Singapore, Thailand, Philippines, Malaysia

JICA's Cooperation with Southeast Asian Fisheries Development Center (SEAFDEC)

Project Sites Philippines, Thailand, Malaysia, Singapore

1. Background and Objectives of Evaluation

Southeast Asian Fisheries Development Center (SEAFDEC) is an international organization that was established in 1967. Since its establishment, Japan has contributed to establish and strengthen the system and functions of SEAFDEC through continuous support in terms of both financial contribution and technical cooperation (experts dispatch, acceptance of trainees, and provision of equipment).

However, in recent years there has been a growing demand in Japan for more efficient and effective ODA project execution. With respect to more than thirty years of continuous cooperation from JICA to SEAFDEC, it is time to re-examine effects to date and plans for the future.

For this evaluation, in order to gain a third party perspective, Professor Tsuneo Sugishita of Ibaraki University was asked to lead the evaluation team [1]. Professor Sugishita has a rich knowledge of Japan's ODA projects, and also serves as a Board Member of the Japan Evaluation Society. Professor Kohei Kihara of Tokyo University of Fisheries was asked to evaluate from the technical standpoint of the fisheries field. Professor Kihara has a great deal of experience as a JICA expert, and also serves as a technical advisor for the Japan Overseas Cooperation Volunteers (JOCV).

2. Evaluated Projects

(1) Long-term experts dispatch (139 experts) and short-term experts dispatch (96 experts) through JICA from FY1968 to FY2000. (Data for short-term experts only available after FY1978.)

(2) Acceptance of SEAFDEC staff members (234 members) dispatched to Japan as trainees from FY1976 to FY2000.

(3) Provision of equipment.

3. Members of Evaluation Team

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4. Period of Evaluation

20 March 2001 − 7 April 2001

5. Framework of Evaluation

<Evaluation Method>

Before field study was conducted, references were made through questionnaires with concerned departments of the SEAFDEC secretariat. During the field study, inter-

[1] The full report consists of the report of the evaluation team, comments from SEAFDEC, and comments from JICA experts who were dispatched to SEAFDEC at the time of evaluation. Therefore, opinions in this report are a summary of each opinion.

views were carried out with the people concerned.

<Viewpoint of technical evaluation and criteria>

When technical cooperation projects are carried out, it is important that techniques introduced to solve problems or meet social demand, not only conform with existing techniques, but, more importantly, employ methods so that the recipient organizations can apply and generate new techniques by themselves through application. Therefore, in this evaluation, the following points were noted:

1) issues in Southeast Asia at the time of SEAFDEC establishment and social needs toward SEAFDEC activities;
2) basic principles of SEAFDEC for resolving issues and its precondition and level of problem solution;
3) types of techniques necessary for input for the purpose of realization and goal achievement and related qualities and quantity;
4) necessary techniques to input, the input range, methods of input and extension to achieve the goal;
5) planning, management system and method of implementation in SEAFDEC;
6) degree of extension of the input techniques, entrenching, fusion with existing techniques, and congeniality with various conditions;
7) effectiveness and relevance;
8) self-inspection and method for review; and
9) sustainability of SEAFDEC as an international organization.

6. Evaluation Results

(1) History of JICA's Cooperation with SEAFDEC

SEAFDEC was established in 1967 to promote fisheries activities in Southeast Asia by training piscatorial technicians and conducting research on fishery techniques and fishery resources. In the latter half of the 1960s, it was necessary in the Southeast Asian countries for an increase in food supply, improvement in the level of nutrition, and especially an increase in the supply of animal protein. Therefore, promotion of fisheries development was an extremely important issue. At the time of establishment, there were only three member countries. Currently, the following ten countries are members: Japan, Singapore, Thailand, the Philippines, Malaysia, Brunei, Vietnam, Myanmar, Indonesia, and Cambodia. The techniques developed or accumulated at SEAFDEC are extended to the member countries mainly through training of government officers dispatched from those countries. The trainees are expected to become mainstay technicians or members of training institutions in their respective countries after completing the training in SEAFDEC.

Departments of SEAFDEC are spread throughout different countries. The SEAFDEC Secretariat and the Training Department (TD) are located in Thailand, the Marine Fisheries Research Department (MFRD) in Singapore, the Aquaculture Department (AQD) in the Philippines, and the Marine Fishery Resource Development and Management Division (MFRDMD) in Malaysia. The board consists of members selected one each from each member country.

JICA's assistance with SEAFDEC involved expert dispatch and acceptance of trainees. There have been 235 experts dispatched since 1968, and the fields of training have changed in line with Southeast Asian fisheries trends and the fishery policy of each government. The evaluations of JICA experts dispatched to SEAFDEC have always been high, since the technical level and results of the projects have been satisfactory. The areas of expertise of long-term and short-term JICA experts vary, and include many areas in marine science and techniques. This means that through SEAFDEC, most areas of marine-related techniques have been introduced to the Southeast Asia region.

