers depends on the abilities of the intermediary agents who bring new technologies to farmers (e.g., extension workers). Therefore, the project should recognize the importance of such intermediary agents and aim to strengthen their capacity by education and training. Evaluation of the process of intermediation is also important.

(8) Need for long-term cooperation to address disadvantaged groups in rural areas

When a project targets disadvantaged groups in the rural areas, namely, the poor, women and children, the expected impact on them should be larger entitlement⁴⁾, that is, an improvement of the conditions under which such groups can live by their own efforts. However, the project will not create larger entitlement for the disadvantaged groups unless the planners and managers fully recognize its importance.

Also, it takes time for the project inputs to reach

disadvantaged groups, and more time is required to have impact on them. Therefore, a project of this type tends to need long-term cooperation with the implementation of some additional measures such as Follow-up Cooperation. At the same time, with regard to entitlement, inputs from outsiders might be necessary at an early stage of the project but should be minimal.

(9) Establishment of a combination approach

When considering the issue, "how the impact of cooperation in agriculture, forestry and fisheries reaches farmers," one should understand the characteristics of rural areas, particularly that the "place of production" and the "place of living" are the same. This means that the approach of the cooperation includes two aspects, production and life. Direct intervention to both aspects brings greater impact than focusing only on one aspect and expecting effects to spillover. Projects will look quite different depending on the approach taken.

It is more effective to implement a project targeting both aspects (i.e., intervention in production and life) simultaneously. This type of project is sometimes called "comprehensive development" and requires sub-projects corresponding to each of the aspects.

However, multi-sectoral projects require close coordination of sub-projects. For example, while CDF/WCP contributed greatly to empowerment of women, one of its sub-projects to improve livelihood did not have notable effects. Experts and government organizations working in this field should have participated in this livelihood sub-project. The Horticulture Development Project went the other way: it attained increased incomes by improving production technologies but did not contribute much to the empowerment of women.

In planning and implementing a project, therefore, it is important to target the right groups and adopt a functional approach, namely, a systematic combination of several JICA schemes (e.g., Project-type Technical Cooperation, Development Studies, Grant Aid, JOCVs) as already practiced in the studied projects of this evaluation.

⁴⁾ According to Amartia Sen, entitlement is "a combination of goods that an individual can dispose of on his/her own discretion through exercising rights or opportunities given by others." While empowerment presupposes the existence of those who empower (i.e., donors), entitlement is based on the premise that beneficiaries have a primary role and donors play supportive roles to provide materials and know-how. In other words, entitlement emphasizes self-help of the beneficiaries, and is achieved by their active participation in the project.

(10) Evaluation for the utilization of project experience

Through this study the team recognized that the experience of past projects had not been fully incorporated in subsequent ones. Japan has more than 35 years of experience in technical cooperation in Nepal, and the society and economy of the country have changed dramatically over this period. However, the problems that confront projects remain basically the same. The team visited past JICA project sites and found that some projects still had effects, some had little impact and some had been transformed to other projects. This suggests the importance of long-term analysis of project impact and future evaluation studies similar to this one, but from a longer perspective. Such a study should not be an evaluation of individual projects but a comprehensive impact assessment of the cooperation (to a sector/area/country) as a whole.

11. Attempts to Feedback the Evaluation Results

In order to feedback the result of this evaluation to those who concerned to development aid, JICA evaluation seminar "Poverty Reduction and JICA's Cooperation" was conducted at Institute for International Cooperation in 17 November 2001.

Poverty and Gender in Agriculture and Forestry Cooperation

Project Sites

Southern part of Pilar City (Neembucu Province)
 Blas Garay Settlement (Caaguazu Province)
 Pirapo city (Itapua Province)
 San Lorenzo City, Capibary City



1. Background and Objectives of Evaluation Survey

JICA has gradually recognized that it was important to give special consideration to the issues of poverty and gender, and apply social research during the project planning stage to projects targeting community people. However, specific methodologies to apply research results to the cycle of project planning, implementation and evaluation had not been established, and hence methods had been created on a project by project basis.

This evaluation study was carried out in order to develop methodologies to address poverty and gender in the project cycle. The study is aimed at evaluating four completed projects and ongoing agriculture and forestry projects in Paraguay from a perspective of poverty and gender, understanding activities of other donors from the same perspective, and deriving lessons and recommendations from the results of the evaluation for feedback to future cooperation in the agriculture and forestry sector.

In the effort to make the study objective, and utilize the experience and knowledge of specialists in the field of gender and poverty, an external organization, Global Link Management, Inc., was delegated responsibility to carry out the evaluation.

2. Evaluated Projects

- **The Rural Development Project in the Region South of Pilar in the Paraguay**
(1994-1999, Project-type Technical Cooperation)
- **The Rural Development Project in the Blas Garay Colony and Its Influenced Area**
(1987-1994, JOCV Team Dispatch Program)
- **The Forestry Development Project in the Southern Region of Paraguay**
(1979-1986: Project-type Technical Cooperation

[including the extension period of 1984-1986], 1986-1987: Follow-up cooperation)

- **The Forest Extension Project in the Eastern Region of Paraguay**
(April 1996-April 2001, Project-type Technical Cooperation)

3. Members of Evaluation Team

Team Leader/Evaluation Method:

Keiko NISHINO, Global Link Management, Inc.

Poverty/Gender Analysis I (Education and Living Improvement):

Naoko KAMIOKA, Global Link Management, Inc.

Poverty/Gender Analysis II (Health and Sanitation):

Tomoyo WADA, Global Link Management, Inc.

Agriculture and Forestry:

Seiichi MISHIMA, Global Link Management, Inc.

4. Period of Evaluation

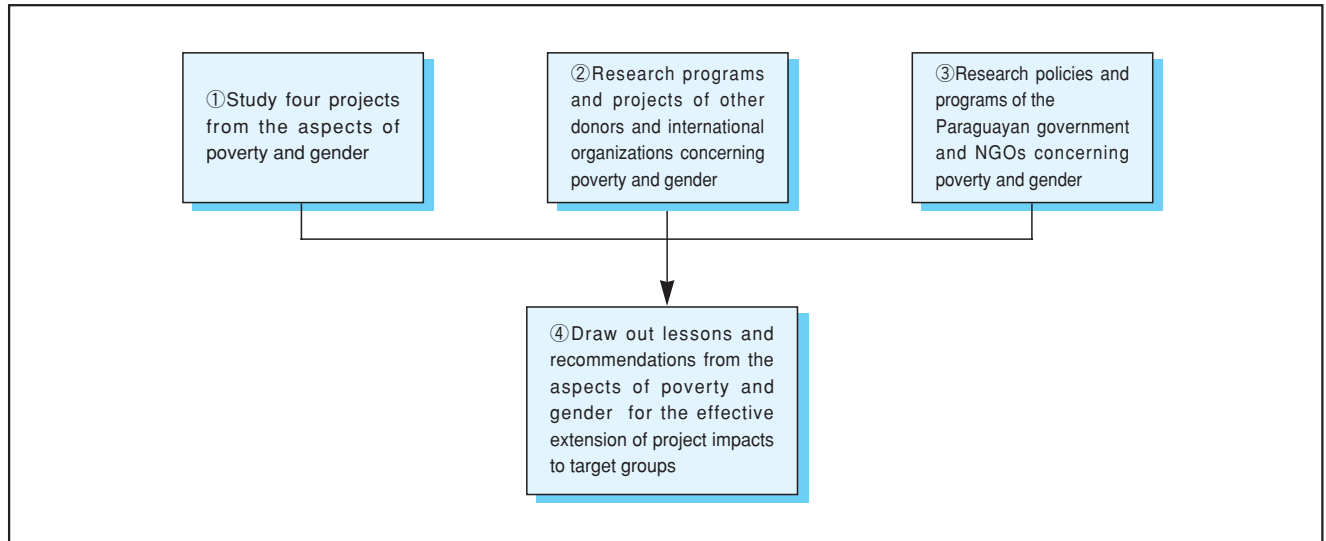
1 March 2000-7 April 2000

5. Method of Evaluation

(1) The Four Projects Subjected by the Study and Focus of Research

All four projects had been planned from an agriculture and forestry point of view, but they varied in terms of period of implementation, type of cooperation, project purpose, project sites and target groups. In order to evaluate the four projects in terms of poverty and gender, the research focused on studying the gap between impacts expected by the supply side (those who implemented the projects) and impacts realized by the demand side (those affected by the project, such as groups of poor people and

Table 1 Flow of the Study



women). The study used the following research methods: questionnaire survey to 21 Japanese experts, 14 JICA personnel and 20 counterparts on the supply side, focus group discussions with 89 women and 104 men on demand side, key informant interviews with 30 women and 56 men, twenty site visits, and analysis of approximately 30 secondary materials.

(2) The Situation of Paraguay

The evaluation team conducted interviews with eight government officials from the Secretariat for Women and Secretariat for Social Action and collected statistical materials in order to understand the situation of poverty and gender in Paraguay and to study government policies and approach to these issues.

Overall evaluation was based on the results of the above-mentioned studies, which were categorized according to three types of impacts the project had on the poverty and gender situation: expected positive impacts, unexpected positive impacts, and unexpected negative

impacts (Table 2).

(3) International Organizations and NGOs

The team also conducted interviews with eight staff members of the Inter-American Development Bank (IDB) and the World Bank in the capital city of Asunción in order to study how these international organizations and NGOs which had implemented agriculture and forestry projects give consideration to poverty and gender.

(4) Lessons and Recommendations for Considering Poverty and Gender

Based on the findings of (1)-(3), the study derived lessons and recommendations to make impacts of agriculture and forestry projects benefit the target groups with a special consideration to poverty and gender.

6. The Situation of Poverty and Gender in Paraguay

(1) Socio-economic background

According to the data of the DGEEvC (General Administration of Statistics Surveys and Census), the population of Paraguay in the year 2000 was 5.5 million. Characteristically, the population density has been very low in Paraguay. The majority of the population was mestizo of Spanish origin and indigenous Guarani, comprising 97 percent of the total population. The inflation rate was 9.8 percent (1996) and the rate of economic growth had been broadly flat in recent years. Forty-five percent of the working population were engaged in agriculture, thus the domestic economy was easily affected by unstable weather conditions and the low international price for agriculture products.

Table 2 Evaluation Grid of Project Impact

Evaluation Items	Specific Evaluation Items
Expected Positive Impacts	Improvement of Living
	Improvement of Access to Society
	Improvement of Education
	Improvement of Status
Unexpected Positive Impacts	Improvement of Living
	Improvement of Access to Society
	Improvement of Education
	Improvement of Status
Unexpected Negative Impacts	Improvement of Living
	Improvement of Access to Society
	Improvement of Education
	Improvement of Status

Decentralization had been promoted, although the central administration system was traditionally strong. The literacy rate was very high reaching more than 90 percent, but there was a regional gap between urban and rural areas.

(2) The Situation of Poverty and Gender

Paraguay was in the process of defining the poverty line, the criterion to measure the poverty status and the number of people comprising the poor population. The Basic Human Needs (BHN) research was one of the methods used by the Statistical Office. This approach defines poverty as the condition of not satisfying the four basic human needs of living environment, water and sanitation, education and the standard of living, and calculates the number of people who live in poverty. Another method of calculating poverty was also used: the minimal monthly income is calculated by multiplying expenditures (differs in urban and rural areas) necessary for purchasing food which satisfies the required daily calorific intake by Engel's coefficient. Looking at the situation of poverty in terms of regions, Asunción and the Eastern region were the wealthiest areas with the highest average income level and a well-established living environment. On the other hand, the Northern region was recognized as the poorest area in general.

The situation of gender in relation to agriculture and fisheries was examined. Although the land ownership law gives equal ownership rights to both women and men in Paraguay, land is rarely owned under a woman's name

due to persistent traditional ideas that a man is the pillar of the family. Men normally have the right to make the final decision on what to produce on their own land. Men are more familiar with economic trends and agricultural products than women, and, therefore, men manage the household economy. Women and men both have equal access to loans under the law, but in fact, it is often difficult for women to receive bank loans because women do not hold land and are not recognized as agricultural producers. Also, it is mainly men who participate in farmer training. This is due to the notion that agricultural producers are men and, thus, more men will become agricultural extension workers. In fact, agricultural work is shared by both women and men; basically, men manage cash crops and women produce and manage domestic products. On the other hand, it is mostly men who engage in forestry. Nursery activities, which are often the tasks of women in many other countries, are also led by men. However, it is likely that both women and men collect fuel wood together.

(3) Policies and Actions of Government and International Organizations Concerning Poverty and Gender

Less than 10 years have passed since Paraguay became a democracy, and only a few years have passed since the ideas of social justice, equality, participation in Western terms, and bottom-up development were established. The government has been in the process of planning and establishing policies, programs and projects with the support of external assistance. Paraguay's policy concerning human rights and gender equality was legislated in the new constitution of 1992 for the first time. After the proclamation of the new constitution, the Civil Law was revised and a Development Plan followed shortly afterwards.

At present, the implementation of the gender policies are under the control of the Secretariat for Women established in 1993. The main activities are the enhancement of gender consideration at the department level as well as the promotion of equal opportunity for women. In addition, the Department of Promotion of Women and Rural Youngster, Direction of Agrarian Extension, the Ministry of Agriculture and Livestock established in 1997, planned to pay special attention to gender issues in each project of the Ministry. Furthermore, the Department has been continuously carrying out activities to improve the living conditions of farmers, mainly those of rural women.

In terms of poverty, there is no specific policy



Upper : Key informant interview
Lower: Focus group discussion

targeting the poor population. According to the Secretariat for Social Action which has been responsible for the projects concerning poverty, they will formulate policies and plans targeting poverty by October 2000. The necessary information, such as a poverty map, was established and an agenda has been gradually developed. The Secretariat for Social Action was established as an implementing body for the Public Investment Scheme (PIS) launched under the funding of IDB in 1996, and they have been planning to establish laws and social policies to eradicate poverty.

Major projects concerning poverty and gender by donor agencies were the training project targeting rural women and minorities for poverty reduction carried out by the Secretariat for Women in conjunction with the European Union, and the World Bank's natural resources management project targeting small-scale farmers. There was also a lending and technical cooperation project, International Fund for Agricultural Development (IFAD), that covered poor households.

7. Impacts of Four Subjected Projects

(1) The Rural Development Project in the Region South of Pilar in the Republic of Paraguay

In the southern area of Pilar city, the Neembucu Province, covered by the project, poor land drainage caused agricultural lands and grasslands to be lost due to flooded rivers and heavy rain. The project started in 1994 with the aim of improving the living standard of small-scale farmers in the area. This project was planned to be terminated in 2001 after the two-year extension period. Six project outcomes were expected: 1) implementation of drainage work and management of drainage facilities, 2) establishment of model drainage management facilities, 3) establishment of participatory drainage management system by beneficiaries, 4) improvement of farming techniques concerning diversification of farming system, farming methods and soil improvement, 5) improvement and enhancement of extension work for the implementation of the diversified farming system and improved techniques, and 6) strengthening of agricultural development organization.

Table 3 shows various project impacts to the poor and women in the project area. Agricultural lands and grasslands were rehabilitated due to drainage work, and traffic was improved, and as a result, access to health

Table 3 Impacts of The "Rural Development Project in the Region South of Pilar in the Republic of Paraguay" on the poor and women

Items	Specific Items	Impacts
Expected Positive Impacts	Improvement of Living	<ul style="list-style-type: none"> • Agricultural income of some small-scale farmers rose by an average of 10 to 20 percent. • Production and consumption of fruit and vegetables increased slightly and the nutritional status was improved in the project area.
	Improvement of Access to Social Resources	<ul style="list-style-type: none"> • Land for agriculture and livestock was rehabilitated after drainage construction and area available for agriculture became larger. • Opportunities for technical training, such as seminars, were increased. • The transportation system was improved through road improvement, and transportation time and cost were reduced dramatically.
	Improvement of Education	
	Improvement of Social Status	<ul style="list-style-type: none"> • Participation and organization of some small-scale farmers empowered them and improved their social status and self-reliance. • The awareness of some women participating in the activities was raised.
Unexpected Positive Impacts	Improvement of Living	<ul style="list-style-type: none"> • Transportation costs of small-scale farmers were reduced due to the construction of access roads for drainage work.
	Improvement of Access to Social Resources	<ul style="list-style-type: none"> • The construction of access roads improved access to health services as ambulances could reach and provide appropriate care for emergency patients. • Electrification in the area was promoted by the construction of access roads. • Although the project targeted small-scale farmers, mid- and large-scale farmers in the area benefited from drainage construction and then became interested to join the project, which revitalized the activities. • Effective activities were carried out as a result of the partnership with local NGOs and local government institutions in addition to the Ministry of agriculture and livestock, the implementing organization.
	Improvement of Education	<ul style="list-style-type: none"> • Access for education was improved by the construction of access roads.
	Improvement of Social Status	
Unexpected Negative Impacts	Improvement of Living	<ul style="list-style-type: none"> • Road improvements provided easier access for strangers, and this triggered uncertainty in terms of public security in the area. • Land became arid due to drainage and wild animals in the area were negatively affected. • Water over-flowed into the area where drainage work was not completed, and this worsened the condition of flooding in the area.
	Improvement of Access to Social Resources	
	Improvement of Education	
	Improvement of Social Status	

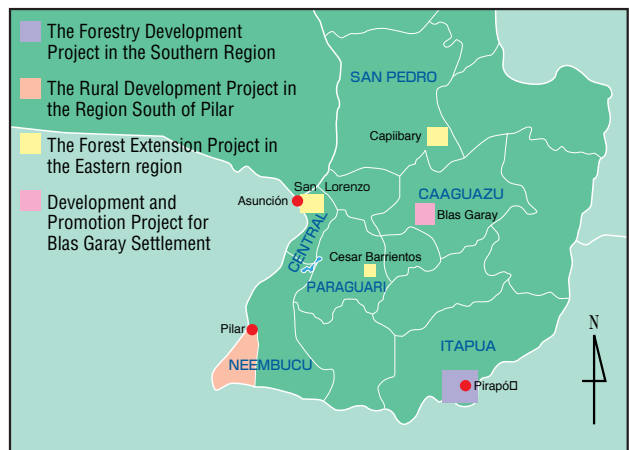


Upper: Flooded trunk road
 Lower: Same road improved by the Project
 (The Rural Development Project in the Region South of Pilar in the Paraguay)



Cotton cultivation was restarted at the site recovered by drainage work (The Rural Development Project in the Region South of Pilar in the Republic of Paraguay)

Fig.1 Map of project locations



activities would have to be continued and financial resources secured. However, project activities might be suspended after the termination of the Japanese cooperation because of the financial limitations of implementing organizations. Special consideration for these situations would be necessary.

(2) Rural Development Project for Blas Garay Colony and Its Influenced Area

Although the Blas Garay Settlement, Caaguazu Province, a site covered by the project, had the right conditions for producing fruit and vegetables and their farmers had high motivation, the region was underdeveloped since few public services reached the area.

Under these circumstances, the project was carried out under the JOCV Team Dispatch Program aiming at income generation of small-scale farmers through the improvement of production techniques for fruit and vegetables. During the project period from 1987 to 1994, twenty volunteers were sent to the Direction of Agrarian Extension of the Ministry of Agriculture and Livestock. There were five main outcomes of the project: 1)

production techniques of cash crops, mainly vegetables and fruit, were transferred, 2) farming techniques were efficiently extended, 3) affordable and high-quality farming equipment was guaranteed, 4) produce sales were

promoted, and 5) other living conditions were improved.

Table 4 shows the impacts of the project relative to poverty and gender. Major impacts were acquisition of new technology and know-how, an increase of

Table 4 Impacts of "the Development Project in the Blas Garay Colony and Its Influenced Area" on the poor and women

Items	Specific Items	Impacts
Expected Positive Impacts	Improvement of Living	<ul style="list-style-type: none"> • Production of fruit and vegetables increased. • Nutritional status of families improved as a result of increased intake of fruit and vegetables.
	Improvement of Access to Social Resources	<ul style="list-style-type: none"> • Access to loans was improved as a result of the establishment of agricultural cooperatives. • Transportation is more convenient due to improvement of road. • Technical training became accessible due to the establishment of Blas Garay Agricultural Center. • Knowledge of fruit and vegetable production were acquired. • Techniques and know-how of fruit and vegetable production were acquired.
	Improvement of Education	<ul style="list-style-type: none"> • Children learned the basics of agriculture in gardens of elementary schools through the guidance of JOCV.
	Improvement of Social Status	<ul style="list-style-type: none"> • Both women and men small-scale farmers were empowered and improved their social status by acquiring skills and knowledge through seminars and technical training.
Unexpected Positive Impacts	Improvement of Living	<ul style="list-style-type: none"> • Farmers who had small increases in income were able to invest in the improvement of the living environment.
	Improvement of Access to Social Resources	<ul style="list-style-type: none"> • Access to local health services was improved through the public health center established with support from the project. • Farmers who had small increases in income were able to invest in the improvement of agricultural infrastructure. • Transportation was improved as a result of road construction. • Electrification of the community was promoted due to the support of the project. • Groups of small-scale farmers in other regions admired the increased production of fruit and vegetables in Blas Garay and therefore requested and undertook training.
	Improvement of Education	<ul style="list-style-type: none"> • Transfer of information to small-scale farmers and organizations of those farmers was to a greater degree than expected.
	Improvement of Social Status	<ul style="list-style-type: none"> • Human relations in the community were improved through project participation.
Unexpected Negative Impacts	Improvement of Living	<ul style="list-style-type: none"> • The sale of agricultural products was low due to a lack of appropriate activities to improve marketing, and farmers were unhappy about not gaining the higher income expected.
	Improvement of Access to Social Resources	<ul style="list-style-type: none"> • Small-scale farmers were not satisfied with the insufficient results of Blas Garay Agricultural Cooperatives, which were established as part of the project.
	Improvement of Education	
	Improvement of Social Status	<ul style="list-style-type: none"> • The project created envy among farmers who were excluded from the technical training and services provided by JOCVs and their extension worker Counterparts under the project. This had an adverse impact on human relations in the community.