Among the long-term experts, there is an experts in each department who serve as a Deputy Chief. SEAFDEC regards the Deputy Chief's role as largely administrative, while it also requires them to have expertise in their respective departments.

The number of trainees dispatched to Japan from 1976 to 2000 totals 234. The majority was dispatched up to 1985, and the number has been declining rapidly since then. One

Actual numbers of JICA Experts Dispatch (FY1968－FY2000)

Department	Experts dispatched			Expert-monthes (man - month)		
	long-term	short-term	Total	long-term	short-term	Total
Training Department (TD)	64	35	99	2,660	102	2,762
Marine Fisheries Research Department (MFRD)	38	15	53	1,481	40	1,521
Aquaculture Department (AQD)	30	16	46	1,194	32	1,226
Marine Fishery Resource Development and Management Department (MFRDMD)	7	30	37	288	46	334
Total	139	96	235	5,623	220	5,843

of the reasons for this decline is the selection system. The trainees are usually selected within a pre-set number of trainees of the country where each department is located. Therefore, there were many cases where, even when SEAFDEC requested training in Japan, other training programs were given a higher priority in the selection process by the government of the country where the SEAFDEC departments were located, and the application was declined within the country. In recent years, due to a reduction in JICA's budget, the number of trainees from the international organizations has also been decreasing. This could be another reason for the decline of the number of trainees from SEAFDEC. Despite this situation, many departments and trainees evaluated the results of the training in Japan highly since they were able to learn the latest techniques. Some trainees even pointed out that the training in Japan had not only improved their technical ability, but had also established a human network with Japanese experts and engineers.

(2) Actual Activities and Issues of SEAFDEC

1) Establishment purpose and basic ideology

SEAFDEC was established with the objective of promoting fisheries as a food source to help Southeast Asian development. It aims to research fishery for the rational development of fishery resources and their effective use. This can be achieved through provision of training in the areas of fish catch, fishing boat organization, marine product processing, aquaculture techniques, and extension. It also functions as an institution to investigate and study the areas of fishing equipment, fishing methods, fishing resources, resource evaluation, fishing preservation and aquaculture technique development. However, there was no clear explanation during the investigation about indispensable items such as the motive, external conditions, preconditions, or methods for problem extraction when the purpose and targets were set [2]. A basic principle is necessary to carry out the projects to realize the purposes and achieve the targets. However, for these items, neither was clear from the provided materials.

The evaluation team taking the explanation of the activities of AQD using panels

2) Management System

When different departments are dispersed to different countries such as in SEAFDEC, a management system exerts a large influence on the activities of the organization. Therefore, this evaluation focused on the committee in order to evaluate SEAFDEC activities and the management system. Generally, a committee is an indispensable means for an organization to adjust opinions, solve issues, and make decisions to support the achievement of targets set by the whole organization, each department and each departmental office for management. Therefore, it is one of the important elements for assessing the activity of an organization. The committee activities in SEAFDEC varies by the department. On one hand, with the AQD, for example, there are department offices that eagerly establish many committees—from ones that focuses on specific fields to those related to research seminars. On the other hand, there are department offices that are less active in committee activities.

Generally, as an internal committee for an organization that performs education, training, and development of techniques such as SEAFDEC, it is presumed necessary to have committees in charge of planning, training courses (curriculum), budgeting, personnel, future policy, maintenance of facilities and equipment, self-inspection and evaluation, staff training, and publishing and public relations. Among these, committees related to project planning, formulation of training programs, management and maintenance of facilities are considered to be essential. However, in most of the departments, only committees related to personnel and facility management were established (except for MFRD in which those committees were established in February 2001 but have never actually been assembled). Meetings for these committees seem to be held once a month in each department. However, regarding the facility management committee, it is not clear whether

[2] Comment from SEAFDEC Secretariat: The activities of SEAFDEC are analyzed, prioritized, and decided through a needs assessment process with the participation of experts from the member countries. Through this process, SEAFDEC aims at reflecting member countries' interest and social needs on principle and objectives of the organization.

maintenance of existing facilities, which is the most important topic, is included, or if it is merely focused on setting up new facilities. Committees related to technical training issues were not established, such as for training courses (programs and curriculum), training contents (syllabus), training for creating teaching materials, and examination on contents of training, despite the fact that training is considered one of the SEAFDECs' major mandates. Furthermore, there is a necessity to carry out projects that meet SEAFDEC's purpose. This can be achieved by listening to social requests and opinions in order to increase the contribution to society and further promote project cooperation with the organization concerned. In order to do so, it is important to exchange and collect external opinions through committees with fishery-relevant expertise. However, such committee has not been established.

Moreover, it has become clear through this evaluation that the sense of technical independence by SEAFDEC's staff members seemed to be low. In order to create the necessary techniques to independently solve fishery-related issues in the area, it is essential not only that each staff in SEAFDEC possesses awareness of the issues, but that a forum be created to exchange expertise among the relevant staff members. The fact that committees have not been established for these purposes could be a reason for the delay in developing self-reliance.