Table 5 Impacts of "Forestry Development Project in the Southern Region" on the poor and women

Items	Specific Items	Impacts
Expected Positive Impacts	Improvement of Living	<ul style="list-style-type: none"> • Small-scale farmers who received skill training were employed at the Forestry Center. • Income increased as a result of skill training.
	Improvement of Access to Social Resources	<ul style="list-style-type: none"> • Forestry Development Center was established and opened to the local people. • Workplace for lumber, fittings, and sharpener was established and wood processing machine was set up. • Roads and communication facilities were established for the opening of Forestry Center.
	Improvement of Education	<ul style="list-style-type: none"> • Fifty-five youths including those from small-scale farmer households had the opportunity to acquire a skill after completing middle-school education. • Knowledge and skills of forestry were transferred.
	Improvement of Social Status	<ul style="list-style-type: none"> • Youths were empowered and their independence was enhanced as they acquired and applied new knowledge and skills. • Employment at the Forestry Center became available for foresters and their social status was raised as a result of skill training.
Unexpected Positive Impacts	Improvement of Living	<ul style="list-style-type: none"> • Small-scale farmers in the neighboring community of the Forestry Center were employed for construction and cleaning of the Center and this resulted in creating income resources for those farmers.
	Improvement of Access to Social Resources	
	Improvement of Education	<ul style="list-style-type: none"> • Seedlings for tree planting were distributed to local schools and the children's awareness toward community afforestation activities was raised and skills and knowledge acquired as a result.
	Improvement of Social Status	
Unexpected Negative Impacts	Improvement of Living	
	Improvement of Access to Social Resources	<ul style="list-style-type: none"> • Greater demand from the community for information regarding reforestation and the environment, and on activities of the Center arose because of exposure to the project and existence of the Center.
	Improvement of Education	
	Improvement of Social Status	



Newly planted forest
(The Forest Extension Project in the Eastern region of Paraguay)



Focus group discussion (women of small-scale farm house holds)

agricultural production, and improvement of the level of nutrition of the small-scale farmers. However, income of the small-scale farmers did not increase as expected. The issue of market was not taken seriously into account (no JOCV member was specialized in marketing). As a result, agricultural product sales were poor and this was also affected by the economic recession and spread of smuggling. Activities targeting women were carried out only on an occasional basis since women were not identified as beneficiaries in the initial plan. However, the limited group of women who participated in the project activities benefited by being empowered and acquiring fruit farming techniques.

Small-scale farmers expressed the view that beneficiaries of the project should be involved in the project management in any form for effective and efficient use of resources as well as for avoiding negative impacts to poor people and women. It would be highly possible that resources would be inappropriately used and would not reach beneficiary groups if the resources were managed only by the supply side, particularly by the central government.

(3) The Forestry Development Project in the Southern Region of Paraguay

This project was implemented between 1979 and 1989 in the rapidly developing area of Itapua Province, Southern Paraguay aiming at the development of basic technology on afforestation and nursery, as well as the development of medium-level engineers for the forestry sector. Four major outcomes were identified; implementation of variety-classified afforestation in pilot and normal forests, implementation of variety-classified nurseries in model fields, training in the basic processing techniques and execution of various processing experiments, and the development of engineers. The project activities were carried out mainly at the Forestry Development Center (CEDEFO), which was constructed under the grant aid program of Japan in 1981.

The project impacts on the poor and women are indicated in Table 5. The impacts to the poor and women were very limited because the concept of poverty and gender consideration was not popular at the time of project initiation in the late-1970s and small-scale farmers and women were not targeted by the project since it aimed to develop engineers. However, side effects of the additional activities brought benefits to local small-scale farmers. Those farmers raised their awareness of the significance of reforestation and forest preservation and acquired the knowledge and skills of reforestation and nursery management through the activities, which distributed free seedlings for reforestation in schools and neighboring communities.

(4) The Forest Extension Project in the Eastern Region of Paraguay

This project is JICA's third in the forestry sector in Paraguay following the two mentioned above (Paraguay



Nursery in Cesar Barrientos



Community Nursery in Capiibary started through the project

Forestry Development and Central Paraguay Afforestation project). The project began in 1996 with the aim of transferring skills and knowledge of sustainable forest resources management. The project also aimed at spreading afforestation activities to the people engaged in forestry and to community members in the eastern area where the share of forests had declined to 15 percent of national land. The project was terminated in April 2001.

The JICA project office was located in San Lorenzo city in the outskirts of the capital city of Asunción. The project covered a wide area of the Eastern part of Paraguay. Community-based agro-forestry activities

targeting poor groups and women were carried out through the dispatch of a female expert on socio-economic analysis in the Capiibary area, San Pedro Province. Activities focused on Training Seminars of Community-based Agro-forestry, which integrated social and gender aspects, and a total of fifteen seminars were carried out by the time of evaluation. Twenty-six forestry promoters (including eight women) who would be in charge of forestry extension were fostered through part of activities, and then strengthening the capacity of communities to solve problems was attempted through the approximately 40 community-based reforestation projects.

The results of the project activities in the Capiibary area were evaluated from the aspects of poverty and gender. As Table 6 shows, integral benefits to the rural development were brought about as reforestation and afforestation activities were promoted and the standard of living was improved. It was also recognized that the position of women was enhanced as a result of the introduction of gender sensitivity.

However, project benefits were limited to the community members who directly participated in the community-based activities, but did not extend to other areas of Capiibary city. Forestry extension work would be implemented more effectively and efficiently if poverty

Table 6 Impacts of The "Forest Extension Project in the Eastern region of Paraguay" on the poor and women

Items	Specific Items	Impacts
Expected Positive Impacts	Improvement of Living	
	Improvement of Access to Social Resources	
	Improvement of Education	<ul style="list-style-type: none"> • Opportunity to learn skills and knowledge of natural environment preservation, reforestation, nursery, use of thinned wood and agro-forestry was created. • Knowledge of health, hygiene and nutrition improvement was acquired. • Knowledge of gender was acquired through training. • Training on planning, management, monitoring and evaluation of community project was carried out and knowledge was acquired.
	Improvement of Social Status	<ul style="list-style-type: none"> • Status of the community members who became forestry promoters were upgraded. • Community organizations were strengthened. • Participation of community members in forestry activities and community activities in general was promoted. • Women were more involved in both community and household matters through training and knowledge of gender.
Unexpected Positive Impacts	Improvement of Living	
	Improvement of Access to Social Resources	<ul style="list-style-type: none"> • Some nurses became forestry promoters; therefore, access of the entire community to health services was improved. • Services for transportation and communication were indirectly improved.
	Improvement of Education	<ul style="list-style-type: none"> • Elementary and middle-school students visited sites of community reforestation and afforestation activities and recognition of reforestation in the community was upgraded as a result.
	Improvement of Social Status	<ul style="list-style-type: none"> • The relationship among the community and schools, churches and municipal governments was enhanced.
Unexpected Negative Impacts	Improvement of Living	
	Improvement of Access to Social Resources	<ul style="list-style-type: none"> • The community was not satisfied with the community forestry activities as not everyone could receive skill training at the Forestry Center in Capiibary.
	Improvement of Education	
	Improvement of Social Status	

*Agro-forestry is a land use method which grows agricultural produce and trees most suitable for a certain plot.

and gender issues were considered by the counterparts who gave follow-up training, and the benefits would be distributed on a wide scale.

8. Lessons Learned and Recommendations Considering Poverty and Gender in the Agriculture and Forestry Sector

(1) Definition of poverty and identification of poor groups

At first, it is necessary to identify what kind of people are categorized into poor groups in countries and areas covered by the project. However, it is often difficult to define poverty in a uniform sense, and therefore JICA sets standards suitable for each project. The necessary information to identify the poor population, such as the government's definition of poverty, policies towards poverty, and contents of projects targeting the poor, should be prepared and analyzed by local JICA offices. A system should be established whereby local offices are able to provide information according to the needs of headquarters.

(2) Concept and method of classification of poverty reduction project, pro-poor project, and general project

A poverty reduction project has the goal of reducing and alleviating poverty, while a pro-poor project is one that attempts to bring about benefits to the poor groups in the target areas, along with achieving certain outcomes. In contrast, a general project can be defined as one where activities are carried out mainly at the training center and research institute, and concerns counterparts but not community people or the poor people in particular. In this sense, poverty reduction projects should not be formulated through particular sectors, agriculture and

forestry in this case, but should be approached from a broader cross-sectoral view, which is often used by country programs, with the aim of resolving the issues of poor target groups. The official documents of poverty reduction or pro-poor projects should clearly state that the projects address poverty in order to gain the understanding of counterparts and other stakeholders.

(3) Concept of target group in Project-type Technical Cooperation

Different stakeholders hold varying concepts of "target group" or "primary beneficiaries" for projects. Experts of Project-type Technical Cooperation, in particular, strongly recognized that direct beneficiaries are the counterparts to whom technologies would be directly transferred. However, primary beneficiaries would be the poor population if the project aims at poverty alleviation. Hence, it is generally considered that the counterparts of technology transfer should be the ones to address the issue of poverty, and not the Japanese side. It is also argued that it is not the experts' responsibility to work directly with farmers, but to establish the system and transfer technologies. However, Japanese experts should consider primary beneficiaries more seriously, since projects are carried out in collaboration with the counterpart country. Otherwise, the concept to alleviate poverty will not be established.

(4) Concept of Extension in Poverty Reduction/ Pro-poor Project

Japan's method of technical cooperation has been very effective in supporting South Asian countries, which have both the financial and human resources and government capable of providing their own training and extension activities. Nowadays, Japanese cooperation covers larger areas and the purpose and components of cooperation have become more diverse; hence, there are a growing number of cases where transferred technologies did not diffuse to other areas as expected. If a pro-poor project is planned for a country which would not be able to afford the local expenses, such as personnel costs, travel allowances for the personnel, gas charges, and fuel and light expenses, certain policy judgments are necessary to determine how local costs will be covered. Furthermore, if financial sustainability of the counterpart organization is not promising after the end of the cooperation period, the project needs to build in activities aimed at developing churches, NGOs and community-based organizations, or should include various types of cooperation, such as Community Empowerment Program,



Drain load constructed by the project

Development Partnership Program, Dispatch of Volunteers or Grant Aid, in order to gain sustainability of extension activities.

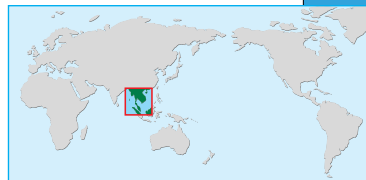
(5) Issues related to Formulating Poverty Reduction and Pro-Poor Projects

One difficulty of formulating poverty alleviation and pro-poor projects is establishing indicators that measure project effectiveness. In recent years, the preparation of PDM came to be recognized and numerical indicators tend to be emphasized. However, activities often do not follow the plan when the project targets community people, particularly the poor groups. There are also many qualitative indicators; attitude and actions of poor people, access to jobs, and the use of income. Therefore, when the project targets poor people, it is necessary to include qualitative indicators and to make the project more flexible by considering the possibility of the second phase from the beginning and by accepting the modification of project approaches.

(6) Gender Considerations

Among the four projects evaluated, it was only the "Forest Extension Project in the Eastern region of Paraguay" that carried out a gender analysis in the preliminary study and identified necessary gender considerations. Although Country WID Profiles have been developed and information on gender has progressively improved in recent years, collection of the specific information of socio-economic background and the gender situation in the project area is vital to consider poverty and gender when a project is planned from JICA headquarters. Hence, it is important to carry out gender training for the personnel of local JICA offices in order for them to collect and compile gender information. In addition, it would be important to employ female extension workers, female counterparts and female experts in countries such as Paraguay where gender differentiation is significant. Furthermore, gender components should be clearly defined in the official project documents, and other organizational efforts made for adequate monitoring and evaluation, for example, by requiring the project team to develop guidelines and actions to address gender concerns.

Support for Persons with Disabilities



Project Site Bangkok

1. Background and Objectives of Evaluation Survey

Enhancement of the international support system for the realization of the goals of full participation and equality of persons with disabilities (PWDs) in social life had been attempted at the international level. The United Nations designated the year 1981 as the "International Year of Disabled Persons" and declared 1983-1992 as the "United Nations Decade of Disabled Persons". The General Assembly of ESCAP (United Nations Economic and Social Commission for Asia and the Pacific) also declared the Asian and Pacific Decade of Disabled Persons beginning in 1992. As part of this international trend, Japan developed a basic approach and specific measures concerning PWDs and established the "Long-term Program for Government Measures for Disabled Persons" in 1982 and the "New Long-term Program for Government Measures for Disabled Persons" in 1992. The promotion of international cooperation for PWD was set as one of the priority areas in the above-mentioned plans.

JICA has carried out various projects to support PWDs under various schemes, mainly Project-type Technical Cooperation, Acceptance of Trainee, and dispatch of Japan Overseas Cooperation Volunteers (JOCVs). JICA, in line with the international and national trends to strengthen the support system for PWDs, and has studied and considered direction and measures of future cooperation for the realization of the goals of equality and full participation of PWDs in their society through conducting Project Formulation Studies in 1996 and 1997 and regular internal study meetings from July 1998.

This evaluation was carried out with the consideration of these circumstances within and outside JICA, since JICA did not have any previous experience to draw from for the establishment of a system for providing assistance

for PWDs. Thailand was selected for this case study evaluation, because JICA had already implemented certain cooperation projects in the field of supporting PWDs in Thailand, and expected to expand its cooperation in this field in Thailand, as Thailand plays a central role in the Indochina region.

The purpose of this evaluation study was to evaluate JICA's past cooperation and to identify lessons and recommendations for the improvement of future cooperation in terms of the realization of the goals of full social participation and equality of PWDs.

2. Evaluated Projects

- **Industrial Rehabilitation Center Project**
(Project-type Technical Cooperation FY1983-FY1990, Follow-up cooperation in FY1991, and Follow-up cooperation in FY1996)
- **Industrial Rehabilitation Center Project**
(Grant Aid Program in FY1983)¹⁾
- **Japan Overseas Cooperation Volunteers (JOCV) and Senior Overseas Volunteers**
(FY1992-FY1999): 10 volunteers dispatched
- **Acceptance of Trainees**
(FY1985-FY1999): 77 trainees accepted

3. Members of Evaluation Team

Team Leader:

Yukiko NAKANISHI, President, Asia Disability Institute

Sub-Team Leader:

Akiie NINOMIYA, Professor, School of Policy Studies, Kansei Gakuin University

Member:

Naoto OKAWA, Office of Evaluation and Post-

project Monitoring, JICA

Member:

Mari FURUKAWA, Associate Specialist, Indo-china Division, Regional Dept., JICA

Evaluation Analysis:

Makiko KOMAZAWA, Sekkei Keikaku Architects, Inc.

In addition to above, Ms.Yuriko SAITO, IC Net Thailand Inc., was joined the evaluation team as a local consultant

4. Period of Evaluation

11 August 2000-28 August 2000

5. Method of Evaluation

The overall goal for providing assistance to PWDs is the realization of full participation and equality of PWDs in society. This evaluation study was carried out using the framework presented below with this goal in mind.

(1) Present conditions of PWDs

The study attempted to understand the present conditions of PWDs in Thailand using statistical data and a questionnaire survey (133 respondents with disabilities) and to define the issues for achieving the goals of full social participation and equality of PWDs.

(2) Present measures to support PWDs

The study was carried out to understand the

international trends concerning support for PWDs, government's policies and programs in Thailand, and activities or future direction of cooperation from donors, international organizations and NGOs.

(3) Evaluation of JICA's past cooperation projects

- 1) Major JICA cooperation projects for PWDs in Thailand were evaluated using the methods below.

- **Industrial Rehabilitation Center**

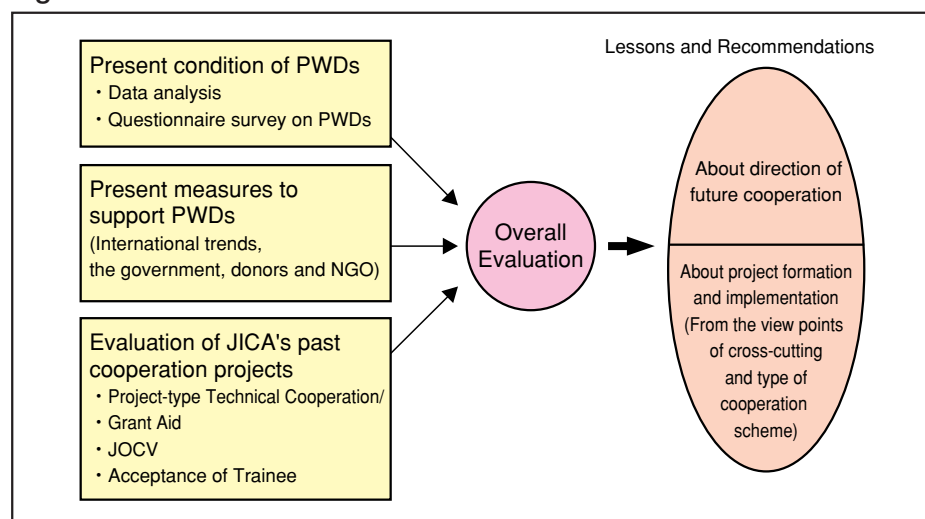
The project was evaluated in terms of five evaluation criteria (efficiency, effectiveness, impact, relevance, and sustainability) through field study and questionnaire survey on PWDs who received the training course at the Center.

- **Dispatch of JOCVs (including senior volunteers) and Acceptance of Trainee**

Questionnaires were delivered to organizations which hosted JOCVs and ex-trainees of the training courses. Based on those results, the evaluation was made mainly from the view points of effectiveness. In addition, group interviews were conducted with nine JOCVs who were still on duty at the time of evaluation and 20 ex-trainees in order to deeply grasp and understand where improvements could be made to both programs of JOCVs and technical training.

- 2) An overall evaluation of JICA's cooperation was then completed based on the results of the above-mentioned studies on the present conditions of

Fig. 1 Framework of Evaluation



1) While grant aid projects fall under the jurisdiction of the Ministry of Foreign Affairs, JICA is responsible for carrying out the necessary preliminary studies (preparatory studies, basic design studies, etc.). JICA also supports the implementation of grant aid projects.

PWDs, present measures to support PWDs, and JICA's past cooperation projects. Then the team evaluated the entire JICA cooperation program from the aspects of realization of full social participation and equality of PWDs.

(4) Lessons learned and recommendations for JICA's future cooperation

Based on the results of above (1) through (3), lessons and recommendations for the future direction of JICA's cooperation and improvement in the formulation and implementation of projects of JICA were presented.

6. Present Conditions of PWDs

(1) Statistical data on PWDs

Statistical data on PWDs were not yet sufficient in Thailand and the Situation of those living in local areas was hardly understood. At the same time, there were large discrepancies in the statistical data used by different government organizations. The Committee for Rehabilitation of Disabled Persons, the Department of Public Welfare of the Ministry of Labor and Social Welfare used the statistics compiled by the National

Public Health Foundation of the Ministry of Public Health. According to their statistics, for example, the population of PWDs was 4,825,681 (1996), which accounted for 8.1 percent of the total population.

A review of PWDs by age group showed that the ratio of PWDs in the age group of 60 or over and in the 20-29 age group was as high as approximately 20 percent each. Compared with the age distribution of total population, the age group of below 10 showed a considerably small figure, indicating a low survival rate for children with disabilities.

The statistics on the ratio of PWDs by type of disability compiled by the National Public Health Foundation indicated that persons with physical disability account for more than half, followed by persons with visual disability who accounted for about 20 percent, and these two types of disabilities alone constituted three quarters of the total. In developed countries, there had been a conspicuous tendency to show a significantly large ratio for mental disability or internal disorders (functional disorders of internal organs such as kidney malfunction and respiratory malfunction). In contrast, Thailand had a very low ratio for these types of disabilities. This was considered presumably because people were identified as

Table 1 What is the most serious issue that concerns you?

(multiple choice)

	Persons	%
Income and Finance	33	24.8%
lack of support to PWDs	32	24.1%
Work-related issues	21	15.8%
None	10	7.5%
Issues related to living	9	6.8%
Issues related to education	3	2.3%
Other (human relationships, etc.)	13	9.8%
No answer	21	15.8%
Total	142	106.8%

Table 2 What would you like to do in your life in the future?

(multiple choice)

	Persons	%
Job other than self-employment and vocational training	52	39.1%
Support to PWDs	25	18.8%
Self-employment	23	17.3%
Living and family	16	12.0%
Education and academic qualifications	10	7.5%
Other	20	15.0%
No answer	12	9.0%
Total	158	118.8%

Table 3 What is necessary to achieve your needs?

(multiple choice)

	Persons	%
Funds and loans	32	24.1%
Vocational training and job	15	11.3%
Official support from government agencies and institutions	16	12.0%
Understanding and aid from supporters and community	13	9.8%
Mental matters	10	7.5%
Support to education	7	5.3%
No description	7	5.3%
Others	13	9.8%
No answer	30	22.6%
Total	143	107.5%

Table 4 What do you enjoy the most now?

(multiple choice)

	Persons	%
Hobbies and life	72	54.1%
Job-related issues	25	18.8%
Supporting PWDs	20	15.0%
Issues related to education	4	3.0%
Other (degree of satisfaction, achievement or obscure responses)	8	6.0%
No answer	19	14.3%
Total	148	111.3%

PWDs only when their disabilities could be visually recognized. The Ministry of Public Health reported that as far as the category of mental and intellectual disabilities was concerned, although they started to provide services in some areas, there were not many specialists and the existence of disabilities itself was not recognized.

(2) The circumstances surrounding PWDs

In order to understand the circumstances surrounding PWDs and the issues remaining for the realization of the goals of full social participation and equality of PWDs from their own viewpoint, questionnaires were delivered to almost 680 people. There were 133 respondents and ratio of valid response was approximately 20 percent. The result of questionnaire were shown as table 1 to table 4.

Many of the respondents sampled for this survey belonged to a group of highly educated people fortunate to have a job, vocational training and social participation opportunities. Therefore, these people tended to be more self-sufficient and more involved in social activities than the overall disabled population. However, many still needed to secure employment and become economic independent. This survey also revealed the fact that these PWDs who enjoy a relatively favorable environment strongly feel that they could lead a meaningful life by participating in activities for supporting other PWDs, in addition to participating in activities that interest them. These findings also revealed that there was a growing tendency for PWDs in Thailand to seek self-realization and social participation, and that PWDs themselves could be important human resources for empowerment of other PWDs while not being content themselves with their position to receive protection.

7. Overall Measures to Support PWDs

Measures to support PWDs in Thailand have developed in line with international trends, such as the establishment of the "United Nation's International Year of Disabled Persons" (1981) and the "United Nations Decade for Disabled Persons" (1983-1992) as well as the declaration of the "Asian and Pacific Decade of Disabled Persons" (1993-2002) of ESCAP. Legal preparation was promoted, such as establishment of the 1991 Rehabilitation of Disabled Persons Act, the first law concerning PWDs in Thailand, and a basic level of human resources, facilities and financial resources had been secured at the central level. A support service system had been established, while advanced facilities, such as Sirindhorn National Medical Rehabilitation Center and Industrial



Industrial Rehabilitation Center



Electronics training course exercise

Rehabilitation Center, had played a role as models. Furthermore, NGOs, such as the Foundation for Handicapped Children, Redemptorist Vocational School for Disabled Persons, and Skill Development Center for the Blind, in collaboration with public organizations, played important roles at the central level and carried out flexible activities corresponding to existing needs. These achievements were very significant in the Indochina region and it was expected that Thailand, advanced in the region concerning providing assistance for PWDs, positively influence on other neighboring countries through displaying their achievement.

As mentioned earlier, the chief concern of PWDs was "securing a job" and "activities for supporting PWDs" to attain economic independence and self-realization. Measures to assist them to achieve these goals were required, such as creation of job opportunities, improvement of living environment including public transportation, raising of public awareness including employers, and support to the activities of PWDs themselves.

The Thai Government set forth priority areas with

Table 5 Result of evaluation of JOCV

(persons)

	Good	Not so bad	Average	Not so good	Bad	Total
Level of skill	3	4	3	0	0	10
Ability to speak in Thai	2	3	3	2	0	10
Teaching method	4	3	3	0	0	10
Daily communication with colleagues	5	3	1	1	0	10

respect to their measures to support PWDs, including quantitative expansion of basic rehabilitation services to PWDs such as medical care and education, upgrading of vocational training to achieve economic independence and creation of job opportunities. Improvement of accessibility of public transportation and other facilities was set as one of the measures to achieve these goals. These priority areas were in agreement with the needs of PWDs as mentioned earlier.

8. Evaluation of JICA's Cooperation Performance

(1) Industrial Rehabilitation Center (IRC)

1) Overview of cooperation

The Industrial Rehabilitation Center (IRC) Project was carried out under the programs of Project-type Technical Cooperation and grant aid from 1983 to 1991. The purpose of the project was for graduates of IRC to be employed. The outputs of the project were the establishment of facilities and equipment of IRC, development of management organization, development of trainers, and development of training curriculum and teaching materials.

2) Overview of evaluation results

Results of the evaluation of IRC project by the evaluation team are summarized below.



A JOCV carries out a PDW rehabilitation activity in a swimming pool

- a) IRC played a central role in the nation's policy for the employment of PWDs who suffered from industrial accidents as a pioneer in the field of vocational rehabilitation for those who suffered injuries in industrial accidents.
- b) IRC rehabilitated many trainees, and those who completed its training were very satisfied with its services.
- c) The level of technical skills on the part of the IRC director and staff was high among government agencies, and they were making use of the results of technology transfer by Japan.
- d) IRC had a considerable ripple effect on other agencies and high sustainability.
- e) IRC accepted domestic and foreign observation teams and many trainees from educational institutions for PWDs, and thereby has spread technologies transferred from Japan extensively in Thailand and in other Asian countries.

3) Recommendations to IRC

- a) In order to reflect the needs of PWDs to IRC's activities, it would be necessary to build a system that enables PWDs to positively participate in the decision-making process and operations concerning its activities.
- b) In order to flexibly respond to the needs of trainees and the needs of industry, it would be necessary to thoroughly review the training program at regular intervals.
- c) It would be necessary to establish a system for providing follow-up services for those who completed training at IRC.
- d) To provide more multi-layered services, IRC would be necessary to have close relationships with other institutes for PWDs to exchange trainees, information, and new techniques and have mutual access to facilities.

(2) JOCV Projects (including Senior Volunteers)

1) Overview of cooperation

A total of 17 volunteers (JOCVs) and two senior volunteers were dispatched in the disability field by

Table 6 Evaluation of training by former trainees (by people with/without disabilities)

Evaluation	Respondent classification	
	Without disabilities	With disabilities
Greatest training results	<ul style="list-style-type: none"> ⊙ Learned about well-developed institutional framework and environment surrounding PWDs. In particular, impressed and motivated by staff's high awareness and high levels of training skills. ⊙ Strongly impressed by the realization of economic independence 	<ul style="list-style-type: none"> ⊙ Learned about well-developed institutional framework and environment surrounding PWDs. In particular, empowered by general public's awareness of PWDs, and high awareness of PWDs themselves. ⊙ Strongly impressed by the realization of economic independence
Transfer of the training result	<p><Transferred training results in some way ></p> <ul style="list-style-type: none"> ⊙ Reported within the affiliated institution or organization. • Contribution to program reform in the affiliated institution. • Gave a lecture and seminar in other institutions 	<p>< Participants with disabilities empowered PWDs themselves ></p> <ul style="list-style-type: none"> ⊙ Reported within the affiliated institution or organization. • Activity for educating other organizations • transmission via mass media (radio, publication). • Gave a seminar. • Developed into collaboration with Japanese organizations for PWDs (National Association of the Deaf in Thailand and Japan Federation of the Deaf).
Improvements to be made	<p>① Training course setting</p> <ul style="list-style-type: none"> • The degree of satisfaction increases in the following order: group → country-specific setting → individual. • Separate courses should be prepared for staff in the service section and in the administrative section. • Appropriate participants for respective training courses were not always selected by DTEC selection method. 	<ul style="list-style-type: none"> • Disability-specific curriculum is effective in some cases.
	<p>② Content of training</p> <ul style="list-style-type: none"> • Trainees needs to have training that matches their own duty. ⊙ More opportunities for on-site practical training and for social interaction with on-site staff are needed. • Prior adjustment of visit to/explanation of institutions to be inspected or visited (to avoid duplication). • Both public organization and NGOs should be included in site visits. 	<ul style="list-style-type: none"> ⊙ More opportunities for on-site practical training and social interaction with on-site staff are needed. • More opportunities to exchange views with Japanese PWDs are needed • Techniques and training that can be learned without expensive facilities and equipment are needed
	<p>③ Upgrading communication tools</p> <ul style="list-style-type: none"> ⊙ All teaching materials should be written in English or the Thai language. ⊙ Teaching materials should be distributed before lectures. 	<ul style="list-style-type: none"> ⊙ All training materials should be written in English or the Thai language. • Consideration must be given to provide translation into Braille and in large print for visually disabled persons, and teaching materials on floppy disks for aurally PWDs. • Quality of sign language interpreters should be improved. ⊙ Teaching materials should be distributed before lectures
	<p>④ Follow-up after returning to home country</p> <ul style="list-style-type: none"> • Support for building a former-trainee network is needed. • Continuous provision of latest information is needed. 	
	<p>⑤ Others</p> <ul style="list-style-type: none"> ⊙ There should be leeway of schedule which allows time to review and digest subjects during training. ⊙ More training opportunities in Thailand are needed in order to enable participation of as many related personnel as possible. 	<ul style="list-style-type: none"> ⊙ There should be leeway of schedule which allows time to review and digest subjects during trainings. ⊙ More training opportunities in Thailand are needed in order to enable participation of as many disabled people as possible. • There are not many opportunities to transfer acquired knowledge to other people. JICA should provide such opportunities.

⊙ represents items common to people with/without disabilities.

August 1999. Volunteers were posted to positions in physical therapy, nursing, and youth activities, and the host organizations were NGOs supporting PWDs, schools and facilities for disabled children and hospitals. Posted areas of the senior volunteers were social work and sports for PWDs and their hosting organization was the Sirindhorn National Medical Rehabilitation Center. The evaluation team evaluated the activities of ten volunteers who had already returned to Japan.

2) Overview of evaluation results

It was learned that JOCVs had high aspirations, made efforts to adapt themselves to the host

organizations, and eagerly provided their activities. The host organizations were also fairly satisfied with their activities. They also highly evaluated the technical skills, language proficiency, teaching skills and the communication skills of volunteers, although their Thai language skill was not as admirable as other skills.

At the facilities visited by the evaluation team, technical cooperation was combined with provision of equipment as facilities and equipment as these were needed to conduct technical cooperation. For example, a gymnasium was established at the Sirindhorn National Medical Rehabilitation Center under the

Grant Assistance for Grassroots Projects due to the efforts of the senior volunteers. Volunteers also served as role models, and contributed to improving awareness of PWDs and attitude on the part of the staff of the institution. In addition, JOCV built a self-help system through seminars organized spontaneously.

3) Recommendations for volunteer projects

- a) It was found that volunteers were not necessarily posted to the countries and organizations which they preferred; therefore, both the host side and volunteers were often unsatisfied with the situation. As a possible solution to this problem, applicants for JOCVs should express their priority with respect to host countries, types of job, and receiving institutions so that this information will be reviewed when the assignment positions were considered.
- b) To provide more detailed information to JOCVs, JICA should reorganize already compiled information on countries, activity areas, and organizations to which volunteers would be

dispatched.

- c) A system for performing a 'hand-over ceremony'²⁾ at the time of dispatching JOCVs should be strengthened in order to promote understanding of the host organizations towards the volunteer program, and the JICA office should consider the possibility of upgrading its monitoring system during the assignment.
- d) To assist JOCVs in their valuable activities, JICA should support the development of a network among JOCVs and between JOCV and experts.
- e) Volunteers need to continue making efforts toward improving their language skills in order to overcome communication problems that were a result of their poor Thai language skills. Volunteers themselves should continue making efforts to understand Thai society, and, in addition, should try to explain and reach out patiently to people around them in order to overcome the lack of understanding and low recognition of hosting organizations and colleagues.

(3) Acceptance of Trainee

1) Overview of cooperation

From 1985 to 1999, a total of 77 trainees participated in 14 training courses in Japan, including a course for rehabilitation experts, a leadership training course for PWDs, and a course on the welfare of mentally disabled people.

2) Overview of evaluation results

Participants who had returned to Thailand were generally highly satisfied with the training. More than 80 percent of the 77 survey respondents had mentioned that they were making use of the acquired skills and about 80 to 90 percent of these respondents said that they had transferred the acquired skills and knowledge to colleagues through debriefing and guidance sessions at their workplaces. Some 60 percent of the respondents also wrote reports on their training. As such, the impact of the training and achievement of project outputs were deemed to be high.

The evaluation team also held sessions for exchanging opinions among 20 trainees (eight with disabilities and 12 without disabilities) in order to

²⁾ The ceremony that is carried out by the JICA office, Department of Technical Economic Cooperation and hosting organizations at the beginning of the assignment of volunteers.



A gym constructed by grant assistance for grassroots projects (Sirindhorn National Medical Rehabilitation Center)



Redemptorist Vocational School for PWDs (Pattaya)

understand the details of training outcomes. The following are the results (refere to Fig. 6 for details).

The major training outcome of people both with and without disabilities was their increased awareness through seeing the established environment for PWDs in Japan. They found that the support system for PWDs was well-established, motivation of PWDs was high and, as a result, PWDs were able to realize social participation. In addition, training-course participants said that they were greatly empowered through the interaction with PWDs in Japan.

On the contrary, in Thailand, there has been a shortage of human resources, as well as a limited number of opportunities for the development of personnel in the field of support for PWDs. It is also found that the demand for new skills and information in the field is very high.

3) Recommendations for Acceptance of Trainees

- (a) In order for trainees to obtain greater results from training, it would be necessary for them to participate in the courses that match the characteristics of the trainees (whether they had disabilities or not, whether they are staff members working in the department that provides service or in the administrative department). To achieve this, it is recommended that the qualifications of trainees should be clearly listed on the application form. It would be also important to set up well-thought-out programs, such as combined-type lectures for people with and without a disability, practical training by types of disabilities, or learning for case studies and research reflecting many fields of expertise.
- (b) With respect to the content of training, many of the former trainees required practical training and visits to institutions that would immediately help them with their duties. Training needs should be regularly assessed and then the training program should be redesigned accordingly. Since techniques that require the latest material/equipment and budget may not be utilized in many cases after the trainees return to Thailand, it would be necessary to consider providing training mainly in techniques that could be actually put into practice in developing countries, including Thailand.
- (c) Since the latest information in the field of supporting PWDs tended to be insufficient in Thailand, many of the respondents requested that the latest information be provided after training,



Computer training course exercise

and that in-country training should be held. To this end, JICA must work for developing a follow-up system for former trainees such as expanding opportunities for in-country training and providing the latest information on an ongoing basis.

- (d) Although various kinds of disability-related projects were being implemented within JICA, these were independent projects and there was with no collaboration. If each project were well communicated, more effective cooperation outcomes could be yielded.

(4) Overall Evaluation

JICA started its cooperation in the field of supporting PWDs with Project-type Technical Cooperation and grant aid cooperation for IRC in FY 1983. In those days, the general public in Thailand had a very low awareness of PWDs, and it could be said that the government virtually provided no services to support PWDs. The construction of a full-fledged facility for vocational rehabilitation of PWDs through JICA's cooperation was a great achievement in this early period. As the awareness of PWDs on the part of the general public in Thailand has started to grow with the enactment of the Act for Rehabilitation of Disabled Persons in 1991 and declaration of the Asian and Pacific Decade of Disabled Persons started in 1993, IRC contributed to the diffusion of the concept of vocational rehabilitation and technology development. Particularly, the fact that IRC has achieved a self-sustaining growth in response to the growing domestic demand in Thailand, demonstrated the validity of the cooperation. Furthermore, the results of questionnaire survey revealed that the major desire of PWDs was economic independence, and thus this project was recognized to have made a great achievement

tackling the issue of PWDs through the supportive vocational training and social rehabilitation of those injured in industrial accidents.

With the popularization of rehabilitation of PWDs in Thailand, demand for human resources development in the field has been growing significantly since the early 1990s. About this time, JICA started to accept administrative officers, staff members of institutions and PWDs from Thailand on a full-scale basis as trainees, and contributed to training pioneering leaders and introduction of advanced techniques and systems in the field of supporting PWDs. In addition, JICA played a significant role not only in sending its JOCVs and Senior Volunteers to institutions for PWDs in Thailand for transferring techniques to the staff of these institutions, but also in improving the understanding and attitude of workers concerning PWDs.

As explained above, JICA's support for PWDs through various schemes extended to the areas of education, medical care, and vocational and social rehabilitation, and this greatly contributed to developing the foundation for realizing the goals of full social participation and equality of PWDs.

9. Lessons Learned and Recommendations

(1) Future direction of cooperation concerning the support for PWDs in Thailand

As was confirmed in the previous sections of "present conditions of PWDs" and "present measures to support PWDs", the Thai government had been attempting to establish a system for supporting PWDs in line with the international trends in order to achieve the realization of full social participation and equality of PWDs. At the central level, fundamental human resources, facilities and financial resources required to support PWDs have been secured to a certain extent. In order to realize full participation and equality of PWDs, it would be important to promote activities not only of the government, but also of organizations of PWDs and of other NGOs, and it would be essential to involve the entire society.

Therefore, JICA should focus its cooperation policy on expanding support to PWDs in rural areas where progress has been slow in providing support, and also provide cooperation in collaboration not only with the government, but also with organizations of PWDs, and other NGOs to realize the Thai government policies mentioned in Section 7.

Since Thailand has been a center of the Indochina region in terms of social and economical aspects, it has a

significant influence on and is ahead of its neighboring countries in the field of supporting PWDs. Therefore, provision of support to "PWDs in the neighboring countries with Thailand as its core" forms an important framework for efficient and effective provision of cooperation with ESCAP, which has long experience in supporting PWDs in the region and NGOs would be highly beneficial in forming and implementing cooperation projects in line with such framework.

(2) General lessons about project formation and implementation

Recommendations for the IRC project, the dispatch of volunteers and acceptance of trainee were described in Section 8, "Evaluation of JICA's Cooperation". general lessons in terms of formulation and implementation of projects are listed below.

1) Participation of PWDs in cooperation and development of environment for the participation

PWDs know the needs of PWDs better than anyone else. There is also a positive effect of the model



Pier counseling at IRC



Gym rehabilitation at IRC

role of active PWDs for raising awareness of other PWDs. As a matter of fact, NGOs with PWDs participating in their planning and implementation efficiently carry out activities that meet the needs of PWDs, and thus both activity providers and recipients are very active. Therefore, in order to efficiently implement cooperation projects that satisfy the needs of PWDs, it would be necessary for JICA to allow PWDs in both Thailand and Japan to actively participate in all stages of a project cycle, including project formation, implementation, monitoring and evaluation. Also, it would be important to consider and establish an environment enabling the participation of PWDs.

Collaboration with the Japanese and Thai organizations of PWDs would be effective in providing conditions that facilitate active participation of PWDs in cooperation.

2) Consideration for PWDs in cooperation

In order to realize full social participation and equality of PWDs, it is important to secure the accessibility PWDs have as members of the community to various aspects of social and economic activities. Therefore, JICA should consider carrying out Development Studies and grant aid programs addressing the establishment of infrastructure and facilities that give consideration to PWDs. (ESCAP has already drawn up non-handicap guidelines for the development of infrastructure and environment with the cooperation of JICA experts.)

3) Collaboration with NGOs

Since JICA should tackle many cooperation themes, it cannot be expected to increase the annual amount of cooperation in the field of supporting PWDs in the future, and is required to work out a way to effectively use the present amount of cooperation. On the other hand, as mentioned earlier, there are a large number of excellent NGOs in Thailand that efficiently provide services that meet the needs of PWDs.

Although most of JICA's aid is in the form of technical cooperation between governments and the counterpart organizations are governmental organizations in general, it is recommended that JICA should work in partnership with good NGOs and use their know-how in order to address the issue of maximizing the effect of existing cooperation. Since manifestation of the effect of cooperation varies greatly depending on whether there is an established utilization system in a counterpart organization accepting our cooperation, particularly for small scale cooperation

such as the JOCV and Senior Volunteer dispatch, JICA should actively respond to requests for dispatch from good NGOs.

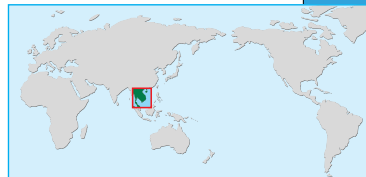
10. Attempts to Feedback the Evaluation Results

JICA's latest cooperation to support PWDs in Thailand was implemented in response to the results of this evaluation study. For instance, the Asia-Pacific Center for Persons with Disabilities (PWDs) Project was planned under a combined program of Project-type Technical Cooperation and Third-country Training Program, responding to one of the Recommendations mentioned in Section 9. (1), the promotion of activities to support PWDs in countries neighboring Thailand.

JICA also started to take the new approach towards actors other than governments, such as ESCAP, organizations and NGOs of PWDs, responding to the recommendation in Section 9.(2).2). For instance, the above project seek to develop collaboration with these various organizations, including ESCAP. In addition, the in-country training, entitled "Designing Public Facilities concerning the Access of Persons with Disabilities" was carried out with the technical support of ESCAP in March 2001. Third-country Training Program on "the establishment of an environment friendly to PWDs" is also planned in order to expand the cooperation to other neighboring countries.

Furthermore, the participation of PWDs in the cooperation projects also has been promoted, responding to the recommendation in Section 9.(2). 1). PWDs were involved in the meetings from the project formulation stage and they were also included as members of the field research team. As such, JICA has seriously taken account of the evaluation results and worked actively to design more effective programs for PWDs.

JOCVs' Cooperation for Vocational Training



Project Site Phnom Penh

1. Background and Objective of Evaluation

Since Cambodia concluded a Peace agreement in 1991, one urgent task for its recovery was human resources development, as well as repatriation of refugees. Considering this need, JICA began supporting vocational training mainly through the dispatch of JOCVs (Japan Overseas Cooperation Volunteers) in 1993. According to the reports from the volunteers, the technical transfer and impact and effectiveness of the projects varied considerably case by case. It was also found that trainees had difficulty to find employment after completion of training.

The objective of dispatching JOCVs, in general, was to promote voluntary activities of youth and unite with local people. It is also expected that dispatch of JOCVs contributes not only to technical transfer but also to mutual understanding between Japan and Cambodia. The projects (dispatch of JOCVs), however, had never been evaluated from this viewpoint.

Considering the above circumstances, therefore, JICA evaluated the impact and effect on technical transfer, as well as the other impacts of the activities in Cambodia to which JOCVs were dispatched. The evaluation is also important for the future dispatch of JOCVs in the vocational training sector, to aid Cambodia in its recovery efforts. The aim of the evaluation, therefore, is to distill lessons learned to better achieve the goals of Japan's cooperation for vocational training in Cambodia.

2. Evaluated Projects

This evaluation targeted the activities of the following 10 JOCVs in the field of vocational training during the seven years from 1993 to 1999.