Therefore, it can be said that, under the conditions for establishing committees, there is room for improvement in the decision-making process and the management system required for SEAFDEC's undertakings as an international organization [3].

3) Development and extension of necessary techniques

The publication of SEAFDEC's research activities in many technical journals should be highly esteemed, as it is means for accomplishments to be introduced worldwide. However, research should not be confined to mere research, but should lead to achieve effective use of fishery resources and to improve the food situation by fishery development, which SEAFDEC states as its targets. Although it must be one of SEAFDEC's duties to make the results of the research available to the many people concerned in fishery activities for further application, it was not possible to obtain enough information on the types of activities SEAFDEC has been carrying out [4].

At SEAFDEC, various extension activities are carried out, such as group training, workshops, seminars, and announcements of research results via academic societies, various reports, newsletters, and public information journals. As for techniques introduced by SEAFDEC, they were extended through different channels and many steps, depending on the country. Thus, the question is how many necessary techniques actually reached the areas facing various issues in fishery. Unfortunately, however, through the studies, information was not available on, for example, what kinds of techniques were introduced, what methods were used in which area, and how useful the techniques were in solving the problem. These are, in other words, fundamental items concerning the geographical range of extension, extension scale, and the target group (class).

The introduction of the chemical analysis carried out at AQD

Information on not only activities, but also on their effects are expected to be demanded in the future. It is also necessary to build a system to constantly measure and evaluate the effects of SEAFDEC's various activities in order to clarify the significance and contributions of SEAFDEC.

4) Relevance of techniques input

When a technical project is evaluated, it is necessary to examine the type and level of techniques used and its components, whether the target group (class) of input technology was appropriate, and whether the implemented techniques unite with existing techniques and take root. To implement evaluation on these points, it is necessary to understand the basic principles of SEAFDEC and, at the same time, to find out what issues

[3] Comment from SEAFDEC Secretariat and dispatched experts: In SEAFDEC, there are internal and external committees necessary for administration, and originally, the organization itself incorporates administrative mechanism through a hierarchy.

[4] Comment from SEAFDEC Secretariat: There can be an example such as MFRDMD (Malaysia), where there is only limited direct extension of techniques to the people in fishery, since the activities mainly involve research and development. However, each department publishes many extension materials, pamphlets, and videos every year using the results presented in research papers after verification processes.

the community requires of SEAFDEC. On inquiry regarding these issues to SEAFDEC, no clear explanations was given. It can be assumed that this is because SEAFDEC was carrying out activities without always clarifying the target group (class, range), type and the level of the techniques necessary to input, as related to the achievement of its purpose [5].

The abovementioned issues were also indicated in the results that the techniques introduced by SEAFDEC were diverse and all-inclusive. In Southeast Asia, very small fisheries using non-powered boats and fishing equipment make up the majority. Owing to this background, evaluating from the target group (class, range), type, level and social needs of the input techniques, the relevance is low regarding the following cases: establishment of expensive experimental and training devices for offshore fishing such as radar simulators, training sessions on trawling with large training ships for pelagic fishing and on tuna long-line fishing (which is also for large-scale fishing), fishing product processing necessary for large-scale fishing, and technical training on, for example, large fishing boat engines. Under the present condition of the member countries, where fishermen largely engage in coastal fishing in small fishing boats, there seemed to be problems such as in the present objectives for training, the type of training techniques, and the training course (curriculum). In the same way, the relevance of introduced techniques remained unclear in the areas of aquaculture and fishery processing.

As mentioned above, due to the lack of analysis regarding the target group (class, range), type and level of input techniques and social needs, it can be said the project objectives were not properly set in line with the principles of SEAFDEC, as normally done by other international organizations. Through this evaluation study, necessary materials for the evaluation were not obtained - issues such as the adaptation, the extent to which the techniques transferred unites with the existing techniques, and the extent to which those techniques conformed to the various socio-economic conditions.

As for technical cooperation in the field of fisheries, it is necessary to develop techniques that have high conformity with existing techniques and applicability for various conditions, and to develop a methodology for cooperation that allows sustainability in the target area. At SEAFDEC, it is important that JICA experts, who provide techniques, and SEAFDEC, which receives the techniques, make joint efforts to research and develop unified techniques and, at the same time, strive to see the techniques take root.

5) Technical Independence

In the evaluation, interviews were conducted with the staff members in each department who received technical training in Japan. They were asked what they expect technically from Japan, and how much they relied on Japan. It was found that even after more than thirty years from the establishment, their sense of dependence on Japanese fishery techniques and Japanese experts was high. There was no clear explanation on how they would develop necessary techniques as an independent international organization, or any policy or plans for future technical self-sustenance [6]. SEAFDEC needs to develop its own original techniques to adapt to the marine conditions in South East Asia, so that it may contribute to fishery promotion in each member country. However, the willingness towards technical independence for meeting social needs and expectations did not seem high. Furthermore, each department does not seem conscious of its position as part of an international organization. Therefore, although benefits on fishery promotion should be commonly shared among the member countries, the concern remained that the undertakings reflected more of an interest of the country in which the department is located, rather than that of all member countries.