- **Preah Kossamak Vocational Training Center**
6 JOCVs (2 for machine tools, 1 for automobile maintenance, 1 for Refrigeration, 2 for electronics)]
- **Cambodia-Japan Friendship Skills Training Center**
4 JOCVs (1 for sewing, 1 for carpentry, 1 for Dress Hanking, and 1 for electronics)

3. Members of Evaluation Team

Team Leader:

Katsuzo Tsubata, Employment and Human Resources Development Organization of Japan

Vocational Training/NGO Cooperation:

Kouji Tejita, Vice-Secretary General, Shanti Volunteer Association

Evaluation of JOCV activities:

Daisuke Iijima, First Overseas Assignment Division, Secretariat of Japan Overseas Cooperation Volunteers, JICA

Evaluation Planning:

Naoto Okawa, Deputy Director, Office of Evaluation and Post Project Monitoring, Planning and Evaluation Department, JICA

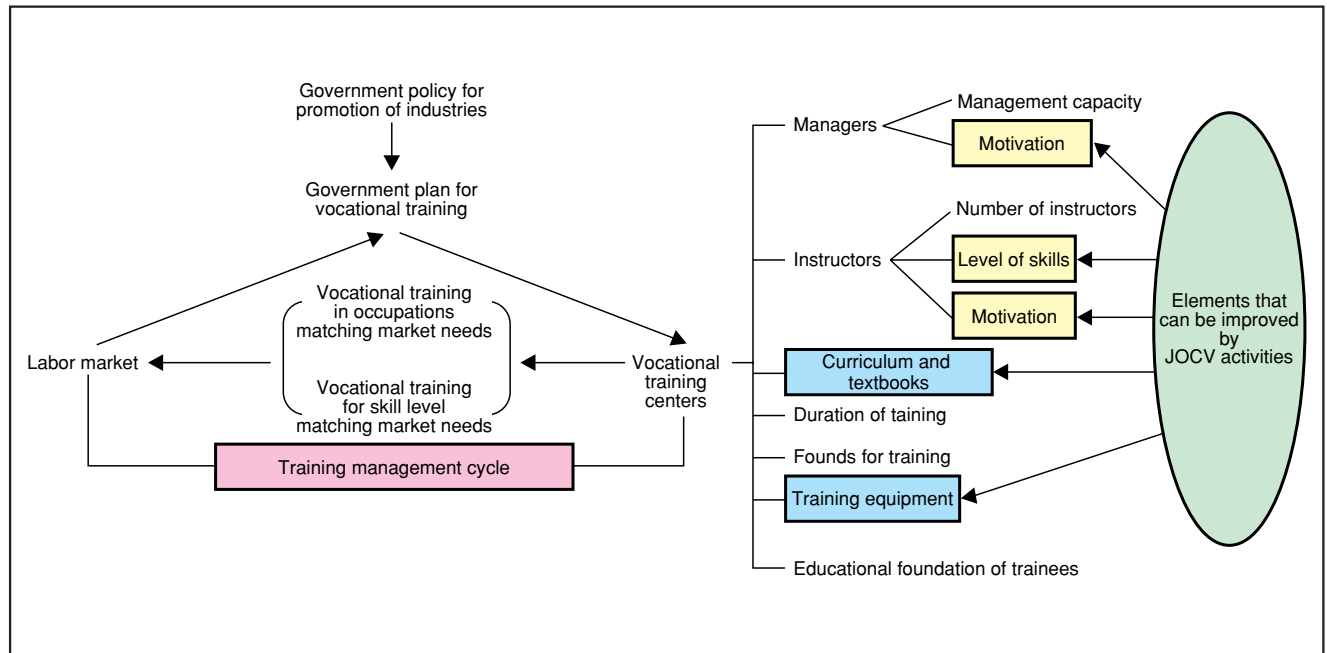
4. Period of Evaluation

18 September 1999-30 September 1999

5. Method of Evaluation

In this evaluation, the objective of dispatching JOCVs is set as "to improve the level of vocational training in their assigned organization", and the overall goal was set as "trainees are employed and contribute to the development of Cambodia". The activities of 10 JOCVs

Fig. 1 Components of the process from vocational training to employment



were evaluated, with respect to the above objective and overall goal, from five evaluation criteria, namely, efficiency, effectiveness, impact (the achievement of overall goal), relevance, and sustainability.

In addition, evaluation was carried out in the viewpoint of "mutual understanding of both countries", "promotion of domestic (Japanese) understanding of international cooperation and the increase of human resources", and "the training of youth".

The evaluation conducted through following methods; questionnaires completed by the 10 JOCVs, an analysis of their final reports, and interviews with the staff of the host country organizations and other related organizations.

6. Outline of Cambodia Industries and Vocational Training Activities

(1) Cambodia Industries

Cambodia relies mainly on agriculture and on the whole the manufacturing industry remains backward. Meanwhile, clothing manufacturing has grown since 1995, partly due to the preferential treatment by the United States and the receipt of foreign direct investment mainly from ASEAN countries. However, since 1999, the United States has controlled the amount of its garment imports, which has slowed the growth of Cambodia's sewing industry. In addition, following the Asian Economic crisis, Cambodia lost its comparative advantage in labor costs. Economic infrastructure has not been developed enough to attract labor-intensive industries

such as assembly plants. Thus, there is no growth factor found in the present manufacturing industry.

As Cambodia has now joined ASEAN, it should gradually abolish tariffs for the ASEAN countries by 2018. However, under the current circumstances no Cambodian industry has a comparative advantage with that of the other ASEAN countries. Therefore, its entry into ASEAN may be disadvantageous for the domestic economy.

Skilled workers in the manufacturing industry face difficulties to find work. The labor market is not large enough to absorb employees since industry is not developed, mostly relying on so-called back-street workshops, which tend to employ family members or relatives. In addition, the technical level of Cambodian skilled workers is not high enough to compete with Vietnamese engineers who have been entering Cambodia's domestic labor market.

(2) Outline of vocational training

During the socialist regime, under the system of a centrally-planned economy, vocational training schools had been established and managed, supported by aid from the Soviet Union and partly from NGOs of the United States and Europe. Since the dissolution of the Soviet Union in 1991, this aid was withdrawn. The Cambodian government was slow to respond to this situation however, and failed to draw up a new industrial promotion policy and vocational training plan in the context of a market economy. Instead, the vocational training system under the socialist regime continued

without the strengthening of vocational training schools. Staff and training equipment remained the same and the schools suffered from a lack of funds to cover management and labor costs.

But in 1996, the Asian Development Bank (ADB) provided 15 million dollars in aid for vocational training in Cambodia. The Cambodian Government then began promoting vocational training in the context of a market economy, from the base of two vocational training centers in Preah Kossomak and Russey Keo.

(3) Components of Vocational Trainings in Process from Vocational Training to Employment

The objective of the JOCV cooperation in the field of vocational training was set as the improvement of the level of training. The expected output at the final stage is the employment of trainees. The process from vocational training to employment contains the components listed below and Fig. 1, also. Although all of these factors should be developed and managed properly for the process to work, JOCVs can only be engaged in the italicized activities.

- 1) To draw up a national vocational training plan, based on the government policy for industrial promotion and market needs.
- 2) To implement training, after certain occupations and training levels were selected based on the vocational training plan of central government. The implementation of training should be guided by several factors including the capacity and motivation of managers, the number, skills and motivation of instructors, curriculum and textbooks, duration of training, budget, equipment, and the qualification of trainees.
- 3) Training needs of the labor market are conveyed to the central government through training centers

and then reflected in the vocational training plan of central government.

7. Results of Evaluation

(1) Summary of evaluation results

With respect to the components in the process from vocational training to employment, JOCVs contributed to the improvement of the activities in which they could intervene, and the level of training improved accordingly. However, the quality of vocational training is still below the level required by the labor market due to many other problems remaining unsolved. Moreover, job vacancy itself is still limited because there was little development of industries. As a consequence, in many cases, trainees could not find employment following the completion of training.

On the other hand, JOCV cooperation had been more effective than expected regarding "mutual understanding of both countries", "promotion of domestic (Japanese) understanding on international cooperation and the increase of human resources", and "the training of youth".

(2) Outline of Preah Kossomak training center and evaluation results

1) Outline of the center

This center was established in 1964 and closed during the Pol Pot regime. In 1981, the center reopened and continued to operate with aid from the Soviet Union that fully covered management costs and equipment until the aid was cut off in 1991. At that time, approximately 20 experts from the Soviet Union were training Cambodian instructors on a regular basis. Though this center was the largest and at the highest level in Cambodia, it still suffered from a scarcity of funds for management after aid from the Soviet Union stopped. Therefore, teachers at the center were engaged more in side businesses, to supplement their low salary. The center eked out training on a reduced scale.

As to the training courses, they offered a two-year course for high school graduates in the subjects of electricity, electronics and civil engineering, and a one-year course for junior high school graduates in the subjects of air conditioning/refrigeration, car maintenance, machine tools, welding, radio repair, electricity, woodwork and plastering. The fixed number accepted by the center in a grade was 170 and the number of teachers was 59. Among these teachers, about half were trained in socialist countries including the Soviet Union. From interview and site visit, it



Preah Kossomak Vocational Training Center

could be seen that teachers had basic skills and motivation to obtain new skills though their skill level still lagged behind that acceptable in developed countries.

The training equipment was outdated and mostly made in the Soviet Union. The evaluation team observed that in the courses for air conditioning/refrigeration and machine tools, the equipment was outdated but its quantity was satisfactory. Meanwhile, in the courses for electronics and car maintenance, the equipment was unsatisfactory in quantity as well as quality, which presented an obstacle to providing sound training.

The aid from ADB helped the Preah Kossamak vocational training center to become the "national vocational training center" in October 1999. The center was then in charge of curriculum development and re-training of teachers, and vocational training in the fields of civil engineering, electricity and electronics. Each of these three training courses was planned to have a two-year program for high school graduates and three-year program for junior high school graduates. The other courses that had been offered by the center were transferred to Russey Keo vocational training school. These training courses would also have two-year programs for high school graduates and three-year programs for junior high school graduates. The necessary equipment for improving the training was expected to be provided by the aid from ADB.

The management cost of this center was planned to be raised from the profits from short-term vocational training courses paid for by private companies. Recruitment of trainees for these private company training courses had already begun.

2) Evaluation results

Six JOCVs were dispatched to one-year courses targeting junior high school graduates. The following are the evaluation results of their activities.

a) Efficiency

Although JOCVs worked hard in their activities, there remained many problems in the process from vocational training to employment, as explained above, which hindered the efficient implementation of JOCVs' activities. The problems which were obstacles to JOCVs' activities are as follows.

- Counterparts were paid a low salary (from 15 to 20 dollars per month) and needed to be engaged in side businesses. Therefore, they sacrificed their time for technical transfer.



Workshop of the machine tools course



Interview for counterparts of machine tools course (Preah Kossamak Vocational Training Center)

- Equipment for training was insufficient.
- The budget for the training was meager.

However, there were some achievements in JOCVs' activities despite these constraints, such as the repair of training equipment and curriculum development, which contributed to the improvement of counterparts' skills to a certain extent. These achievements resulted partly from the following advantages.

- Counterparts had basic skills.
- Counterparts were motivated to learn new skills and cooperative with the volunteers.
- JOCVs had good communication with counterparts and worked actively.
- JICA provided grants for training equipment through and JOCVs-related expenses

To sum up, the problems that hindered JOCVs' activities were somehow mitigated by the highly motivated JOCVs, good communication between JOCVs and counterparts, the capacity of counterparts to absorb skills, in addition to

JICA's support.

Three of the JOCVs were dispatched in 1993 and the other three were in 1996. Comparing the activities of the two groups, the latter seemed more efficient in their activities. This can be attributed to the fact that the former group worked to prepare good conditions for their successors. In addition, counterparts came to understand that JOCV activities are not for material cooperation but for technical cooperation.

b) Effectiveness

Though some of the objectives were not achieved, the activities were mostly satisfactorily implemented. The training level improved steadily with Technical Trainees Aid Programs¹⁾ and the preparation of equipment. Counterparts and graduated trainees highly evaluated JOCVs' activities.

c) Impact (the degree of achievement of overall goal)

Though we do not have accurate data on employment rates, we estimated from the interviews that the employment rate of the trainees in the course on air conditioning/refrigeration was 70 percent, car maintenance 40 percent, and machine tools 25 percent. It showed the employment rate was low in general. JOCVs were dispatched to the one-year course targeting junior high school graduates and the course contents were thus limited. Therefore, the low employment rate should be resulted by the low skills of graduated trainees basically, in addition to low capacity of undeveloped industry to absorb employment. Other factors include that the main means for employment was personal

Table1 Training record of Japan Cambodia Friendship Skills Training Center (1998)

Training Field	Number of times training held	Duration of training	Number of trainees
Sewing	3	90 days	30
Electronics	2	180 days	28
Printing	—	3 years	38

connections and that highly educated people, who graduated from high school at least, hesitate to be engaged in unclean, dangerous and hard work. All of these problems must be solved to increase employment rates; the most important task would be to improve the level of trainees' skills to match market needs by extending the duration of training and widening the scope of subjects taught.

d) Relevance

The dispatch of JOCVs for vocational training was relevant considering the low education level and underdevelopment of human resources. The sorts of occupations selected for JOCV activities were appropriate because they were elemental in the manufacturing industry, and the fields of electronics, car maintenance and refrigeration matched the increasing needs in the market. The centers receiving JOCVs need to have certain conditions for JOCVs to work properly since JOCVs are dispatched without any equipment and tools. Nevertheless, when the JOCVs were dispatched, there were many problems at all stages in the process from training to employment, without the support from the Soviet Union and a precise vocational training plan corresponding to market economy. For this reason, the dispatch of JOCVs to government-run vocational training centers at that timing can be judged less relevant.

e) Sustainability

The training was improved through the work of the JOCVs and appeared to remain at the same high level for the following reasons: 1) Counterparts remained in their positions, 2) The curriculum and textbooks made by JOCVs were utilized effectively and improved continuously, and 3) Provided equipment was also utilized effectively. In addition, as already mentioned above, the training system of the center was being reformed taking advantage of ADB's aid. Under the new system, a new curriculum and textbooks were to be developed based on the



Cambodia-Japan Friendship Skills Training Center

skills introduced by JOCVs, curriculum and textbooks made by JOCVs, and Technical Trainees Aid Programs. Thus, it is expected the outcomes of JOCV's cooperation would be sustainable.

(3) Outline of Cambodia-Japan Friendship Skills Training Center and evaluation results

1) Outline of the center

This center was established as a chalk-producing factory in 1982. Since 1984, the center had been engaged in production of learning materials, supported by UNICEF. In 1986, the center started providing vocational training for high school and junior high school students, as requested by the Ministry of Youth, Education and Sport. In 1991, the Shanti Volunteer Association (SVA) started providing assistance to the center. In 1993, the center changed its name to "Japan-Cambodia Friendship Skills Training Center." On the basis of SVA's plan, the center started accepting JOCVs in 1994. The center also upgraded its building and equipment, supported by other Japanese cooperation such as the Grant Assistance for Grassroots Projects, postal savings for international voluntary aid and WID-related equipment. This aid as well as its name made the center somewhat of a showcase for Japanese assistance.

The center conducted two courses. One accepted applicants from the general public. The other was for re-training the teachers of neighboring public schools. In addition, the center had a course for vocational training instructors in two public schools located adjacent to the center.

The course for the general public targets the poor and is divided into three subjects, namely, sewing, electronics and printing. JOCVs first trained counterparts (training in printing was managed by SVA experts), and then shifted management responsibilities for the training course to them. Training in woodworking was added in 1999.

Applicants for training courses in sewing and woodworking should have completed the second grade of junior high school. Applicants for electronics should be high school graduates. Separate entrance examinations were given for each subject. The examination and classes were free of charge. Students include many dropouts of another school.

The president of the center was dedicated to its management. Since 1986 he tried to introduce a self-sufficient accounting system by covering the cost for



Trainees produce clothing in the sewing course (Cambodia-Japan Friendship Skills Training Center)

training from school revenue. There were 24 teachers including eight women. Most of them are graduates of teacher's schools or Preah Kossamak vocational training center. Their average tenure was from six to nine years. Many teachers were in charge of the training subjects which were not their specialization. The salary of teachers covered living costs (approximately \$100), supplied by SVA.

Though training equipment was being provided by SVA, JOCV-related expenses, funds for WID-related equipment, and Grant Assistance for Grassroots Projects, it was still not sufficient. The quality and quantity of equipment affects the training curriculum and the level of training. Teachers were also unable to produce certain learning materials such as circuit diagrams and models used for lectures.

The annual management budget amounted to \$60,000, representing \$20,000 from SVA, \$20,000 from the NGO project subsidy of the Japanese government and \$20,000 from their own funds generated from the sale of sewing and woodwork products. Managing the center will be an important issue when the NGO project subsidy ends in 2002. (As the training in printing is now managed by a self-supporting system, it is not included in the above cost for management of the center)

2) Evaluation Results

The followings are the evaluation results on the

¹⁾ This is the training course held by Japanese local governments at prefectural level and cities designated by ordinance, supported by the Ministry of Foreign Affairs, aiming to promote technical transfer to developing countries. Trainees are selected by the organization, which were recommended by respective local governments. JICA is also one of these organizations and recommends counterparts of JOCVs as trainees to receive technical transfer.

activities of the four JOCVs in this training center.

a) Efficiency of activities

JOVCV activities were judged efficient and without any major obstacles. Success was related to the following factors:

- The head of the center was known for his noble character and high motivation for training.
- SVA was in charge of the arrangements for the center to receive aid, including that from Japan. Therefore, the center had a firm management system in place.
- Counterparts were active.

The activeness of counterparts can be traced to willingness and an incentive in terms of salary guaranteed by their production activities.

- JOCVs were competent, enthusiastic and had good communication with counterparts.
- Needed equipment was provided by Grant Assistance for Grassroots Projects and by JICA. In addition, counterparts who participated in Acceptance of Trainees Programs.

b) Effectiveness

JOCVs' activities improved the technical capacity of the center. Having the courses on sewing, electronics and woodwork, the center nearly became financially independent and able to manage the training courses on their own as for the causes on sewing and woodwork.

c) Impact (The degree of achievement of overall goal)

The employment rate of the trainees was low mainly because the duration of the training was short and the level of the skills obtained in the course insufficient to meet market needs. Counterparts in sewing training indicated that the trainees confronted difficulty in obtaining

employment in garment factories because the sewing training did not give them instruction in using industrial sewing machines. Besides this, the industrial sector was still underdeveloped and not providing many jobs. The training courses need to be revised to match market needs and the duration of the courses should be extended.

The effectiveness of the cooperation cannot be highly evaluated in the sense that the cooperation did not achieve satisfactory results in terms of the expected output, namely, the employment of trainees. However, it should be noted that the training in sewing and electronics was newly established by JOCVs and as such were not completely developed.

d) Relevance

Since the level of education was low and human resources training in Cambodia undeveloped, cooperation in the vocational training sector is relevant. As to the fields for which JOCVs were dispatched, training in sewing was reasonable considering the fact that the sewing industry is growing. Training in electronics and electricity match the growing needs for the repair of electrical appliances. Meanwhile, training in woodworking seemed not to correspond to market needs. The center was a suitable place to receive JOCVs, having been supported by SVA's aid and having prepared the basic conditions for receiving JOCVs.

e) Sustainability

The training courses were improved by JOVCV activities and were expected to remain high for the following reasons: 1) Counterparts had remained in their position, 2) the curriculum and textbooks made by JOCVs had been continuously improved and utilized effectively, and 3) provided equipment had been utilized effectively.

As to the financial sustainability, the center should increase revenue by increasing production, since it cannot expect further NGO aid from the Japanese Government after 2001.

(4) Other impact (except for impact on technical cooperation)

Since JOCVs' activities were voluntary activities at the grass-roots level, it was expected that their activities would also have an impact on "mutual understanding of both countries", "promotion of domestic understanding of



Products produced are sold at a shop in the training center

international cooperation and the increase of human resources", and "the training of youth". We evaluated these impacts based on the analysis of the questionnaire given to JOCVs (eight out of 10 members responded to the questionnaire) and interviews with counterparts and former trainees. The followings are the evaluation results, which show that the impacts of JOCV's cooperation were larger than expected.

- 1) Mutual understanding of both countries
 - a) All of the interviewed counterparts highly appreciated JOCV's activities. They came to like Japan and learned the Japanese sense of responsibility for toward work and rules, mutual respect, and willingness to help other people. Trainees also became familiar with Japan and gained admiration for the country through the exchange with JOCVs.
 - b) Six JOCVs were involved with other activities beyond their primary role including teaching Japanese, supporting athletes who participated in the 12th Asian Games in Hiroshima, AIDS education, supporting the recruitment of trainees, management of wireless machines in the JICA office and cooperation for the JOCV PR magazine.
 - c) All 8 JOCVs were keeping in contact with Cambodians, including two who married Cambodian women.
- 2) Promotion of domestic understanding of international cooperation and the increase of human resources
 - a) JOCVs were engaged in the following activities after they returned to Japan.
 - One presented the experience and the situation in Cambodia in a meeting of a local women's association.
 - One wrote an article of the activities in Cambodia for a monthly technical magazine.
 - One gave a series of ten lectures on Cambodia to the general public, as a part of NGO activities.
 - One reported on activities in Cambodia to the parents of pupils in the junior high school where he worked.
 - One opened a website which introduced Cambodia.
 - b) Eight members who responded to the questionnaire answered that they would like to work for international cooperation again if they had a chance. Some were actually involved in international cooperation. One was engaged in



Woodwork course exercise



Interview for counterparts of woodworking course

technical transfer in the private sector. One was dispatched to Cambodia again as a United Nations Volunteer. Another started a business to link Cambodia and Japan.

3) Training of youth

Six JOCVs out of eight answered that they underwent personal changes as a result of participating in JOCV activities, for example, by broadening their horizons, becoming calm and composed, and becoming more able to address problems in a positively.

8. Lessons Learned and Recommendations

The purpose of this evaluation is to draw lessons for more effective projects and support for JOCVs to achieve the goals of cooperation for vocational training in Cambodia. However, many lessons can be applied not only to JOCV activities but also to other aid schemes and to other countries. In fact, the future cooperation to Cambodia in the field of vocational training should include aid schemes other than JOCVs. Therefore, some of the lessons and recommendations listed below are not only for JOCV activities but also for cooperation

activities in the field of vocational training in Cambodia or in general.

(1) Issues to be considered in finding and formulating projects in the field of vocational training and in supporting JOCV activities

- 1) When designing a vocational training project, planners must ensure that adequate attention is given to each of the "components in the process from training to employment," which was mentioned early.

The most important among such components is that the final objective of vocational training is trainees' finding jobs and contributing to the development of Cambodia. Therefore, cooperation should target the technical level that matches the employment market.

Also, the indispensable key components in the process from training to employment are counterparts' motivation to absorb skills, level of their skill, and time they can spend for technical transfer. Thus, it is recommended to confirm the above three points by conducting interviews with counterparts in the background survey carried out following a request. Furthermore, though it is a worn-out lesson, the Japanese side should thoroughly explain to the managers and counterparts of the host organizations that the objective of Japan's cooperation is not material transfer but technical transfer.

- 2) In many cases, governments cannot afford the expense for management costs of the organizations where JOCVs are dispatched. Thus, for long-term projects, it is recommended to draw up a cooperation plan to combine "training and production" from the beginning, similar to the Cambodia-Japan Training Center, aiming at incorporating ways to generate income such as selling products, which would cover the management cost in the future.

The Cambodia-Japan Training Center could also be a model of a mechanism involving NGOs: it might be effective that a training center receives assistance by a NGO in the first place, and the NGO makes a cooperation plan in which assistance is provided by JOCVs, NGO project subsidy and Grant Aid for Grassroots Projects by the Ministry of Foreign Affairs, postal savings for international voluntary aid and Community Empowerment Program and the like until training

activities become stably funded by profits from the center's own production activities.

- 3) Since JOCVs are engaged in cooperation activities without carrying any equipment from Japan, the host organizations need to prepare the basic facilities and equipment necessary for technical transfer. In this sense, organizations that have already received NGOs' or other assistance have sufficient facilities and equipment in many cases, and thus are appropriate as the host organizations.
- 4) JOCVs need to have good communication with their counterparts. In cases where JOCVs are placed at under-resourced organizations such as Preah Kossamak, the technical transfer will be more effective if it is linked with the provision of equipment and training (e.g., by local authorities in Japan).

(2) Recommendations for future vocational training in Cambodia.

- 1) Conclusion

As the human resources development has been slow in all sectors and migrant workers make up for the lack of supply in the Cambodia labor market, the Cambodian government needs to provide vocational training, especially for mid-level engineering technicians, which is a cost consuming task. The government has been aiming to strengthen vocational training in the country, and drew up a master plan for vocational training with the support from ILO and



JOCV and Counterparts making a training course curriculum (Preah Kossamak Vocational Training Center)

ADB. Although industries are underdeveloped and the employment is still limited, JICA should continue its cooperation for the training of mid-level engineering technicians, who are fundamentally needed for the development of the nation and national industries. It is important to pay attention to the master plan of government and the progress of the components that should be addressed in the process from training to employment, as mentioned above.

More precisely, it is recommended to consider the Dispatch of Experts as advisors for establishing of licenses and systems and the management of vocational training, and to assist with curriculum development in training centers and the capacity building of instructors, since the government efforts for vocational training have just started.

Moreover, in addition to Japanese experts and training in Japan, it should be positively considered to utilize human resources from more developed neighboring countries such as Thailand (e.g., as third-country experts or implementers of Third-country Training programs).

2) Recommendations for future cooperation to the Cambodia-Japan Friendship Skills Training Center

This center is quite important as a model of Japan's international cooperation and as a pioneering project which involves an NGO, the Ministry of Foreign Affairs and JICA. In that sense, it would be valuable to continue the cooperation for this center and strengthen its activities. Specifically, further technical, material and financial support should be provided until the training is at an appropriate level for the Cambodia labor market.

3) Recommendations for future cooperation for Preah Kossamak vocational training center

As discussed, the center is being reformed and training equipment supplied by funds from the ADB. Even so, problems remained in curriculum, the level of instructor skills and budget for management costs. According to the explanation given by the center, the center was planning to start fee-based short-term training courses to cover management costs. They needed JICA's support by means of the Dispatch of Experts to improve instructor skills (in the fields of computer maintenance, electricity, electronics, and civil engineering).

The center would become a national center for vocational training after the reform. Therefore, enhancing the training level of this center would result

in enhancing the level of vocational training in Cambodia. However, because the reform of this center has just started the situation is still unstable, especially in terms of the availability of funds to cover management costs. Thus, the future cooperation to the center should be considered after the budget for management costs is ensured and the condition after the reform is stable for a while (i.e., a year).

(3) Other recommendations: linkage between JICA projects and investment from Japanese private sector

It is said that Japanese were hesitant to invest in Cambodia without a local connection although they were looking for opportunities. This is similar to many other developing countries. We recommend establishing formal linkages between JICA projects and private investment, for example, by means of introducing former JOCVs in sewing to a sewing company which may invest in Cambodia, and attracting Japanese private companies which can utilize those trained through support from JICA. This would contribute to ensuring the employment of trainees, strengthening the impact of JICA's cooperation activities and creating job opportunities for ex-JOCVs.

9. Attempt to Feedback of the Evaluation Results

Based on the recommendation in 7.(2).1), JICA dispatched a short-term expert as a vocational training advisor in June 2001, for a four-month duration. In addition a Senior Overseas Volunteer (System Engineer) have dispatched at Cambodia-Japan Friendship Skills Training Center from 23 October 2001, for 2 years.

Health and Medical Services



Project Sites Honduras (Nation wide)

1. Background and Objectives of Evaluation Survey

In Latin American and Caribbean countries, infectious diseases such as diarrhea, acute respiratory infection (ARI), malaria, cholera, and dengue fever are widespread and are cause of the high infant mortality rate. Honduras is one of the least developed countries in Latin America, especially in terms of economic development. Japan has been providing assistance to the health sector of Honduras through many cooperation scheme as Project-type Technical Cooperation, Development Studies, equipment provision, grant aid, and the Japan Overseas Cooperation Volunteer.

Recently, basic health indicators such as the infant mortality rate have improved due to the positive approach by the Honduras government and assistance of donors. However, certain issues remained unresolved, such as poor access to essential health services and poor-quality health services.

Japan has provided technical cooperation in the health sector of Honduras based on "the worldwide welfare initiative" advocated by former prime-minister Hashimoto in 1996. The improvement of health service has set as one of the priority issues of JICA country program.

This evaluation was conducted to assess the impact of Japanese cooperation by analyzing past projects and to deriving lessons for future cooperation.

2. Evaluated Projects

All projects of health sector including Project-type Technical Cooperation, Grant Aid¹⁾, Dispatch of Japanese Experts, Acceptance of Trainees, and Japan Overseas Cooperation Volunteers were subjected to the evaluation. Table 1 shows the list of the projects conducted for Honduras over the past 17 years.

3. Members of Evaluation Team

Team Leader:

Yoichi YAMAGATA, Development Specialist, JICA

Evaluation Management:

Takuo KARASAWA, Office of Evaluation and Post Project Monitoring, JICA

Evaluation Analysis:

Tomoyo WADA, Global Link Management Inc.,

4. Period of Evaluation

23 October 1999-8 November 1999

5. Methods of Evaluation

Evaluated projects were categorized into three groups: (1) master plan development, (2) human resources development in nursing education, and (3) infrastructure development of medical facilities and equipment provision. Each category was evaluated from DAC's five evaluation criteria, and then the combined results were summarized as the overall evaluation of the health sector. The following points were the focus of the individual evaluations.

(1) Master Plan Development:

It was examined how the master plan – "the development study on "the strategies and plans for upgrading the status of public health in the Honduras" – was applied (whether it was utilized by other foreign donors, or implemented by the Government of Honduras itself) and how it contributed to the improvement and development of the health sector in Honduras.

Table 1 Japan's cooperation activities to Honduran health sector

Type of cooperation	Project title/Field of technical transfer	Cooperation period
Grant Aid	The Project to Control Malaria and Dengue Fever	1982-1989
	The Project for the Improvement of Medical equipment for Mother and Infant Hospital I. H. S. S., in Tequigalpa	1984
	The Project to Establish the Central Hospital in the Region	1988
	The Project to Strengthen the Hospital Network	1992
	Project to Improve the Metropolitan Hospital Network (based on a model plan proposed in a development study)	1996
	The Project for Countermeasure Infant Diseases	1999
	The Project for Enforcement of the hospital Network of San Pedro Sula Metropolitan Area	Planned
Provision of Equipment	Equipment for dental care	1989
	Special medical equipment	1992
Project-type Technical Cooperation	The Project on the Fortification of Nursing Education	1990-1995
	The Project on the Fortification of Nursing Education (After-care cooperation)	1998-2000
	The Reproductive Health Project in the Health Region Seven in the Republic of Honduras	2000-2005
Development Study	The study on the strategies and plans for upgrading the status of health in Honduras	1995-1996
Dispatch of Individual Experts	Health and Medical Services	1991-1994
		1994-1996
Japan Overseas Cooperation Volunteers	Doctors, nurses, midwives, public health nurses, malaria and endemic diseases, public health, nursing for the disabled/handicapped, physical therapist, occupational therapist, nutritionist, medical equipment, children's nursery, radiological technologist, dental hygienist	Every year
Senior Overseas Volunteers	Nutrition improvement	1995-1998
Acceptance of Trainees	Public health, nursing education, operation and maintenance of medical equipment, early gastric cancer, hospital pharmacy, tuberculosis control, blood-borne diseases and infections, development plan of tropical medicine, health administration, large-scale disaster medicine, emergency, AIDS and others	Every year

(2) Human Resources Development in nursing education:

The training activities of nursing education (training of sister tutors, capacity development of nurses and nurse assistants, in the viewpoint of quality and quantity), were examined by the evaluation of employers of those who completed the training. Local consultant was utilized in order to determine the impact of the training on countries in Central and South America.

(3) Infrastructure Development (Medical facilities and provision of equipment):

Focused on three projects (Project to Improve the Metropolitan Hospital Network, Project to Strengthen the Hospital Network, Project to Establish the Central Hospital in the Region), and the review was conducted to see whether these projects contributed to improve the medical services in both qualitative and quantitative terms. Local consultants conducted public hearings to determine the impact of the projects on beneficiaries.

6. Results of Evaluation

(1) Master Plan Study

1) Efficiency

It was evaluated that the Japanese research team of development study had good research capabilities and an appropriate approach. Communication between the Japanese research team and government authorities



Emergency clinic constructed under grant aid by Japan in 1998

was very smooth, so the team could receive timely cooperation and participation from the authorities throughout the process of research.

2) Effectiveness

The "11 priority issues" proposed in the master plan were included in the "5-year National Health Policy" by the Government of Honduras, which indicates that these issues represent practical ideas to be included in the national health policy. In particular, the cross-cutting and practical measures presented in

1) While grant aid projects fall under the jurisdiction of the Ministry of Foreign Affairs, JICA is responsible for carrying out the necessary preliminary studies (preparatory studies, basic design studies, etc.). JICA also supports the implementation of grant aid projects.

the plan regarding the improvement of medical facilities and health service system, provided useful ideas for the construction of regional health policies.

On the other hand, the plan omits the macro level and strategic viewpoints. As a whole, it does not present a logical framework and an interrelationship among its goal, policy, strategy, and actions. Therefore, some donor agencies commented that the plan is not user friendly.

3) Impact

The construction of an emergency clinic at Tegucigalpa and the construction of an OB/GYN unit at San Felipe Hospital proposed in the plan have now begun under grant aid by Japan, the Project to Improve the Metropolitan Hospital Network. Other projects proposed in the plan are being implemented in regional cities. And the Ministry of Health is now planning to build "Emergency Clinics", which are new to the country, at 50 sites throughout Honduras. Other donors have mainly used the master plan as a reference, but have not utilized the project plan in their own programs due to the reason mentioned above under "Effectiveness".

4) Relevance

The master plan proposed collaboration among donor agencies to implement the various projects. This approach corresponds to the national health policy, which advocates taking a cross-sectional (cross-cutting) approach to health issues and policies. However, the devastation of hurricane Mitch in 1998 influenced the setting of priority issue in the health sector, thus the master plan study was not followed to the degree expected.

5) Sustainability

Considering the economic status of the country, it is unlikely that the Government of Honduras can implement any of the projects recommended in the master plan study on its own. The hurricane made it even more difficult for them to implement project plans. It should be noted, however, that some of the projects such as "Emergency Clinics" as well as the "OB/GYN unit of the San Felipe Hospital" have already been implemented and managed properly by the Government of Honduras. It is expected that the government will continue support for these projects.

(2) Human Resources Development (Strengthening nursing education)

1) Efficiency

The Government of Honduras greatly appreciated

the Japanese technical cooperation, especially the enthusiasm and capabilities of the Japanese experts. The counterpart-training program as well as the equipment provision was executed as planned. As a whole, the project greatly contributed to the quality improvement of nursing education. The capabilities and determination of counterparts also contributed to the high efficiency of the project.

2) Effectiveness

The project contributed not only to improve the technical aspects of nursing education, but also to promote a sense of responsibility and awareness of issues of concern. At the "Nursing, Research and Training Center" in which Project-type Technical Cooperation was implemented, the staff developed curriculum development skills and has been producing textbooks and videos for nursing education. Since it requires a comparatively short time to become a nurse assistant, the strengthening of the nursing education project has helped a number of nurse assistants as well as improve the level of their technical expertise and knowledge. As for registered nurses, however, unfavorable working conditions and low pay have made it difficult to encourage school graduates to become registered nurses. Consequently, the number of registered nurses has not increased. Instead, many nursing school graduates find better paying jobs in industries in the north.

3) Impact

The project has contributed to increase the number of schools and training courses for nurse assistants. Also, the "Committee for the Development of Nursing Education" was established with the assistance of the International Cooperation Bureau. Textbooks and educational materials developed under the project have been sold outside the country, in Paraguay and El Salvador. This means that the project impact has spread to neighboring countries. In El Salvador, JICA has newly implemented a similar project to improve nursing education, and many of lessons learned in the Honduran project have been applied.

4) Relevance

It can be said that this project is highly relevant because the project purpose corresponded closely to the issues confronting human resources development in nursing education, namely the shortage of nurses and the low quality of nursing services. In terms of the nursing education curriculum, some graduates commented that the course program at the school in Tegucigalpa lacked training on patient care in health

facilities due to its heavy focus on primary health care at the community level.

5) Sustainability

After completion of the project, nursing education continued as before at the training institutes such as the school in Tegucigalpa. And the training for health professionals also continued at several places in the country under the leadership of the "Nursing, Research and Training Center". The sale of textbooks and the curriculum developed by the "Research Center for Nursing Education" contributed to its financial self-sufficiency, which facilitated their obtaining external assistance from other donor agencies.

(3) Infrastructure development of medical facilities and equipment

1) Efficiency

Equipment provided by the Japanese government is superior in quality and offers long-life durability. Also, they have met the needs of users in Honduras. The Government of Honduras further appreciated that the construction of health facilities has been completed as planned. Some minor problems are that certain consumables are not available in the local market or repair of some equipment may not be possible in the country. However, Japanese vendors are strong in their complete after-care system and their professional performance. Some equipment and facilities have remained unused due to the lack of technical expertise and shortage of operational funds on the Honduran side.

2) Effectiveness

Japan provided Grant Aid assistance for the construction of new hospitals, expansion of others, and equipment maintenance. After two years, the San Felipe Hospital in Tegucigalpa managed 70 to 80 percent of projected deliveries (722 deliveries on a monthly basis). In the third year, it is most likely that the hospital will be able to handle the number of deliveries that were projected. At the emergency clinics (CLIPERs) constructed in the central part of the city, the number of outpatients more or less exceeded the projection (766 OPDs on a monthly basis). However, the number of deliveries is less than 10 percent of the projection (70 deliveries on a monthly basis). With the installation of Intensive Care Unit (ICU) equipment, the number of infants and children treated in the ICU increased from 60 to 300 per year. In addition, the mortality rate of infants treated in ICU decreased from 33 percent to 21 percent. The exception is the surgical



Obstetrics of San Felipe Hospital

unit, which is not operating due to the shortage of nurses.

Japan also provided assistance to improve the health services at the regional level. The construction of San Francisco Hospital has greatly helped to improve the service quality, especially the technical expertise of diagnosis, emergency clinical service, and the endoscopes. Overall medical services quality has improved greatly at regional facilities.

3) Impact

The overflow of patients at emergency units is now being treated at CLIPERs. This makes it possible to transfer patients to the CLIPER or OB/GYN unit of the San Felipe Hospital in case of congestion at university hospitals. Consequently, this has led to delivering appropriate services to patients in a timely manner.

4) Relevance

San Felipe Hospital and the CLIPERs is consistent with the policy of the Government of Honduras-"reducing congestion at teaching hospitals will eventually lead to strengthening of their research function". Management of CLIPERs may require reconsideration because under the present policy, the CLIPERs belong to the national or regional government hospital for the purpose of strengthening the health service system. But this may be inconsistent with the decentralization policy guided by the Pan American Health Organization (PAHO).

5) Sustainability

From a financial point of view, San Francisco Hospital has maintained its financial stability through collecting fees and commissions from patients as well as receiving subsidies from the Social Insurance Bureau. On the other hand, CLIPERs do not have autonomy to utilize the fees and commissions received from patients because they belong to the national hospital. Therefore, the procurement of consumables

including drugs and the allocation of doctors cannot be done independently by CLIPERs.

Technical expertise and human resources are sufficient to operate the equipment and utilize the infrastructure. However, equipment maintenance is a problem in some instances. The original plan was for an engineer from the department of maintenance in the Health Ministry to be temporarily transferred or sent on a regular basis to handle maintenance. However, it is not possible at present because there is a lack of engineers available, and no training program exists to develop such human resources in Honduras. Another problem is the shortage of doctors and nurses at work. The current number of nurses cannot cope with the drastic increase of patients at hospitals. Under the current rotation system, often only one doctor is available at one time at a CLIPER, which makes it very difficult to provide sufficient care to patients. Furthermore, some equipment was heavily damaged by the hurricane, and has been left unused because the high cost of repair²⁾. As a whole, the maintenance of facilities and equipment is not properly managed due to the shortage of funds.

(4) Overall Evaluation

1) Evaluation of Japanese technical cooperation by counterparts

Overall, the Japanese technical cooperation is well accepted and highly appreciated by authorities of the Government of Honduras. The following are the positive comments made by the counterparts.

- a) Japan is one of only a few donors who have supported the area of improvement of hospital management. Many donors have focused on the improvement of regional health facilities such as health posts under the primary health care policy. But hospital management has been left unchanged over the years and as a result many problems have occurred. Therefore, the Japanese technical cooperation to strengthen hospital management is very timely and relevant. Practically, strengthening health facilities to treat illnesses and injuries is as important as improving primary health care. Neither aspect should be neglected in order to upgrade the overall health service system.
- b) Japanese technical cooperation is always based on the request from the recipient country, and it does not impose its own agenda on the recipient country.



San Francisco Hospital plays an important role as a central hospital in the region.

- c) Some donors often implement a project that is formulated in the donor country. The Japanese government, on the other hand, always takes the policies and views of recipient countries into account and tries to adjust their policies and schemes to meet the needs of recipient countries.
 - d) Japanese technical cooperation has also provided after-care service at the request of recipient countries even after their withdrawal. This may not be the same in case of other donor agencies.
 - e) Facilities and equipment provided by the Japanese Government are of high quality and durable. As for the "aftercare service during the guarantee period", some vendors in other countries may not always provide the service free of charge. The Government of Honduras has high regard for the Japanese vendors who always provide adequate service with sincerity.
- ##### 2) Requests from counterparts
- The Government of Honduras presented the following requests:
- a) The master plan has been well accepted and highly appreciated by the Government of Honduras. However, the hurricane brought a change in health priorities and national policies, and the need to revise and upgrade the master plan accordingly. They envision a "comprehensive master plan of health service policy following the hurricane".
 - b) The Government of Honduras requests technical cooperation from Japan in the fields of emergency medical service system, infectious disease control, and the mental support system to deal with disasters.
 - c) In terms of the above issues, a speedy response from Japan would be highly appreciated.

3) Issues to be considered for future cooperation

The poor administrative capabilities of the Government of Honduras may prevent them from promoting technical cooperation. On the other hand, the flexibility of its administrative system may provide easy access for foreign investment. All the projects evaluated for this research-nursing education, regional center hospital, and CLIPER-represent success stories as a form of "targeted technical cooperation".

In the long run, the lessons learned from the targeted technical cooperation should be reflected in the national health sector development policy. The following points should be considered in the process of project formulation.

a) Formulating the Master Plan

Generally speaking, the Japanese master plan is completed for two purposes: One is to formulate the sector development plan, and the second is to adjust the Japanese investment plan. For the sectors in which infrastructure development can resolve the major problems, both purposes will be achieved if the master plan study is conducted. However, in case of the health sector where social development components are highly important, the two purposes cannot be addressed at the same time.

In the case of Honduras, the intent was to fulfill the two purposes at the same time. The master plan did serve to adjust the sector investment, but could not produce an adequate sector development plan.

For the purpose of investment adjustment, the Master Plan Studies met the requirement.

The construction of the OB/GYN unit of San Felipe Hospital and CLIPER by grant aid has greatly contributed to mitigate the congestion of hospital treatment. This is consistent with one of the national health policies.

San Francisco Hospital in Olancho Prefecture is now operating smoothly and many patients have utilized the facility and services.

Although issues raised in the master plan were included in the "5-year National Health Sector Policy" of Honduras, some donors explicitly stated that "the Master plan does not provide sufficient information in an appropriate report structure".

Issues that were raised in the master plan and reflected in the national health policy (Nueva Agenda) are the selection of priority issues and

development plan of CLIPER. Specific comments include (1) logistic framework, purpose → policy → strategy → operation, and is not clear. Problems at different levels are discussed in the same standard. (2) The proposals addressing the obstacles, such as human resources, financial constraints, and drug supplies are not clearly presented. (3) Due to the insufficient participation of stakeholders, the necessary follow-up was not conducted by the Government of Honduras after the study.

It became clear that Japanese Development Studies might have some inconsistencies with master plans developed by the recipient country. In the future, the exact purpose of Development Studies should be clarified at the inception.

b) Human Resources (Strengthening nursing education)

Many believe that the nursing education project is one of the most successful Japanese projects in the health sector of Honduras. After the completion of the project, counterparts continued activities, and sustained the positive aspects of the project outcomes. The reasons behind the success include 1) the great demand for human resources development in nursing, 2) the counterparts' capabilities, and 3) the culturally appropriate curriculum.

The Government of Honduras ranked human resources development for nursing as a high priority. Nurses and nurse assistants are numerous, have direct contact with the patients, and play a vital role in community health services. Because of their high numbers and their diversified roles, it is natural that there is a great demand for training nurses and nursing assistants. The need to implement a project like "human resources development in nurse education" was well understood and greatly appreciated at the inception of the project. The "Nursing, Research and Training Center" has played an important role and has established itself firmly at the national level for nursing education through the process of curriculum development and educational material development. The sale of educational materials

²⁾ As for the destroyed equipment by the hurricane, it was considered to carry out Follow-up cooperation of Grant Aid. It was concluded, however, the damage of these equipment was too big to repair.

has made it possible to develop a revolving fund system, which will eventually lead to sustainable development.