From these findings, it is clear that a system for technical independence must be prepared immediately. Even

Watching hatched hata larval fish, one of the important fish for development

[5] As seen in 2)

[6] Comment from SEAFDEC Secretariat: SEAFDEC is making efforts to enhance our technical ability ourselves and by cooperation with other agencies. However, since techniques advance day by day, it is natural, in a sense, that we request necessary techniques from Japan, which is one of the most developed countries in the fishery field.

in cases in which necessary techniques are introduced from external expertise, it is necessary to foster technical self-sustenance. In so doing, it is important not to rely too heavily on a specific country, ensure diversification of the type and source of the techniques, and make use of the existing techniques of Southeast Asia. By doing so, the degree of conformity with existing techniques and the stability of the techniques would increase.

(3) Future method of cooperation with JICA

1) Degree of technological transfer

It is found through the evaluation that each department has high esteem for the achievements of technical transfers carried out by JICA experts. For example, when the Training Department (TD) was established in Thailand on the operation of research and training vessels, captains and all other higher officers concerned with navigation, communication, fishing works etc., were all JICA experts. Currently, all staff members except the chief of fishing works are from the TD. As for instructors on the ground, such as on navigation, communication, meteorology, and basic sciences, TD has tried to shift toward Thai instructors by establishing an appointing system for instructors from the related institutions and universities in Thailand. Furthermore, in the Aquaculture Department (AQD) in the Philippines, experts for shrimp and fish culturing techniques were dispatched from the time of establishment to the mid 1990s, but now staff members of AQD have taken over the seed production of various fish and shellfish.

2) Quality and quantity of input techniques

Regarding the quality and quantity, target groups, ranges and methods of input techniques, results of trainee acceptance and experts dispatched by JICA all implied that a wide range of continuous input had been carried out. Consequently, a wide range of marine techniques was transferred from Japan to SEAFDEC, and on through to member countries. In recent years, with Third Country Training, techniques were introduced outside member countries, to Africa and around the Pacific. Regarding projects involving JICA expert dispatch and acceptance of trainees, it is worth noting SEAFDEC's unprecedented contribution that introduced a variety of marine technologies in South East Asia as the only regional international organizations in fishery.

3) Coherence with other Japanese cooperation

JICA has dispatched a substantial number of experts to promote fishery in Southeast Asia. Other than to SEAFDEC, individual experts were dispatched to other fishery organizations, and lecturers to Third Country Training held in related countries. JICA had also been dispatching Senior Overseas Volunteers (SV) and Japan Overseas Cooperation Volunteers (JOCV), cooperating in various ways to fisheries in Southeast Asia. It can be said that multi-layered cooperation was carried out for the field of fishery in Southeast Asia, including both multilateral cooperation through SEAFDEC and bilateral cooperation. There still is room for JICA to improve since cooperation has been biased toward specific areas and countries.

The evaluation team hearing the activities of SEAFDEC in Thai FMO, which sends a staff member for the training of SEAFDEC training

Furthermore, the Japanese government has disbursed of more than 200 million yen as contribution to multilateral organization each year for the administration and operation of SEAFDEC. At the same time JICA has spent around 200 million yen (as bi-lateral cooperation) to cover the cost of expert dispatch and equipment every year. As it can be viewed as a duplicated cooperation, it would be desirable for the situation to be rectified.

4) Relevance to continue cooperation

A review of the following two points is necessary to examine the relevance of JICA continuing cooperation with SEAFDEC. One is that, whether JICA should continue cooperation with an international organization such as SEAFDEC, since JICA is a technical cooperation organization in the field of bi-lateral cooperation. The other is whether, it is appropriate to continue providing technical cooperation to the same organization for more than thirty years.

Regarding the cooperation of JICA to an international organization, one of the positive opinions is, "dispatching experts for technical cooperation by JICA to SEAFDEC, which is an international organization engaged in technical cooperation execution, does not conflict with JICA's mandate." However, the circum-

stances at the time SEAFDEC was established should be considered. From the viewpoint of the evaluation team, it is assumed that at that time, considering that it was during the Cold-War, Japan had to cooperate with SEAFDEC to contribute to stability in Southeast Asia. Therefore, the cooperation may have been politically motivated [7]. Since international circumstances have dramatically changed, there seems to be no reason why JICA should continue cooperation with SEAFDEC. In light of the severe financial conditions facing the Japanese government, it is time to reexamine budget cutback on Japan's ODA. Thus it is not appropriate to maintain support for SEAFDEC in the conventional scale, also from the aspect of ODA efficiency.