Many commented that Ms. Liliana Mejia, a project leader, greatly contributed to the success of the project. This can also be confirmed in some project reports.

Some counterparts mentioned that the project performance was highly effective because the Japanese experts made a great effort to transfer not only the technical expertise, but also the cultural aspects—the philosophical value and attitude of nursing care. Many counterparts were influenced by the businesslike manner of Japanese experts and impressed by the work ethics of nurses encountered during the CP training program in Japan. This sort of "qualitative" outcome should be recognized in the evaluation of Japanese technical cooperation. Japanese experts never forced counterparts to follow their policy, but spent sufficient time to understand the status of counterparts. For example, the Government of Honduras highly regarded the fact that the Japanese experts made a great effort to acquire the Spanish language. And because nursing care is similar internationally with many countries using the same uniform and educational protocol, it was relatively easy to transfer nursing skills. Furthermore, the good teamwork by the Japanese project team, as a result of the well-functioned support mechanism in Japan, was also considered an important factor to successful transfer of such "cultural heritage".

c) Infrastructure Development (Medical facilities

and supply of equipment)

The Government of Honduras holds in high regard Japanese grant aid in the health sector. They appreciated that Japanese grant aid does not have any restrictions, and that sufficient research is conducted before the inception of the project. Facilities and equipment provided through Japanese assistance are quite durable and high in quality. Some problems are difficulties of equipment maintenance and in the case of medical facilities, poor hospital management capabilities in securing capable employees, the procurement of drug supplies, and in the medical fees system.

CLIPERs seem to have had some positive impact. The aid offer from the government of Spain to increase the number of CLIPERs verifies the success of the project. However, many problems remain to be addressed in the management of CLIPERs, such as working rotation, maintenance of drug supplies, and revolving fund for medical fees. The utilization level of CLIPERs varies from location to location, and they require more promotion. In addition, CLIPERs belong to the national and regional government hospitals and the concept of "Urban Emergency Clinic" may not be consistent with the decentralization policy guided by PAHO. Also, they focus on treatment and not prevention. As a whole, the role of CLIPERs in the comprehensive national health policy should be reviewed and reconsidered by those concerned.

7. Lessons Learned and Recommendations

(1) Role of CLIPERs in the health service system

The role of CLIPERs in the national health service system is not clearly understood and accepted. Since the 1980's, Latin American countries have been decentralizing health service systems, with the aim to provide equal services to all regions under the Primary Health Care policy. CLIPERs, on the other hand, aim to provide emergency care for those who live near cities. CLIPERs help relieve the problem of congestion at the research hospitals; however, they may have a negative impact on the region as a whole if scarce resources are provided to CLIPERs rather than to outlying facilities.

A cost benefit analysis of CLIPERs would contribute to evaluate their role in poverty alleviation, and it is very



Text books made by Nursing Education Center after the project finished

important to have a mutual understanding among stakeholders. This requires a full understanding of not only the theoretical background but also the current status. It may be beneficial to conduct research through Project-type Technical Cooperation "Reproductive Health Project" at Orancho CLIPER to better understand the benefits and drawbacks of CLIPERs.

(2) Technical cooperation in infrastructure development

With the international trend in the 1980's and 1990's to provide infrastructure, Japan is no longer the largest provider in this area. A recent IDB report commented that sector investment on its own may not be effective. Infrastructure development has now been reconsidered as the major component of technical cooperation. An improvement in infrastructure will help upgrade the quality of medical treatment, and over time this would increase the credibility of the Ministry of Health.

However, human resources and operational costs are essential, and therefore need to be thoroughly examined before undertaking infrastructure development projects. The ideal strategy of technical cooperation is to participate in discussions on social development aspects while utilizing Japanese technical expertise in infrastructure development. It may be wise for Japan to develop skills in social development assistance through providing assistance to countries such as Honduras in which Japanese have sufficient experience.

(3) Managing the project after the withdrawal

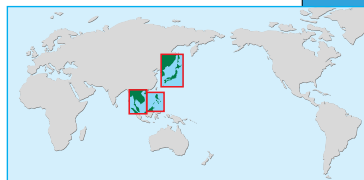
The operational costs for the "Nursing, Research and Training Center" are funded by UNICEF, UNFPA and their own profits from the sale of educational materials. The Japanese ODA policy advocates "self-help", and its aim is for the beneficiary country to continue project activities at the end of the project. This may not be easy for a country like Honduras due to its economic difficulties. Therefore, if Japan completely withdraws assistance, the Government of Honduras must seek assistance elsewhere. In this case, it would be beneficial for Honduras to retain the activities and experiences that another country may find interesting and profitable. The project may be sustained in this manner, and medical research projects are common examples of this type of project. When Japanese assistance is completely cut off, it is most likely that the project outcome-trained human resources and their technical expertise will be absorbed by the third party organizations. It may be wise to continue the assistance just to retain the project outcome

on the Japan side and to utilize the trained counterparts for the purpose of public relations of Japanese ODA.

In the health sector, regional differences are not so great. Therefore, the standard countermeasures, such as "Declaration of Alma Mata"³⁾ and "Health Sector Investment" are valid internationally. Because of the commonalities among projects, Japanese experts can apply the experiences and expertise gained in one country to other countries. In Latin American countries, because of the commonalities in language and customs, Japanese experts can utilize their skills throughout the region. JOCVs and experts who work in one country can be trained to work in other countries in the same region. Practically, it would be wise to utilize JOCV and Japanese experts by giving them the opportunities to attend international and regional conferences, so that they can gain exposure in the policy-making process as well as expand their personal network.

³⁾ An international conference was held in Alma Mata, the capital of Kazakhstan, under convocation of WHO and UNICEF. The representative of 140 countries were attend the conference, and the purpose of "Health for everyone by 2000" was agreed. Primary health care was highlighted as a strategy for achieving above purpose.

Partnership Between JICA and Okinawa Prefecture in International Cooperation



Project Site Japan (Okinawa Prefecture)

1. Background and Objectives of Evaluation Survey

As "human-centered development" became a recent international current of development cooperation, activities to tackle the issues closely related to local areas, such as poverty reduction, improvement of living condition, environmental conservation, enhancement of regional health, basic education and other basic social services, became more significant. Also, practical use of the knowledge and experiences that Japanese local government have developed became very important in terms of implementing effective international cooperation. The Mid-term Policy of ODA, a basic guideline of Japanese ODA announced in August 1999, set goals to actively expand Japanese "aid with a human face" as the future direction. It also targeted to further promote cooperation with participation and support of the Japanese public, including local authorities and NGOs, in implementing ODA projects through which Japanese citizens can gain understanding.

At the same time, local governmental units independently promoted "internationalization" from the perspectives of revitalization of local areas and international contribution and carried out various programs of international exchange and cooperation. Particularly, Okinawa prefecture put emphasis on the promotion of international cooperation program in the Third Promotion and Development Plan of Okinawa (FY 1992-FY2001). They also formulated the Okinawa International Exchange and Cooperation Promotion Outline in March 1998, which promoted international cooperation programs, as well as an exchange of people and materials between Okinawa and places with similar subtropical climate and insular characteristics.

Following these moves, a thematic evaluation of partnership cooperation between JICA and Okinawa prefecture that took place at the Okinawa International Center (OIC) was carried out.

This study attempted to assess the cooperation result of OIC, which had been a local base of international cooperation since its foundation in 1985. It also evaluated the actual outputs of partnership cooperation between Okinawa prefecture and JICA with a central focus on the technical training of overseas participants carried out with the cooperation of relevant organizations in Okinawa. The aim of this evaluation was to derive recommendations that would contribute to the implementation of more effective partnership cooperation between JICA and Okinawa in the future.

2. Evaluated Projects

Six courses relevant to the characteristics of Okinawa:

- **Effective Utilization of Tropical Agriculture and Forestry Resources**
- **Sugar Cane Research**
- **Marine Pollution Surveillance and Control**
- **Sustainable Management of Mangrove Ecosystems**
- **Clinical Nursing**
- **Community Health Service (Country-focused Training Course for Bolivia and Paraguay)**

3. Members of Evaluation Team

Team Leader:

Hiroshi KAKAZU, Deputy Governor Okinawa Development Finance Corporation

Evaluation of Planning 1:

Tetsuya SUZUKI, Deputy Director, Training Division, Okinawa International Center, JICA

Evaluation of Planning 2:

Katsuhiko HAGA, Deputy Director, Office of Evaluation and Post-project Monitoring, JICA

The research in Japan was carried out by the Japan International Cooperation Center, and Takuo KARASAWA, Office of Evaluation and Post-project Monitoring of JICA, was in charge of the domestic preparation for this evaluation.

4. Period of Evaluation

Field study:

21 November 1999-27 November 1999

Domestic research:

September 1999-January 2000

5. Method of Evaluation

Okinawa-based activities of JICA, including those of the Okinawa International Center (OIC) and international exchange program of Okinawa Prefecture, were reviewed based on existing information.

Through a questionnaire survey and interviews, six training courses that had been implemented with cooperation from related organizations in Okinawa were evaluated. Respondents included the staff of the prefecture authority and the organizations that implemented the trainings, as well as the trainees who had returned to their home countries. In addition, the evaluation team visited the Philippines and Thailand, met with relevant actors on both the side of Japan (staff of Japanese embassy and JICA local offices and experts dispatched) and partner countries (returned trainees and their colleagues), and exchanged ideas. They also carried out site visits to some partnership projects implemented with other local authorities of Japan.

Based on the results of the above research, the opinions of related actors of OIC were gathered and then lessons and recommendations for enhancing international cooperation in Okinawa were summarized.

6. Results of Evaluation

(1) State of Partnership Cooperation between Okinawa Prefecture and JICA

Technical training of overseas participants, Dispatch of Experts, and dispatch of Japanese Overseas Cooperation Volunteers (JOCV) were the major forms of partnership cooperation between JICA and Okinawa prefecture.

1) Performance of technical training of overseas participants

The number of trainees accepted had been increasing every year since 1982 when the first 14 trainees were accepted. The number of trainees in 1985 and 1990 were 190 and 299 respectively, then the

number steadily increased from 279 to 288, 305 and 310 from 1994 to 1997, and the number rose to 331 in 1998.

The total number of trainees accepted by 1998 was 3958 from 137 countries. If we look at the origin of trainees by region, almost half (47.6%) of them came from Asia. The distribution of trainees by other regions was as follows: 944 trainees (23.9%) from Latin America, 487 trainees (12.3%) from the Middle-East, 416 trainees (10.5%) from Africa, 193 trainees (4.9%) from the Pacific region and 33 trainees (0.8%) from Europe.

Training courses implemented under the cooperation of Okinawan organizations during the past five years are identified below.

New program courses of "Independent living for Disabled persons (ID)¹⁾" through partnership with NGOs and "Maintenance and Management of Information Network in Insular Areas of Communication Field" were recently established besides the enhancement of trainings in the field of tropical agriculture, forestry and fishery, "Environmental Conservation", and "Training of Health and Medical Services" that incorporated the characteristics of Okinawa.

2) Performance of Dispatch of Experts:

The first group of experts was dispatched in 1983 and the number of experts gradually increased, reaching 42 in 1993. In recent years, twenty to forty experts were dispatched every year and field of activities and countries have been expanding. Health and medical services followed by agriculture, forestry and fishery sector were the major field of activities. By type of cooperation, the experts of Project-type Technical Cooperation were the largest in number. JICA also put emphasis on lectures and expert trainings for the staff of local authorities and this situation was expected to further expand.

During the period from November 1996 to October 1999, a program of team Dispatch of Experts named "Public Health Improvement in Warnes Province, Santa Cruz State" was carried out in Santa Cruz State in

<Agriculture>

Name of Training Course	Person/Year	Training Organization
Plants Quarantine	5	Office of Plant Protection in Naha, Ministry of Agriculture, Forestry and Fisheries
Effective Utilization of Tropical Agriculture and Forestry Resources	5	Ryukyu University
Sugar Cane Research	5	Okinawa Agricultural Experiment Station
Forest Soil	6	Ryukyu University
Crops Cultivation in Sub-tropical Areas	5	Okinawa Agricultural Experiment Station

¹⁾ ID: Independent living for disabled persons.

<Environmental Protection>

Name of Training Course	Person/Year	Training Organization
Marine Pollution Surveillance and Control	8	Japan Coast Guard
Conservation & Sustainable Management of Coral Reefs	7	Maritime Parks Center of Japan
Sustainable Management of Mangrove Ecosystems	5	International Society for Mangrove Ecosystems
Conservation and Sustainable Management of Coastal Area	5	Okinawa Expo Aquarium

<Health and Medical Care>

Name of Training Course	Person/Year	Training Organization
Health and Environmental Technologists	6	Okinawa Prefectural Institute of Health and Environment
Clinical Nursing	5	Okinawa Chubu Hospital
Country focused training course on "Community Health Service (Bolivia and Paraguay)"	5	Okinawa Nursing Society
Country focused training course on "Infectious Disease Control (Peru)"	10	Okinawa Nursing Society
Independent Living for Disabled Persons (ID)	8	Social Welfare Juridical Agency Okinawa Colony
Clinical Course in Urology	5	Ryukyu University

Bolivia. Warnes Province was a sister province of Okinawa prefecture. This project aimed at extending knowledge of public health to the rural people in Warnes Province and upgrading capability of the local health administration.

This program had a strong collaboration with Okinawa as all long-term and short-term experts were selected from Okinawa and all the counterpart trainings took place in related organizations in Okinawa. Also, OIC willingly served as the bridge between JICA headquarters and Okinawa prefecture authority, thus this Expert Team Dispatch Program was a good example of partnership between JICA's local international center and local authorities. (See Page 352 for the results of the terminal evaluation of this project.)

3) Performance of Japan Overseas Cooperation Volunteers (JOCV)

The first three JOCVs from Okinawa were sent abroad in 1968. Thereafter, about the same number of JOCVs were dispatched every year as there were 10, 7, and 5 JOCVs sent in 1993, 1996 and 1998 respectively. The total number of JOCVs by FY 1998 was 177. The major fields of expertise were agriculture, forestry and

fisheries, maintenance and operation, education and culture, health and hygiene, civil engineering and construction, sports, and processing.

In recent years, the number of people joining JOCV while working (such as school teachers and nurses) had been increasing. This situation confirmed that prefecture organizations and private companies improved their understanding toward international cooperation. It was also assumed that this was one component of the long-standing partnership between JICA and Okinawa.

(2) Evaluation of technical training of overseas participants

The number of trainees accepted in the six evaluated training courses during the past five years (1994-1998) was summarized in Table 1.

Project Design Matrix (PDM) of technical training of overseas participants clarifying evaluation items was formulated to carry out evaluations in terms of the five evaluation criteria (efficiency, effectiveness, impact, relevance and sustainability) based on the information collected through the questionnaire survey and interviews (Table 2).

1) Efficiency

According to the results of the questionnaire survey conducted at the end of every training course, about 86% of trainees responded that the scope of training was "appropriate" and approximately 81% of them answered that the level of training was "appropriate". As such, it was considered that both the scope and the level of trainings corresponded to the expectations of trainees for the most part. However, appropriateness of the scope and the level of training differed according to the course, as almost 20% of trainees of the course on effective use of tropical agricultural and forestry resources responded that the scope was too narrow and the level was too low. Since the trainees were accepted by separate research units, it seemed that the course did not fit into the expectations of trainees who wanted to acquire broad knowledge.

In terms of time allocation, about 53% of trainees

Table1. The number of trainees accepted in the six evaluated training courses

(unit: person)

Name of training course	Training organization	1994	1995	1996	1997	1998	合計
Effective Utilization of Tropical Agriculture and Forestry Resources	Ryukyu University	5	4	6	5	5	25
Sugar Cane Research	Okinawa Agricultural experiment station	5	5	6	5	4	25
Marine Pollution Surveillance and Control	Japan Coast Guard	9	7	8	9	9	42
Sustainable Management of Mangrove Ecosystems	International Society for Mangrove Ecosystems	—	7	7	7	6	27
Clinical Nursing	Okinawa Chubu Hospital	5	5	6	5	5	26
Country-focused Training Course on Community Health Service (Bolivia and Paraguay)	Okinawa Nursing Society	5	6	10	10	10	41
Total		29	34	43	41	39	186

Table 2:PDM and Five Evaluation Items of Program of Technical Training of Overseas Participants

Narrative Summary		Important Assumptions	Efficiency	Effectiveness	Impact	Relevance	Sustainability
Overall Goal • Knowledge and skills acquired through trainings are used in partner countries • Mutual understanding between Japan and partner countries is enhanced		• National policies of relevant fields remain unchanged.					
Project Purpose • Trainees acquire knowledge and skills in their area of expertise		• Equipment and budget are secured for application of acquired skills and knowledge. • Returned trainees stay in partner organizations.					
Outputs • Trainees understand Japanese experiences and technologies in their area of expertise • Trainees understand the public administration system in their area of expertise • Trainees understand the situation of other countries in their area of expertise		• Trainees complete all the necessary courses of training.					
Activities • To conduct pre-dispatch briefing • To conduct orientation after arriving in Japan • To hold sessions of lectures, discussions, practical training, and study tours in each field • To hold evaluation meetings	Inputs (Japanese side) • Personnel (Lecturers, administrative staff) • Training facilities • Training equipment • Hotel • Travelling fee, etc. (Partner country side) • Trainees	• Trainees adjust to the training environment in Japan. Pre-conditions • Partner organizations do not oppose sending staff for trainings in Japan. • Recipient organizations in Japan (Okinawa Prefecture) agree to accept trainees.	To understand the level of output by project input and examine whether or not the contents of cooperation were appropriate <Evaluation Items> 1. Trainees • Appropriateness of training program • Appropriateness of lecturers, facilities, equipment, and time allocation, etc 2. Implementing Organizations • Sufficiency of lecturers, facilities, equipment, etc	To examine the level of achievement of project purpose initially planned. <Evaluation Items> 1. Trainees • Degree of application of the technique after the training course. • Degree of understanding about Japan 2. Implementing Organizations • Level of technology transfer to trainees	To examine direct or indirect impact of implementing technical training program. <Evaluation Items> 1. Trainees • Situation of the application of training outputs after returning to the home countries • Level of understanding concerning Japan 2. Implementing Organizations • Level of understanding concerning developing countries	To examine whether or not training needs were appropriately understood and project purpose was valid. <Evaluation Items> 1. Trainees • Appropriateness of acquired skills and knowledge 2. Implementing Organizations • Possibility of continuation of accepting trainees	To grasp whether or not project outputs and impacts were applied following training <Evaluation Items> 1. Trainees • Situation at work • Alumni activities • Consistency of communication with relevant Japanese actors 2. Implementing Organizations • Improvement of training program • Consistency of communication with trainees

answered that it was "good", while 40% said "average" and 7% responded "not good". According to the opinions of those answered "average" and "not good", it was found that many trainees felt that the number of hours of lectures and discussions were almost appropriate but time devoted to practical training was too short. Since many felt that the practical training was too short, the contents of training and the capacity of training organizations need to be taken into consideration when formulating future training programs.

In addition, all implementing organizations for the six training courses had been making efforts to improve training program by having evaluation meetings after completing the courses. There were some organizations which even revised the program during the training period. As such, the organizations appeared flexible and willing to make changes according to need.

In respect of the capacity of lecturers, 37% of trainees evaluated lecturers' presentation skills as "very good" while 45% responded "good". Also, almost 80% of trainees answered "very good" or "good" in terms of each technique of discussion, practical training, and study tour. The data revealed that trainees were mostly satisfied with the capacity of lecturers.

2) Effectiveness

All six organizations that conducted training answered either "sufficient" or "almost sufficient" to the question of whether technology transfer to trainees was sufficiently carried out or not. Ryukyu University responded "almost sufficient" and identified the reason for it that it would be difficult to make general judgments since component of training would differ according to each recipient research unit.

There was no specific data that could be used directly to measure the level of acquired knowledge and skills from the trainees' point of view. Therefore, this evaluation study attempted indirectly to measure effectiveness by measuring trainees' level of satisfaction towards training course. According to the results of questionnaire, 22% of trainees responded that they were "completely satisfied" with training courses, while 62% were "almost satisfied". It became clear that total of 84% of trainees considered that the training in Okinawa was relevant to their expectations.

As mentioned above, both implementing organizations and trainees highly evaluated the level of technology transfer and learning, thus it was evaluated that the project purpose to acquire training skills under effective training program was generally achieved.

3) Impact

As 93% of trainees responding to the questionnaire mentioned that they conducted debriefing sessions on their training in Japan after returning to home countries, it was considered that dissemination of the impact of training to others occurred, as expected.

In terms of applicability of knowledge and skills acquired through trainings, 36% of trainees evaluated "very good" while 48% and 14% of trainees assessed "good" and "average" respectively. It became clear that skills transferred by trainings were practically used in one way or another after returning home. Specifically, there were two major methods of application of training: skills and knowledge transfer to third party and improvement of trainees' own work performance.

However, since more than a half of trainees recognized the problem of lack of funds and facilities to apply the outcome of trainings, concept and methods of follow-up activities for returned trainees should be considered.

The evaluation team carried out interviews and asked the impact of the training program to Japanese implementing organizations. Implementing organizations felt some impacts of taking part in technical training of overseas participants, such as information exchange, understanding developing world, international exchange, and greater sensitivity. Although each organization was very active in having interactions with trainees, they expressed that communication with trainees was hindered by language barriers.

4) Relevance

Since more than 90% of trainees responded that acquired knowledge and skills were useful, it was felt that the training program would remain valid for the future.

Implementing organizations expressed their motivation to engage in technical training for the following reasons: "because needs were there", "wanted to make use of the experiences of Okinawa for

developing countries", "wanted to help build up international friendship in order for people in the world to live equally and peacefully", and "wanted to protect our environment at global level". Based on these opinions, it was recognized that most of the organizations were willing to accept overseas participants, and implementation of training courses was considered to be relevant in terms of sustainability of trainings from the view of training organizations.