Regarding the future cooperation to SEAFDEC being an execution organization of technical cooperation, even though JICA had been cooperating for more than thirty years and many expert dispatches have been completed, SEAFDEC has not yet developed proper independency. Future technical cooperation from JICA to SEAFDEC must have a pre-assumption of promoting self-sustenance. However, in obvious areas in which SEAFDEC has difficulty such as development of fisheries resources, protection of resources, preservation of the environment, and development and maintenance of distribution channels, continuous dispatch of experts by JICA is considered necessary. Due to the budget cutback on ODA, there has been a large reduction in the number of new dispatches of long-term experts. Thus, it is necessary to promote early independence of SEAFDEC, with long-term experts dispatched only for truly necessary posts for the minimum period. Future cooperation between JICA and SEAFDEC should be focused on dispatch of short-term experts. Appropriate human resources should be widely recruited for transferring new knowledge and skills under the request from SEAFDEC.

As for long-term expert dispatch, it is necessary to examine the posts of Deputy Chiefs in each department of SEAFDEC. The Japanese government has been sending JICA experts as Deputy Chiefs to each department based on the agreement with SEAFDEC. The Deputy Chief of the Secretariat and Training Department (TD) in Thailand is served concurrently by the same person; so there are four Deputy Chiefs. These posts have been mainly filled by the staff of the Fisheries Agency at the Ministry of Forestry, Agriculture, and Fisheries of Japan (present and retired employees). The previous position of these officers before their dispatch can be categorized in two: specialists in administration and technical specialists in the field of fishery. Deputy Chiefs who have experience in the administrative side are capable of contributing to the administration of the organization. However, their work naturally becomes "rendering services" rather than "achieving technical purposes." [8] As the requirement of work for Deputy Chiefs is often related to technical aspects, it would be more effective for technical specialists to take these positions.

On the other hand, the aim of reflecting Japan's opinions on policy development or decisions to ASEAN countries related to fishery, which was considered to be the reason why Japan should dispatch Deputy Chiefs, has not been well achieved [9]. Japan's influence on fishery policies in this area has been displayed at ASEAN Agriculture, Forestry and Fisheries Ministers' Meetings and SEAFDEC board meetings, not through the influence of the Deputy Chiefs. For these posts, there is also a problem that staff from the Fisheries Agency of Japan has been almost automatically dispatched. If the major part of the work of the Deputy Chiefs of each department continues to be "rendering services," the Japanese gov-

Evaluation team that takes the explanation onlearning about FMRD activities with a panel from the managing director of FMRD

7) Comment from SEAFDEC Secretariat: SEAFDEC understands that the cooperation between Japan and other SEAFDEC member countries is established based on common interests in the fields of fishery, and do not agree with the reasons mentioned at all.

8) Comment from an expert dispatched to SEAFDEC: Regarding the expert dispatch to an international organization such as SEAFDEC, whose original mandate is technical cooperation, "rendering services to those organizations" itself can be understood as technical cooperation in fishery. These dispatched experts should be treated like "policy advisors" in the context of bi-lateral cooperation.

9) Comment from experts dispatched to SEAFDEC: Before 1998, SEAFDEC had been limiting its activities to technical cooperation, thus it is natural that it does not relate with the fishery policy of ASEAN.

ernment should recommend that qualified proper staff be selected as Deputy Chiefs, and that Japanese expatriates be withdrawn from Deputy Director posts. This process might not require any amendment to the agreement. The continued dispatch of experts "rendering services," which differs from JICA's original mandate as technical cooperation, will negatively affect the quota of experts dispatched in other areas to places where they are really needed. Due to these reasons, the dispatch of long-term experts as Deputy Chiefs should be re-examined in the future.

(4) Japan's future cooperation

In terms of cooperation of Japan to SEAFDEC, there are circumstances that can not be controled by technical cooperation alone. Most significant is that, Japan intends to maintain its influence in South East Asia through ASEAN, and obtain support in times of resolution of international disputes such as over marine resources and environmental preservation issues. Currently, through examining the point of whether Japan has had influence in Southeast Asia or in the international society through SEAFDEC, not all member countries were Japan's absolute advocates, but it did appear to maintain a certain level of influence through SEAFDEC. Thus, it is extremely important for Japan to maintain influence on SEAFDEC, which Japan has largely supported for thirty years, for the national interest. There are conditions that "If Japan withdraws, countries where each department is located will not be able to secure enough funding, and there will be difficulties in some parts for administration (MFRMDM)". It is necessary to prevent such a situation from occurring in order not to waste the past cooperation by Japan.

If SEAFDEC expands its function as a full-fledged international organization in the future, cooperation for all ASEAN countries except Laos will be possible. Therefore, to efficiently utilize ODA, the cooperation to SEAFDEC must be continued.

However, considering the various internal and external situations, a change in Japan's policy is unavoidable. From the viewpoints of maintaining the national interest and ODA reform, two solutions can be considered. First is that if the Japanese government considers that it is having Japanese Deputy Chiefs in the four departments is necessary from the point of view of fisheries policy, the Fisheries Agency should dispatch administrative Deputy Chiefs at their own expenses. This way the quota of JICA experts dispatched will remain unaffected. Second is that, there is a need to reexamine the cooperation with SEAFDEC, including its structural reform. Currently, SEAFDEC has not fully functioned as an international organization. It is an urgent matter to strengthen the functions of SEAFDEC as an international organization, to cope with the increasing necessity of sharing newly developed techniques, and to understand the needs of new member countries such as Vietnam and Cambodia. As for strengthening its management and function, it is suggested that the Secretariat in Bangkok, Thailand be enhanced first. The Secretariat already carries out the coordination of trainees dispatched to Japan, and it is possible to strengthen the function of the Secretariat as soon as the awareness of the member countries improves. The situation where the administration of each department is managed independently prevents the internationalization of SEAFDEC. Without improvement to this situation, SEAFDEC will not fully function as an international organization.

As for future cooperation, the Secretariat function should be strengthened, and a Deputy Chief whose roles are mainly for management should be dispatched to control the funds and dispatch of experts, The abovementioned Deputy Chief will be responsible for reflecting Japan's policies to those of ASEAN countries. Aside from this Deputy Chief, another Deputy Chief familiar with the latest techniques should be dispatched to the Secretariat. This Deputy Chief will be responsible for managing the technical aspects in SEAFDEC, and should maintain close communications with other Japanese experts or Third Country experts dispatched to various departments.

7. Conclusions and Recommendations

(1) Recommendations to SEAFDEC

1) Recommendations

a) Appropriate functions as an international organization must be consolidated immediately. Various types of internal and external committees must be prepared immediately in each department. These committees must function not only as a means of sharing information, coordinating opinions and making decisions, but also to introduce new techniques by unifying new and existing conventional techniques to solve local issues. It may also provide the opportunity to exchange opinions and increase participation. They are indispensable for strengthening the management system, providing technical sustainability, and strengthening internationalization.

b) As a plan for strengthening the functions as an international organization, a system has to be established in the Bangkok Secretariat office, so

that the Secretariat office will administer the four departments both from the administrative and technical side. To realize this, the number of staff members must be increased through dispatches from member countries, and closer communications must be carried out between the four departments and fishery-related agencies concerned in the member countries.

c) With each department maintaining close cooperation with the government of its location, the department should reduce its function as one of a fishery research institution in the country in which it is located. This restructuring should allow each member country of SEAFDEC to participate equally in the policy development of all four departments. In order to reduce disparities in technical benefits between member countries, especially for the newly joined countries, it is necessary to strengthen internationalization by recruiting staff members not only from the country in which it is located, but also from other member countries.

d) SEAFDEC should try to become technically self-sustaining as soon as possible. SEAFDEC should focus technique-transfer efforts on less developed countries among the members. For this purpose, SEAFDEC must strive to unite and adapt fishery technologies already developed, to match the local needs. It is also important to train local experts.

e) A SEAFDEC assistance committee could be established consisting of members from fisheries and other areas in the member nations, to make contributions from SEAFDEC member countries more effective. By doing so, a deeper understanding of SEAFDEC activities will be developed in member countries, and functions as an organization are expected to improve.

(2) Recommendations on the future of cooperation from the Japanese government to SEAFDEC

1) Overall Views

a) Judging from international circumstances, it is considered proper to have provided cooperation to SEAFDEC at the time of its establishment, as an instrument of state policy.

b) At present, cooperation to SEAFDEC is designed to secure assistance and understanding for Japan's fishery policy in the region and in the international society. Although Japan maintains a certain level of influence on fishery policies in Southeast Asia, not all SEAFDEC member countries support all of Japan's policies.

c) For many years, the posts of the Deputy Chiefs have been automatically filled by the staff of the Fisheries Agency of Japan as JICA long-term experts. Their function could be described as "rendering services" regarding management, such as to contact and coordinate with Japan, and control funds. However, they seemed to have no direct influence on making decisions within the department.

d) In terms of selecting dispatched experts and methods of cooperation, some of them seemed to be perpetualed by inertia. Considering the long history of cooperation, effects are small compared to the cooperation provided.

2) Recommendations

a) If the cooperation to SEAFDEC is considered as a diplomatic tool, it is necessary to review the direction of cooperation not only in areas of fishery, but also in relation to the policy for ASEAN as a whole.

b) The fishery industry of Southeast Asia has been growing steadily, and in the near future, there will be countries that "graduate" from Japanese ODA. Therefore, the emphasis of future Japanese cooperation should shift from the ordinary technique transfer to those that aim for political impact. Particularly for developed countries in the region cooperation should be focused on transferring high technology or providing grant aid. For relatively less developed countries among the members, cooperation can be in conventional ways such as transferring basic fishery techniques or providing grant aid.

c) Dispatch of Fisheries Agency staff to the Deputy Chiefs' positions must be reexamined. It is recommended that the four Deputy Chiefs currently on duty dispatched as JICA long-term experts should be withdrawn [10].

d) On the other hand, since SEAFDEC involves all ASEAN member nations except Laos, Japan's continuing influence over fisheries policies in

[10] Comment from experts dispatched to SEAFDEC: As is mentioned in the suggestions, as a part of strengthening functions as an international organization, we agree with the necessity to recruit more international staffers. However, in the current situation, if Japanese Deputy Chiefs leave SEAFDEC, there is high possibility that the next person will be from the host country where the department is located. If this to happen, there is a possibility that its undertakings will be more biased towards the interest of the country in which the department is located, thus moving in the wrong direction.