5) Sustainability

Since more than 90% of trainees stayed in the same office after returning, most worked in positions where they could make use of acquired knowledge and skills.

Trainees who attended an alumni meeting²⁾ after returning home were less than 40%. Many trainees responded that they were absent from the meeting because they were not aware of it.

Although it was pointed out that work load of the staff of implementing organizations became heavier since it was not possible to allocate additional staffs due to limited budget and personnel capacities, all the implementing organizations to which interviews were conducted had strong cooperative attitudes toward technical training program. Therefore, sustainability in terms of continuation of training was recognized to be high.

6) Results of Field Research

Findings from the field research in Thailand and Philippines are as follows.

- a) Trainings in the above mentioned fields carried out in OIC were highly evaluated by both returned trainees and their affiliated organizations and requests were made for the extension and enhancement of trainings.
- b) Outputs of trainings were more or less used in the field and this resulted in the ripple effect.
- c) Most trainees remained in the same employment positions after returning to countries of their origin, and continued to engage in the work relevant to the trained field.
- d) Although there were many similarities among Okinawa, Thailand and Philippines, there were also many differences, such as lack of funds and facilities, information and technology gap, and differences in terms of systems, therefore training outputs were not necessarily directly applied.
- e) Some trainees requested that improvements be made concerning the course on Effective Use of Tropic Agriculture and Forestry resources, since the expertise and the period of practical trainings and study tours were not appropriate. If this course is continued, the training program and



Interview for ex-trainee in Thailand

method need to be reviewed. Since this course focuses on research, and differs from the other more conventional training courses, it might be suggested to transform this course into a long-term training course which awards a degree.

- f) There were many suggestions to enhance the field trainings in the questionnaire survey.
- g) There was an exchange of information among returned trainees through websites and internet, and the network of personal contacts was in the process of formulation.

7. Lessons and Recommendations

Traditionally, Okinawa was an outward looking and cooperative society based on historical and geographical factors. This character and spirit is demonstrated by Okinawan words, such as Yuimaaru (work in partnership, mutual assistance) and Ichoribachooodee (meeting only once makes brotherhood). In addition, Okinawa is the only prefecture in Japan where the whole prefecture has a subtropical marine climate and consists of large and small islands. Therefore, skills and know-how that were developed in such natural environment were not found in other prefectures. These characteristics were significant particularly for implementing international cooperation to developing countries (in Asia and Pacific region in particular) which have similar environmental characteristics. It is also important that effort is made to incorporate Okinawa's characteristics in the international cooperation programs carried out in collaboration with JICA and relevant organizations (local prefecture, city, town and village authorities and NGOs, etc).

By so doing, it would be possible that not only cooperation programs would be effectively corresponding to the detailed needs of developing countries, but also Okinawan people's understandings concerning different cultures and developing countries would be enhanced through international cooperation. Furthermore, this would contribute to the development and regeneration of local areas in Okinawa through building up significant relationships with people from overseas including the development of personnel of the prefecture authorities and improved communication within the industrial sector.

In this section, some issues of extending international cooperation in Okinawa, and the ways to enhance partnership between JICA and Okinawa will be considered.

1) Extension of Cooperation incorporating the characteristics and experiences of Okinawa

Okinawa has accumulated a rich knowledge and much experience on development of insular region, development of agriculture forestry and fisheries in



Interview for ex-trainee in the Philippines

subtropical climate, subtropical medicine, environmental protection, and protection of resources. JICA already had been using these knowledge and experiences for international cooperation with a central focus on the program of technical training of overseas participants, however it should be considered to enhance this situation further.

For instance, in terms of the Dispatch of Experts and JOCVs from Okinawa, there would be possibilities of enhancing personnel in specific fields related to Okinawa's local characteristics or in the technical area that Okinawa advanced the research and accumulated sufficient experiences. Also, it should be considered that supplementary technical training³⁾ for JOCVs would be extended. So far, supplementary technical training carried out in Okinawa concentrated in agriculture, forestry and fisheries sector. There was a lot of needs of developing countries for JOCVs in this sector, and it would be effective to have practical training under the environment similar to that of assigned countries before assignment in order to make the activities in those developing countries satisfactory. Such training would also be effective particularly for many new graduates who become JOCVs without having much work experience. It was also considered to be necessary to extend supplementary technical training mainly in agriculture, forestry, and fisheries sector as well as health and hygiene sector in which the characteristics of Okinawa could be adequately

²⁾ Alumni meeting: A meeting spontaneously held by trainees who completed JICA's training in Japan after returned home to their countries. The meeting is not only a place for communication and information exchange among ex-trainees, but also acts as a bridge between Japan and partner countries. Major activities of alumni were publication of newsletters, annual meetings, and social gatherings. JICA gives supports to the development and enhancement of alumni including financial aid.

³⁾ Supplementary technical training : Pre-assignment technical training which is provided to the volunteers who are appointed but considered to need strengthening in technical aspects according to the specifics of the request from partner countries.

incorporated.

At the same time, it would be important to consider the way of future international cooperation in Okinawa from the perspectives of regional development and industrial development. For example, the development of local industry with a partnership among Asian region had been given attention recently with a central focus on the production of turmeric, konnyaku (alimentary yam paste) and medical plants. Relay cropping of chrysanthemum was also started. Private enterprises in Okinawa had been in the process of seeking ways to move into the countries in Asia and Pacific region and to enhance relationship among them, therefore JICA should consider giving assistance under the program of investment and financing for development⁴⁾ and such to pilot projects and programs of technology transfer of private enterprises.

Furthermore, Okinawa's history and experiences of regional development from the time before and after the reversion to Japan to present would be one model for regional development and valuable study material for developing countries. Okinawa's various programs, such as "Shima Okoshi (boosting development of the islands)", "Yuimaaru (work in partnership) Projects" and "Team Fortune", are good examples to be introduced to regional development in developing countries.

2) Improvement of the training system

Many of JICA's training courses in Okinawa were carried out with the cooperation of related organizations in Okinawa, and the program of technical training of overseas participants was a major partnership program between JICA and Okinawa. The evaluation team carried out a questionnaire survey and interviews with returned trainees and staff of training organizations of six training courses, and discussed the ways to carry out more effective training courses in the future.

a) Field Visits and inspection by personnel in

charge of trainings

Field visits to the work sites of trainees would enhance the knowledge of those designing the training courses and help them to design appropriate curriculum and hold effective training courses. However, most trainers did not have any experience of visiting developing countries and they often formulated curriculum without having a clear vision of the actual situation.

Accurate identification of needs would have a positive impact on the utilization of acquired skills in trainees' countries of origin after completing trainings in Japan. According to the results of the questionnaire survey, quite a lot of trainees responded that lack of budget and equipment in home countries hindered the use of training output even though they acquired new skills and knowledge. By identifying the actual situations and technical levels of developing countries adequately before conducting trainings, it would be possible to make curriculum suitable for applying acquired skills to real work. For instance, only information should be provided concerning trainings of skills and methods that would require advanced equipment, and practical training should focus mainly on simple technology and methods that do not require expensive equipment and reagents. In addition, this background would help identify the most appropriate lecturers.

Other advantages to sending staff of training organizations to visit local sites, other than the identification of needs, include raising awareness and motivation. In addition, communication would likely be enhanced and the training organizations would have the opportunity to monitor the post-training impact and utilization of skills. The Country-focused Training Course on "Community Health Service (Bolivia and Paraguay)" was one of the most highly evaluated among the six courses, and it was considered that one of the reasons was that many personnel of the training organization had the experience of working abroad.

Obviously this recommendation can be more readily implemented for trainings designed for single countries, rather than for those which accept trainees from various countries.

b) Selection of Appropriate Trainees

Selection of trainees with certain technical skills is another important factor. Although decisions on the selection of trainees were usually finalized by OIC based on the requests of partner countries, there were quite a lot of trainees who applied to the program without understanding the contents of training. Also, there were some trainees whose



Site visit for Merchant Marine Training Center in Thailand

English capability was not sufficient, which caused them to act passively since they could not comprehend well or communicate with other trainees. It is therefore important that detailed information about the training program is made available to applicants in order to avoid the situation where the training program of and trainees do not match.

One method of providing information is the Internet since many people in developing countries now have access to computers and the Internet as we live in an information-driven society.

Information on JICA's training program could be provided to many people by posting application information, outline of training courses of OIC, and the contents of the textbooks used in the previous trainings on the website of OIC. Applicants might be able to consider how useful the trainings would be for themselves as well as for their organizations, and training organizations could also then expect to receive applications from appropriate personnel. Also, future trainees could acquire necessary knowledge before training by obtaining the textbook of the previous year.

Recommendations on the use of the Internet should be directed commonly to all the international centers of JICA. This is particularly suitable for OIC as they have training courses on data processing technology. Therefore, it would be opportune for OIC to make efforts to improve programs by actively engaging in using the Internet ahead of the other JICA international centers.

c) Strengthening the network of implementing organization of training courses

The number of training courses conducted in Okinawa in FY 1999 reached 33 and many different organizations in Okinawa were involved with these trainings. Developing a network among these organizations would allow them to share experiences and problems. JICA (OIC) traditionally meets with the training organizations individually to plan courses and again after completion. However, to date, no group meetings have been held. A session carried out on 24 February 2000 as part of this evaluation study with the participation of all six implementing organizations was the first experiment. It was very meaningful for these organizations in charge of conducting JICA's training to share their experiences and learn about the methods of other organizations in order to make courses more effective and efficient.

d) Preparation of Information for Returned Trainees

As revealed in the results of questionnaire survey, many trainees had problems with lack of

facilities necessary for applying the outputs of trainings to their own work in their home countries. At the same time, training organizations were willing to support the trainees even after their returning home through providing advice and relevant information as much as possible. The number of trainees who participated to training courses in Okinawa already reached more than 4000 and all of them were considered as important human resources not only for JICA but also for Okinawa to enhance the programs of international cooperation and exchange in the future. Returned trainees also had strong will to extend communication network among related actors, such as those of OIC.

However, a system to monitor the activities of trainees who returned home was not sufficiently established, so OIC was unable to track their trainees. JICA should therefore establish a tracking system and database to follow-up trainees after their return home. Training organizations would benefit from knowing to what extent trainees were able to apply what they gained from the training in their work. If JICA provided this kind of information to training organization more actively, it would strengthen the follow-up system concerning returned trainees as well as the motivation of these organizations concerning JICA's training programs.

e) Alleviation of Language Problems

The issue of language was pointed out as one of the barriers to communication among trainees during their stay in Japan and after returning to their respective countries. OIC had been attempting to promote the idea of community participation as one of the measures to alleviate this problem. Japanese lessons were given by student volunteers of Okinawa International University and Ryukyu University on weekends and a home stay program during the new year season were examples. These sorts of opportunities enhance understanding and international cooperation at the community level, therefore it would be desirable for other organizations to introduce these exchanges in their training courses.

4) Investment and financing for development: One of the cooperation schemes of JICA which provides long-term financing at low rates of interest to 1) Japanese corporations implementing development projects in developing countries, 2) Japanese corporations which finance local corporations implementing development projects

Water Supply and Water Resources Development



Project Sites Philippines (Nation wide)

1. Background and Objectives of Evaluation Survey

Safe water is one of the factors in meeting Basic Human Needs (BHN). In the Philippines, the rapid population influx and the concentration of economic activity in urban areas have led to an exacerbation of problems that include a shortage of city water and deteriorated water quality. Addressing these issues is an urgent concern. According to this background, JICA has conducted cooperation in the Philippines with high priority in the field of water supply and water resources development. JICA has also specified "improvement of water supply" as the aid issue of the future, particularly from the perspective of poverty alleviation measures in the JICA country-program which is the strategy for aid to the Philippines.

In 1987, the Philippine Government formulated the "Water Supply/Sewerage and Sanitation Master Plan of the Philippines 1988-2000". It has been promoting projects with the aim of increasing the household coverage rate of water supply from 63 percent to 94 percent. To improve the efficiency of water supply organizations, in August 1997, the government contracted out the service division of the Metropolitan Waterworks and Sewage System (MWSS), responsible for water supply in the metropolitan area, to two private companies. It has also reorganized the Local Water Utilities Administration (LWUA), responsible for water supply in local areas.

Given these circumstances, this evaluation assessed past JICA cooperation in the fields of water supply and water resources development in the Philippines. In addition to clarifying the impact, it was also conducted with the objective of drawing lessons and recommendations for future cooperation from the results of evaluation.

2. Evaluated Projects

This evaluation is composed of a sectoral review and a project review. In the sectoral evaluation, all water supply and water resource development projects

(technical cooperation projects and grant aid ¹⁾ projects implemented by JICA) since fiscal 1980 were evaluated. The project evaluation subjected the individual projects listed below.

<National Master Plan (M/P)>

- **Master Plan Study on Water Research Management**
(Development Study)

<Cooperation in the Metropolitan Area>

- **Waterworks and Sewerage System in Metro Manila**
(Development Study)
- **Non-Revenue Water Reduction**
(Expert Team Dispatch Program)
- **Supply of Leakage Water Detective Equipment**
(Provision of Equipment)
- **Balara Water Treatment Plant Rehabilitation Plan**
(Development Study)
- **Project for the Rehabilitation of the Balara Water Treatment Plant**
(Grant Aid)

<Cooperation in Urban Areas>

- **Preparation of Provincial Water Supply, Sewerage and Sanitation Sector Plan**
(Development Study)

<Cooperation in Rural Areas>

- **The Project for Rural Water Supply and Improvement of Sanitary Facilities**
(Grant Aid)

3. Members of Evaluation Team

Team Leader:

Naoto OKAWA, Deputy Director, Office of Evaluation and Post Project Monitoring, Planning and Evaluation Department, JICA

Sub-Team Leader/Sectoral Evaluation:

Ichiro YOKOTA, JICA Expert on Planning of Cities/Towns Water Supply assigned to LWUA

Evaluation Planning:

Hajime NAKAZAWA, Office of Evaluation and Post Project Monitoring, Planning and Evaluation Department,

JICA

Evaluation Analysis (Evaluation Methodology):

Shigeru KOBAYASHI, System Science Consultants Inc.

Evaluation Analysis (Water Supply Technology):

Fumio FUKUDA, Sowa Consultants Inc.

4. Period of Evaluation

23 March 2000-15 April 2000

5. Evaluation Procedure

This evaluation reviewed the sector as a whole and then individual projects, and drew lessons and recommendations.

(1) Sectoral evaluation

This evaluation attempted to clarify the development issues that JICA had focused on in the water supply and water resources development sectors in the Philippines, and then evaluated the appropriateness of the selection of the issues.

- 1) For the purpose of this evaluation, the ultimate objective of development in the water supply and water resource development sectors was set as "adequate supply of safe water to all the people", and from this perspective, the priority issues for the achievement of this objective were selected.
- 2) Based on the priority issues, the investment and results of development projects conducted by donors including the Philippine Government and JICA (referred to as table 2) from 1979, when organizational reform in the water supply and water resources development sector was carried out, until 1999 were summarized. In addition, the results of the above were analyzed, in the attempt to clarify JICA's past development issues.
- 3) Then the relevance of JICA's selection of development issues from the following three perspectives were analyzed.
 - a) Whether the development issue was one that was

relevant for "grant cooperation" (refers to aid with no obligation for repayment, including technical cooperation) or conversely, whether it should have been addressed through loans.

- b) Whether the development issues were selected considering the possibility of effective cooperation with Philippine Government or other donors.
- c) What were the strengths and weaknesses of the approach to the priority issues selected in 1) compared with government and other donor development projects?

(2) Project evaluation

An evaluation of each of the projects listed in 2) above was conducted from the perspective of five evaluation criteria (efficiency, effectiveness, impact, relevance and sustainability) with the principal objective of confirming whether each projects produced the outputs intended in initial plans.

(3) Lessons learned and recommendations

- 1) To make recommendations on the future direction for JICA cooperation considering the results of sectoral evaluation and future trends of action by the Philippine Government and major donors.
- 2) To draw out lessons learned and recommendations for future project formulation and implementation from the project evaluation results.

6. Results of Evaluation

(1) Current status of the water supply sector in the philippines

The establishment of the provision of water supply in the Philippines is divided into Level I (water from wells), Level II (water from communal taps) and Level III (water piped to individual households) depending on the form of water service facilities.

The organization in charge of implementing water supply services used to be the Metropolitan Waterworks and Sewage System (MWSS) in the Manila metropolitan area, but the services are now run under contract by two private companies-Manila Water Company, Inc. (MWC) (in charge of the eastern section of the MWSS area) and Maynilad Water Services Inc. (MWSI) (in charge of the western section of the MWSS area)-as a result of the privatization of MWSS in 1997. The MWSS planning and management division remains on a smaller scale.

Before 1996, water supply projects in provincial areas were carried out by Local Water Utilities Administration (LWUA) for Level III services and Department of Public Works and Highways (DPWH) for Level I and Level II

Table 1 Transition of the government agency for water supply development

	Metro Manila	Other urban areas	Rural areas
Level of water supply	Level III	Level III	Level I • II
Before 1996/1997	MWSS	LWUA	DPWH
Since 1998	•Planning and Administration : MWSS •Operation of water supply services : 2 concession companies	LWUA (WDs+LGUs) Or DILG (LGUs)	

MWSS : Metropolitan Waterworks and Sewage System
LWUA : Local Water Utilities Administration
DPWH : Department of Public Works and Highways
DILG : Department of Interior and Local Government
WDs : Water Districts
LGUs : Local Government Units

1) While Grant Aid projects fall under the jurisdiction of the Ministry of Foreign Affairs, JICA is responsible for carrying out the necessary preliminary studies (preparatory studies, basic design studies, etc.) JICA also supports the implementation of Grant Aid projects.

services. Subsequently, in 1996 the authority for control of water supply services was transferred from DPWH to the Department of Interior and Local Government (DILG). LWUA provides financial and technical support for areas that are cities with a population of at least 20,000 and where Water Districts (WDs) have been established. Meanwhile, with decentralization, Local Government Units (LGUs) have become the principal implementing bodies for water supply establishment outside of the Manila metropolitan area. Local governments are able to choose whether to receive support from DILG or LWUA in the establishment of facilities. Consequently, LWUA and DILG are now in competition with each other as shown in Table 1.

(2) Priority issues for achieving ultimate development objectives

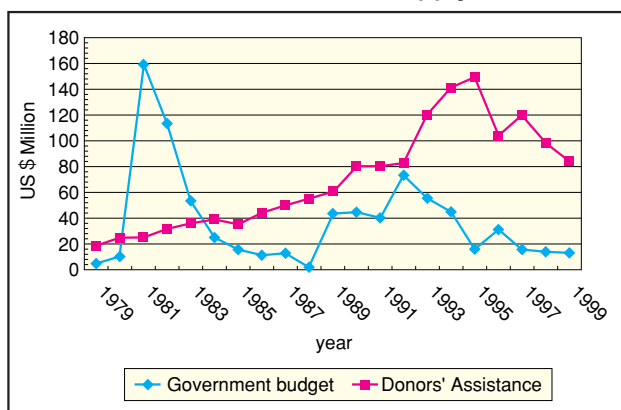
As previously stated, this evaluation sets "adequate supply of safe water to all the people" as the ultimate development objective for the water supply and water resources development sectors. In order to achieving this, the followings are important: 1) formulation of a development plan; 2) establishment of facilities to supply water; 3) efficient operation of water supply in order to increase coverage rates of water supply and respond to demand for water supply using existing facilities (typical examples of efficient operation strategies are improvement of existing facilities and facility operation methods, measures to address non-revenue water²⁾ volume, policy adjustment of volume of demand for water supply through regulation of the water rates system, and strengthening of water supply project organizations); and 4) maintenance of the quality of drinking water. Therefore, these are set as the priority issues.

(3) Inputs and outputs of development projects implemented by the Philippine Government and donors and future development issues

1) Inputs

Fig. 1 shows trends in the government budget and donor aid amounts for the water supply and water resources development sectors from 1979 to 1999.

Fig. 1 Trends in government budget and donor's assistance in the water supply sector



During the last 20 years, the Philippine Government and donors have invested a total of \$2.27 billion (amount of development projects) in the water supply and water resources development sectors. The average ratio of government budget amount to donor aid amount is 35 percent versus 65 percent for the 20 years, but was 19 percent versus 81 percent from 1993 to 1999. As a result, it can be concluded that development in the water supply and water resources development sectors has been largely carried out through donor aid. The major donors are the Asian Development Bank (ADB) (accounts for 50.2% of total aid), the Japan Bank for International Cooperation (JBIC) (accounts for 18.2% of aid), the World Bank (accounts for 17.3% of aid) and JICA (accounts for 8.3% of aid). JICA is the biggest donor of "grant cooperation" for which there is no obligation of repayment.

Table 2 summarizes donor aid on the basis of priority issues selected and by region from 1979 to 1999. As stated previously, development projects were mainly implemented by donors, and this table shows that the focus of development projects was "establishment of water supply facilities", or the expansion of the volume of water supply through the construction of new water supply facilities. On the other hand, little attention was paid to "improving water quality" or "efficient operation of water supply services". Further, with regard to project region and source of finance, projects in which profitability was ensured (mainly implemented in the metropolitan and urban areas) were prioritized and carried out through loans while projects for which profitability was difficult to ensure were carried out through "grant cooperation".

2) Outputs and Future Development Issues

Table 3 compares projected inputs (invested amount) and outputs (rate of water supply) in the Water Supply, Sewerage and Sanitation Master Plan of the Philippines 1988-2000, the basic plan in the water supply sector formulated by the Philippine Government with current achievements. Outputs have been achieved through inputs, and the rate of water supply coverage has risen from 64 percent (1992) to 80 percent (1999). However, problems such as the following were found:

- a) Outputs did not match inputs. In the period between 1993 and 2000, although inputs were generally in line with plans (actual investment of \$1.07 billion compared with planned investment of \$1.13 billion, or 91% achievement rate), outputs were approximately half of projections

²⁾ Non-revenue water refers to water supplied from water treatment plants for which charges cannot be collected due to leakage and theft. The proportion of the water supply that non-revenue water volume accounts for is about 10% in Tokyo. However, in the Philippines, it is about 50% in Manila and about 40% in provincial areas.