Southeast Asia through cooperation to SEAFDEC cannot be ignored politically. Therefore, it is recommended that after the Secretariat function is further strengthened and thus further enhancing the capacity of SEAFDEC as an international organization, a Japanese Deputy Chief in charge of administration and policy should be appointed.

e) Since the role of Deputy Chief in charge of administration and policy is to coordinate closely with the Fisheries Agency in Japan, a core member in the Fisheries Agency should be dispatched with their own budget. On the other hand, the Deputy Chief in charge of techniques can be dispatched as a long-term expert from JICA. As it is difficult to solely administer and grasp fishery technologies in all member countries, the Deputy Chief would have to have close connections with long-term experts, short-term experts, or third country experts dispatched from JICA to each department.

(3) Recommendations regarding cooperation from JICA

1) Overall Views

a) Despite the fact that JICA has been dispatching experts covering most of the fields in fisheries, JICA lacks an active approach to encourage SEAFDEC to attain technical and financial self-sustenance.

b) Communication between SEAFDEC departments and JICA offices in the respective countries do not result in close liaison.

c) Technical cooperation has been biased toward training SEAFDEC staff members. Not many effects of extension could be observed in areas where the techniques have been transferred.

d) It is necessary to reexamine the situation of dispatching experts to an international organization already receiving Japan's contribution as this duplicates aid.

e) The background in which Japan needs to continue providing cooperation to SEAFDEC is no longer valid. JICA originally is an organization in charge of bilateral technical cooperation.

f) There might be some duplication with SEAFDEC cooperation and third country training and receiving trainees.

2) Recommendations

a) Currently, there are calls for drastic ODA reform. Exceptional cases of cooperation to international organizations should be reconsidered. As for long-term and short-term expert dispatch, allocation should be made to areas with urgent needs.

b) JICA should not automatically continue its technical cooperation but hand over the undertakings to SEAFDEC in certain fields once the technical transfer is completed. JICA must put its efforts toward cooperation on techniques that SEAFDEC requests.

c) Future dispatch of experts to SEAFDEC should mainly be short-term experts who give technical training, while limiting long-term experts for only sections where a long commitment is needed, such as human resource development.

d) It is necessary to carefully examine bilateral cooperation projects, and unite or abolish ones that might be duplicated with SEAFDEC projects.

e) Cooperation and collaboration between bilateral projects that are carried out in SEAFDEC member countries and projects of SEAFDEC should be promoted to increase the efficiency of activities. The projects should also be utilized as tools for maintaining and strengthening the influence of Japan to SEAFDEC, both from the bi-lateral and multi-lateral perspectives.

JICA's Assistance for Post Conflict Reconstruction

Project Sites Bosnia Herzegovina

1. Evaluation Outline

(1) Evaluation Objective

For approximately five years (1996 − 2000), after the General Framework Agreement for Peace (Dayton Accords), JICA has provided various cooperation to support reconstruction in Bosnia Herzegovina. This evaluation was carried out to review JICA's support, and then to present both lessons and recommendations for the future. It was headed by Mr. Tadao Kano, an editorial writer for Mainichi Shimbun, who has a deep understanding of Japan's international cooperation and activities for peace establishment.

(2) Members of Evaluation Team

Team Leader:

Tadao KANO, Editorial Writer, Mainichi Shimbun

Evaluation Planning:

Ikufumi TOMIMOTO, Resident Representative, JICA Austria Office

(3) Period of Evaluation Period

10 − 20 December, 2000

2. Current Situation in Bosnia Herzegovina

The civil war in Bosnia started with independence-related conflicts in the former Yugoslavia in April 1992. The Muslims [1] and Croats that supported independence from the former Yugoslavia, fought against the Serbs, who were against independence, or desired to form a new Yugoslavian state. The conflict between the three ethnic groups developed into a civil war. From the beginning of 1995 to the summer of that year, NATO (North Atlantic Treaty Organization) forces carried out massive air strikes against the Serbs. On November 1 of the same year, peace negotiations began in Dayton, Ohio in the United States, and on November 21, the Dayton Accords were initiated. The final Peace Agreement was officially signed in Paris on December 14.

Before the civil war, Bosnia Herzegovina's population was 4.38 million (1991), but the population declined drastically during the war to 2.92 million (1995). Some 200 to 300 thousand people were killed in the war, while around 1 million were injured. Some 1.3 million refugees were displaced within the country, while 1.25 million people fled to outside the country's borders.