Table 2 List of donors' cooperation projects in water supply sector for the past 20 years

	Manila and its Contiguous Areas [MWSS]	Other Urban Areas [LWUA]	Rural Areas ¹⁾ [DILG/DPWH]
Formulation of development plans (M/P,F/S)	J. Groundwater development in Metro Manila (development study) 1989-1992 (¥414 M)	J. Local Water Supply Project 1980-1982 (development study) (¥182 M)	UP. Provincial Water Supply, Sewerage & Sanitation Sector Plan (1st Batch) 1991 (US\$0.25 M)
	J. Balara Water Treatment Plant Rehabilitation Plan (development study) 1990-1991 (¥89 M)	J. Municipal Water Supply Project 1985-1986 (development study) (¥165 M)	J. Provincial Water Supply, Sewerage and Sanitation Sector Plan (development study) 1993-1995 (¥248 M)
Establishment of water supply facilities	J. Waterworks and Sewerage System in Metro Manila (development study) 1994-1995 (¥301M)	J. Grounwater Development in Panay Islands(development study)1987-1989 (¥274 M)	UP. Provincial Water Supply, Sewerage & Sanitation Sector Plan (2nd Batch) 1994 (US\$0.30 M)
	A. Water Supply and Sanitation Sector Study 1997-2000 (NEDA)	J. Cavite Water Supply Development Study (development study) 1993-1995 (¥233 M)	UF. Provincial Water Supply, Sewerage & Sanitation Sector Plan 1994 D. Provincial Water Supply, Sewerage & Sanitation Sector Plan 1994 J. Study on Provincial Water Supply, Sewerage and Sanitation Sector Plan for Visaya and Mindanao 1997-2000
Water quality improvement	A. Second Manila Water Supply 1979-1983 (US\$49 M)	A. Water Supply and Sanitation Sector Study 1997-2000 (NEDA)	A. Water Supply and Sanitation Sector Study 1997-2000 (NEDA)
	A. Manila Sewerage and Sanitation Project 1980-1988 (US\$42.8 M)	W. Water Supply in Provincial Towns Project 1979-1985 (US\$38.0 M)	JB. Rural Water Supply Project I 1978-1983 (¥4.55 B)
Reduction of non-revenue water	A. Manila Water Supply Rehabilitation Project 1984-1990 (US\$39.0 M)	A. Water Supply Sector Project 1982-1989 (US\$46.0 M)	JB. Rural Water Supply Project II 1980-1985 (¥1.86 B)
	A. Manila Water Supply Rehabilitation Project I 1984-1993 (US\$65.5 M)	D. DANIDA Project 1985-1992 (US\$19.5 M)	W. Rural Water Supply and Sanitation Project 1983-1988 (US\$35.5 M)
Efficient operation of services	A. Manila Water Supply Rehabilitation Project 1986-1994 (P1,217 M)	JB. Provincial Cities Water Supply Project I 1988-1995 (¥1.27 B)	J. Pilot Rural Environmental Sanitation Project (grant aid) 1984-1985 (¥965 M)
	A. Metro Manila Water Distribution Project 1986-1993 (US\$35.6 M)	F. Water Treatment Plant 1990-1992 (FF2.1M)	JB. Rural Water Supply Project III 1986-1992 (¥2.55 B)
Reduction of non-revenue water	W. Manila Water Distribution Project 1986-1993 (US\$35.6 M)	A. Metropolitan Cebu Water Supply Project 1991-1997 (US\$16.9 M)	A. First Island Provinces Rural Water Supply Sector Project 1987-1993
	A. Second Manila Water Supply Rehabilitation Project 1988-1993 (US\$26.4 M)	JB. Provincial Cities Water Supply Project II 1991-1997 (¥1.09 B)	JB. Rural Water Supply Project IV 1990-1995 (¥5.08 B)
Efficient operation of services	A. Angat Water Supply Optimization Project 1989-201 (US\$130.0 M)	J. Leyte Island Water Supply Improvement Project (grant aid) 1993-1995 (¥2,799 M)	W. First Water Supply, Sewerage and Sanitation Sector Project 1990-1997 (US\$85.0 M)
	W. Angat Water Supply Optimization Project 1989-1994 (US\$37.6 M)	A. 8-Municipal Water Supply Project 1994-1998 (P3,286 M)	J. Rural Environment Sanitation Project (grand aid) 1990-1992 (¥1,650 M)
Reduction of non-revenue water	JB. Angat Water Supply Optimization Project 1990-2001 (¥10.56 B)	JB. Provincial Cities Water Supply Project III 1994-2003 (¥6.21 B)	A. Second Island Provinces Rural Water Supply Sector Project 1991-1994 (P23.7 M)
	A. Angat Water Supply Optimization Project Telemetry/Scada Component 1992-1997	JB. Provincial Cities Water Supply Project IV 1995-2003 (¥6.13 B)	J. Project for the Water Supply System in Mt. Pinatubo Resettlement Areas (grand aid) 1993-1995 (¥1,342 M)
Efficient operation of services	A. Manila South Water Distribution Project 1993-1998 (US\$31.4 M)	A. Small Towns Water Supply Sector Project 1997-2002 (P548 M)	UF. Rural & Urban Basic Water and Sanitation Services for Selected Area 1994-1998
	A. Umiray-Angat Transbasin Project 1993-1998 (US\$92.0 M)	JB. Provincial Cities Water Supply Project V 1997-2004 (¥7.23 B)	G. Rural Drinking Water in Palawan, Phase II 1995-1998 (US\$1.96 M)
Reduction of non-revenue water	F. Rizal Water Supply Project 1993-1996 (FF54.0 M)	Aus. Baguio Water Supply Upgrading & Rehab. Project 1997-1999	J. Project for Rural Water Supply and Improvement of Sanitation Facilities (grand aid) 1995-1996 (¥1,643 M)
	J. The Rehabilitation of the Balara Water Treatment Pland(grant aid) 1993-1995 (¥3,543 M)	D. Negros Urban Water Supply and Sanitation Project 1997-1999	A. Rural Water Supply and Sanitation Sector Project 1997-2002
Efficient operation of services		G. KfW Program II 1997-1998 (P409 M)	JB. Rural Water Supply Project V 1999-2007 (¥0.95 B)
		G. KfW Program I 1998-1999 (P593 M)	W. Local Government Units Urban Water and Sanitation Project 1999-2007 (US\$190 M)

Loan Program : A ADB F French Protocol loan
 JB JBIC Aus. AusAID
 W World Bank

Grant Aid Program : J JICA UP UNDP
 D DANIDA UF UNICEF
 G German assisted GTZ

NOTE: 1) Including some urban areas from 1991

(the plan was to increase the water supply coverage rate from 64% in 1992 to 94% by 2000, but the actual result was 80%). The reasons for this appear to be shortcomings in the plan itself

including poor water demand forecasting and investment cost planning.

b) Half of the regions nationwide have water quality problems, but water supply service organizations

are not very conscious of these problems. Currently, hardly any attention is paid to water quality in the various studies of water supply.

- c) There are large disparities in the rate of water supply coverage by state with 11 states at 20% or lower, 24 states at 21%-40%, 19 states at 41%-60%, 9 states at 61%-80% and 10 states at 80% or higher.
- d) There are wide disparities in water rates. The cost of one cubic meter of water is 3.3 pesos in Metro Manila, 8-23 pesos in other urban areas and 1.6-23 pesos in rural areas. The form of water supply in rural areas is largely Level I and Level II, and, considering the lower volumes of water and more difficult access, many rural areas receive "low levels of service at high costs" in comparison with the metropolitan and urban areas.

The future development issues and countermeasures for achievement of the ultimate objectives of development given the points above are summarized in Table 4.

(4) Results of sectoral evaluation

As shown in Table 2, the issues that JICA prioritized were "formulation of plans in the water supply and water resources sector through Development Studies" and "establishment of water supply facilities in rural areas through Grant Aid," and it has played a particularly leading role in plan formulation. For both issues, it was difficult to ensure the profitability of projects, and the selection of grant cooperation which has no obligation for repayment was relevant.

In addition, the results of Development Studies were utilized in implementing projects using yen loans, and the establishment of water supply facilities through grant aid was conducted while paying attention to the sharing of roles with other donors. Therefore, they were also relevant from the perspective of efficient collaboration with the Philippine Government and other donors, and the establishment of water supply facilities in rural areas



A mission member carried out a survey of water quality

contributed to correcting the regional disparities in supply rates, costs and services described earlier.

Moreover, a major strength was that JICA had carried out aid to address improvement of water quality and countermeasures for water leakage ahead of other donors.

(5) Results of project evaluation

1) Achievement of Project Purpose and Overall Goal

Development Studies implemented F/S for projects proposed in the M/P for Metro Manila and urban areas, and their results were also utilized by other donor organizations.

The privatization of the implementing work of MWSS was decided on during the term of the Expert Team Dispatch Project for "reducing non-revenue water". Although the term of the project was shortened for this reason, the transferred technology as well as the leakage survey equipment provided through Independent Provision of Equipment had been effectively utilized by the companies contracted after privatization.

In terms of Grant Aid, there had been some success as with the results of facility repairs in the Project for the Rehabilitation of the Balara Water Treatment Plant that covered the Metro Manila area, meaning that 1.6 million tons/per day of water could now be processed in line with plans, and these results have also been utilized by the contracting companies in post-privatization operations. However, in the "Local Water Supply and Sanitation Improvement Project" that aimed to establish Level I and Level II water supply systems in 83 rural locations, the results of sample studies of 14 sites were diverse. Eight sites were being supplied with water due to the establishment of facilities, two sites were not yet supplied with an adequate volume of water due to problems with the facilities, and three sites had water that could not be used for drinking, as it did not meet quality standards due to the high iron content of the subterranean water. In addition, it was ascertained that the operation, maintenance and management capabilities of local governments that had become the implementing bodies for water supply services with

Table 3 Comparison of plan and result of the Master Plan (1988-2000)

Region	Category		First stage			Second stage	
			1987	1988-1992	1993-2000		
Metro Manila	Service Coverage	Plan	86%	87%	97%		
		Results		62%	67%		
	Investment	Comparison		59%	62%		
Other Urban Areas	Service Coverage	Plan	55%	77%	95%		
		Results		58%	73%		
	Investment	Comparison		48%	124%		
Rural Areas	Service Coverage	Plan	62%	92%	93%		
		Results		67%	88%		
	Investment	Comparison		48%	143%		
Total	Service Coverage	Plan	63%	87%	94%		
		Results		64%	80%		
	Investment	Comparison		53%	91%		

Table 4 Development issues and countermeasures

Number	Development (improvement) issue	Background	Countermeasures
1	Improvement of budget planning	<ul style="list-style-type: none"> Decline in investment Low comparative achievement of increase in the supply rate for amount of investment No countermeasures for correction of disparities and poverty 	<ol style="list-style-type: none"> Increase in absolute amount of budget Improvement in calculation techniques Improvement in budget allocation Review of interest rate on loans based on consideration of circumstances Improvement in technical support methods
2	Increasing rate of supply (percentage of households supplied with water)	<ul style="list-style-type: none"> Overall achievement of objective low at 53% Even a hand pump in one location in a village (Barangay) is counted in the supply rate, thus lacking regulation over the details of the supply rate. 	<ol style="list-style-type: none"> Improvement in basis of calculation for rate of supply Improvement in investment cost calculation techniques Introduction of low cost technology <ul style="list-style-type: none"> Expansion of communal tap water supply Introduction of demand restraint strategies Adoption of strategies to reduce non-revenue water Introduction of low cost, appropriate technology
3	Correction of disparities	<ul style="list-style-type: none"> Extremely large disparities in supply rate between cities (regions) Extremely large disparities in water tariffs between cities (regions) No difference in charge for rich and poor; no difference in charge depending on volume used (aim) Disparities in level of service and form of service 	<ol style="list-style-type: none"> Make strategies to correct disparities one of the selection criteria or an important theme of new projects Set up a database for important issues as development criteria Establish criteria for communal taps, installation of hand pumps and collection of tariffs Incorporate restraint of demand and correction of disparities into the water rates system
4	Safe water supply (water quality)	<ul style="list-style-type: none"> Low level of awareness of safe water by service managers (especially top management) River water supplied without coagulation in dry season as water quality is better Lack of accumulated data on quality of subterranean water Prevalence of inadequate supply systems that supply water that is not fit for drinking with water from deep wells not meeting drinking water standards in half of regions Some shallow wells are contaminated with ammonia Trend of people not utilizing water supply systems due to poor quality provided With water that is pH7 or lower, discharges of iron can be seen from pump pipes Lack of water quality analysis laboratories in the Philippines that meet the need of water supply services (Both Manila and LWUA are inadequate) 	<ol style="list-style-type: none"> Increase awareness of and thorough education about water quality Development of a low cost water quality improvement system that is easy to manage Establish a database of subterranean water quality Build a water quality monitoring system Position water quality studies and water quality improvement as a central theme of new projects, including donor projects Establish water quality laboratories
5	Strategy to decrease non-revenue water volume	<ul style="list-style-type: none"> The rate of non-revenue water volume is very high at over 50% in Manila and more than 40% in provincial areas There are no full-scale strategies for improvement other than those taken up by JICA and JBIC 	<ol style="list-style-type: none"> Establish a water-tight design standard Establish a management system for improving non-revenue water volumes
6	Administrative water demand forecasting	<ul style="list-style-type: none"> Water supply facilities cannot keep up with demand Regional disparities and disparities between rich and poor are widening There are marked disparities in the water usage volumes per person per day 	<ol style="list-style-type: none"> Establish guidelines for administrative forecasts of water demand Introduce strategies to restrain water demand and adopt water rates system that regulates demand Enhance PR functions Popularize water conserving equipment
7	Organizational improvement	<ul style="list-style-type: none"> Weak management and tariff collection for village water supply systems The technology in urban areas is insufficient for organizational management There is hardly any cooperation between organizations 	<ol style="list-style-type: none"> Strengthen village water supply organizations Establish technological management support system Enhance cooperation between technicians and management

decentralization were inadequate.

2) Project Sustainability

Water supply projects in Metro Manila have been privatized. In the future, supply will be developed by private companies under the supervision of MWSS through the use of the BOT (Build-Operate-Transfer)³⁾ process. No problems with sustainability were identified in this region.

In other urban and rural areas, particularly rural areas, the implementing body was the Barangay (the smallest administrative unit), or the local government at the state or city level. However, as the majority of local governments did not have adequate operation, maintenance and management capabilities, there were concerns about sustainability.

3) Impact of Privatization of the Water Supply Sector

After the privatization of the service implementation division of the MWSS in Metro

Manila, the number of employees at the "Balara Water Treatment Plant" was reduced from 120 when it was under the jurisdiction of the MWSS to 37, achieving greater efficiency. As a result, water tariffs were reduced from 8.78 pesos/m³ to 3.3 pesos/m³, a major impact for consumers.

In the future, the privatization of the water supply sector will continue with plans for participation by private capital at WMSS through the BOT process, in

³⁾ A method to implement an infrastructure project in which private companies contract to build and operate facilities under contract from the government of a developing country, and transfer the facilities to the developing country after recouping its investment within a specified period of operation.

⁴⁾ A method in which a private company plans and builds facilities, the government buys the facilities and then leases the facilities to a private company, which operates the facilities and provides services.

addition to World Bank plans to conduct development in the water supply sector in urban areas through the DBL (Design-Build-Lease)⁴⁾ process.

However, the following problems were apparent in privatization of the water supply sector.

- a) As private companies prioritize profits in their operation, they distributed water without conducting part of the water purification process in the dry season when source water contamination was relatively low in order to reduce costs. Although processed water from water treatment facilities generally met water quality standards in the Philippines, water purification was necessary even in the dry season in order to supply high-quality drinking water. Therefore, a change in awareness about the form that water supply should take as a public service was needed.
- b) Privatization was only conducted in regions where the water supply business was profitable, and was unlikely to cover the poor and areas that are disadvantaged in terms of location. Consequently, in addition to promoting privatization, the Philippine Government needed to develop appropriate policies for supplying safe water to the poor and those in rural areas.

7. Lessons Learned and Recommendations

(1) The future direction of JICA aid

Roughly speaking, in the future, the Philippine Government and major donors plan to use private assets in the capital (Manila), loans in provincial areas where profitability can be assured and grant cooperation in provincial areas where it is difficult to ensure profitability to establish water supply facilities. They are prioritizing projects based on private assets and loans. This will lead to areas where it is difficult to ensure profitability being left behind, an increase in the regional disparities in water supply rates, charges and services pinpointed earlier, and runs counter to policies to alleviate poverty. In addition, the problems of water quality, counter measures for non-revenue water and the efficient operation of water supply projects including policy adjustments to demand are not being focused on. Even in regions that will have established water supply facilities, there is a possibility that "water of inappropriate quality will be supplied inefficiently."

As a result, in the future, JICA should prioritize technical cooperation aimed at improvement in water quality and efficient operation of water supply facilities. Based on its previous track record, JICA is the leading donor to achieve success in those areas. In addition, in the future, establishment of water supply facilities through Grant Aid cooperation in regions where it is difficult to ensure profitability should be continued. Also, as the management bodies for water supply projects in these regions are local governments that generally have low operational, maintenance and management capabilities, it is particularly important to incorporate technical

cooperation aimed at strengthening these capabilities.

(2) Lessons learned and recommendations for project formulation and implementation

1) Strengthening Counter Measures for Non-revenue Water

Previous water supply projects had mostly forecast demand based on the Philippines large quantity of non-revenue water volumes, and planned and implemented projects with the objective of developing facilities to fulfill that demand. However, as there was a great potential for achieving an increase in the volume of water supply efficiently and at low cost by reducing the volume of non-revenue water, it was important to consider aid projects taking this into account.

2) Consideration of the Relevance of Data Used in Plan Formulation

Currently, the basis for estimating water supply rates used in the Philippine Government's statistical data for the water supply sector is not well defined. For example, with no basis for calculation of household composition, calculations range from 5-9 people, giving rise to disparities between plans.

In addition, in the "Water Supply, Sewerage and Sanitation Master Plan of the Philippines" formulated by the Philippine Government, the volume of water usage is set at 20 liters/person/day for communal taps and 80-120 liters/person/day in a standard household for water piped to individual households. This is a major disparity.

JICA Development Studies also used the figures used by the Philippine Government unchanged. In the future, in order to carry out more precisely targeted aid, it will be necessary to examine and re-establish the plan-basis used by the Philippine Government.

3) Establishment of Water Quality Monitoring System

It has been confirmed through research that it is possible for water quality to meet standards at the time of well construction but to become undrinkable several years after the digging of the well. Cases include drawing too much subterranean water from surrounding areas or toxic substances in shallow strata being drawn into deep wells due to inadequate sealing of the well.

Monitoring following transfer of facilities is basically the responsibility of the implementing organizations in the recipient country. However, it is very rarely actually carried out in developing countries. Therefore, in the future, it is important to support water quality inspection implementation systems in developing countries and the establishment of monitoring systems that regularly inspect water quality.

4) Shift from "Increase in Volume" to "Improvement in Quality"

Projects in the water supply and water resources development sector in the Philippines, including projects by other donors, had so far made increasing

the volume of water supplied as top priority. Water quality had not been focused on very much. As a result, although the shortage of water in rural areas had been resolved to some extent, water supply facilities that produce water that was not fit to drink had also been built. However, in this sector where the ultimate objective was "the supply of safe water", an improvement in water quality was essential, and the need to focus on the quality of well water had also been pinpointed by the Philippine Government and other donors. In the future, it will be important for Japanese aid to adequately consider relevance in terms of water quality in the implementation of projects proposed in previous Development Studies.

It is also necessary to assess the current status of facilities provided through grant aid by monitoring and to devise strategies for facilities where the water cannot be used for drinking.

5) Provision of Support Systems for the Poor

At the time of the evaluation, the Philippine government had not established any policy or support systems for the "supply of safe water" to poor regions. In the future, the prioritization of development in regions where profitability can be ensured will increase if privatization is promoted in the water supply sector, and it is likely that "access to safe water" for the poor will receive less attention.

Further, while poor villages are able to carry out day-to-day maintenance of Level I facilities, it is probably difficult for them to address major repairs for financial reasons. Consequently, it is important to distinguish policies and strategies for the provision of water supply in average-income regions and in poor regions.

6) Development of Operation, Maintenance and Management Capabilities

There was a complex implementation system in which a number of central government organizations had jurisdiction over provision of water supply projects in Metro Manila, other urban areas and rural areas, and the actual operation, maintenance and management of facilities was entrusted to various levels of local government. As a result, responsibility for implementation of projects was not well defined.

Consequently, it will be important to pay adequate attention to the following points when selecting aid projects in the water supply sector in the future:

- a) Central government organizations including organizations such as LWUA and DILG that compete with each other. In addition, as DILG has only just assumed responsibility for services in the water supply sector, there is uncertainty about actual policy drafting and implementation capabilities of some of their bureaus. In ascertaining the suitability of the agency with jurisdiction, it will be necessary to adequately consider its plan drafting and project implementation capabilities, including the previous track record of the relevant department.



A deep well settled at elementary school

- b) The levels of local government covered by aid are the city and town level and the Barangay level. However, at the Barangay level, many offices lack implementation capabilities, so the World Bank targets the city and town levels. In Japanese aid, it is appropriate for the operation, maintenance and management of planned facilities to be conducted by central government organizations or at state, city and town level, and to require states, cities and towns to supervise Barangays.

In addition, while local governments conduct the operation, maintenance and management of water supply services, they do not currently have adequate capabilities to carry out maintenance and management. Further, the central government has no policies for the development of these capabilities. In the future, when considering requests concerning provincial water supply, it will be necessary to give adequate attention to the following points:

- The inclusion of measures for the capacity building of the local government that will be the implementing organization within the activities of the requested project. There is a possibility of failure if maintenance and management of facilities is simply entrusted to local governments only because it is a "Philippine Government policy".
- The inclusion in the aid project of measures aimed at capacity building in technological and financial areas of the local government to manage and operate a water supply system.

8. Attempts to Feedback the Evaluation Results

In order to feedback the result of evaluation to partner countries, JICA conducted a evaluation seminar at Makati City in Metro Manila on 26 July, 2001.