At present (2000), Bosnia Herzegovina remains divided into two separate entities. One entity is the Federation of Bosnia Herzegovina, which is inhabited by Croats and Muslims, and takes up 51% of the territory. The other is known as the Republic of Srpska (or Republika Srpska), occupied by Serbs, which forms 49% of the territory. Although a cabinet called the "Council of Ministers" was set up in January 1997 by the central government, there has been difficulty in coordinating the two entities, which possess their own political structures and administrations. Confusion still remains on the political front.

In addition, the country's economy has only recovered to 30% of its pre-war level, and the unemployment rate has reached as high as 40%. According to the central government statistics, the Federation of Bosnia Herzegovina had a GDP of US$1 billion (approximately 122.9 billion yen) in 1995. This is only one eighth of pre-war levels (1990) and the country's per-capita GDP was also only US$200-US$500 (between 25,000 yen and 60,000 yen). Up to 60% of the country's industrial facilities were phys-

[1] During the 15th Century, the Ottoman Empire conquered Serbia and Bosnia Herzegovina. With this, a number of Serbs and Croats adopted Islam independently. As a result, a Serbo-Croatian-speaking, Islamic ethnic group was born, although their appearance was no different from non-Muslim Serbs and Croats. The former Yugoslavian government recognized the peoples' right to a separate cultural identity, and identified them as a separate ethnic group from the Serbs and Croats.

ically destroyed during the civil war, and industrial production fell to 5-10% of pre-war levels. Similarly, in the Republika Srpska, industrial production in many sectors fell to 5-10% of pre-war levels in 1995.

Since the signing of the Dayton Accords in 1996, there have been signs that reconstruction had begun, as the international community joined in offering support. In 1996, the per-capita GDP in the Federation of Bosnia Herzegovina rose by 35% to $728 (around 90,000 yen), and an economic growth of 35% was seen in the next year as well. Remarkably, the country has struggled to achieve a "sustainable economy," especially since the process of privatization had started in April 1999. Although there still remains challenging tasks such as the improvement of legal systems.

Meanwhile, international support to the Republika Srpska had been halted after the entity failed to fulfill some provisions of the Dayton Accord. However, after the election of the moderate Milorad Dodik as the Bosnian Serb Prime Minister, donor countries began to give full-fledged support.

A number of problems still remain. The number of displaced refugees amounts up to 600,000, and the removal of an estimated three million landmines is still looming.

It appears that the public safety situation was stable at the time of the field study. On the visit to the two cities of Sarajevo and Mostar, SFOR (Stabilization Force) and IPTF (International Police Task Force) troops were seen everywhere. It is safe to say that Bosnia Herzegovina remains under the administration of international authorities.


Sarajevo citizens enjoying road chess. Peace seems to be returning.

During our evaluation, the following international organizations were active in Bosnia Herzegovina:

- **Peace Implementation Council (PIC)**
  Comprised of approximately forty nations (including Japan) and twenty international organizations, based on the Dayton Accords.
- **Office of the High Representative (OHR)**
  Subordinate agency to the PIC, facilitates and mobilizes civilian aspects of peace settlement.
- **Stabilization Force (SFOR)**
  Composed mainly of NATO forces, currently 20,000 troops are stationed. Immediately after the ceasefire, 60,000 troops were stationed.
- **U.N. International Police Task Force (IPTF)**
  Currently numbers 1,600 persons.
- **Organization for Security and Co-operation in Europe (OSCE)**
- **United Nations High Commissioner for Refugees (UNHCR)**
- **Representatives of the European Union (EU), Japan, the U.S., and other donor nations**
- **World Bank, European Reconstruction and Development Bank (ERDB), International Monetary Fund (IMF)**
- **NGOs**

In Sarajevo alone, almost 12,000 representatives from various countries were present. Nine groups from Japan were active in the area.

In East Timor, where peace building and nation building are in progress after conflicts related to independence, a Special Representative of the Secretary - General and Transitional Administrator is assigned as the head of the United Nations Transitional Administration in East Timor (UNTAET), and the Military Observer Group and peace-

keeping force are stationed under the UNTAET to maintain security.

When comparing the structure of Bosnia Herzegovina to the East Timor case, PIC and OHR are the organizations that would correspond as UNTAET and the Special Representative of the Secretary-General and Transitional Administrator. SFOR and IPTF would correspond to the Military Observer Group and peacekeeping force.

The difference between the two would be that in East Timor, the U.N. is taking initiative, whereas in Bosnia Herzegovina, the EU, NATO, and OSCE are in the position to take initiative.

3. Focus of Evaluation

The evaluation will focus on the following four points;

1) The extent to which peace-building consideration was taken into account when formulating and implementing JICA cooperation.

What role has JICA's cooperation played in preventing a reemergence of the conflict, and in promoting reconciliation between ethnic groups?

A bus that runs through Sarajevo is provided by grant aid cooperation from Japan

2) Position of JICA within the framework of the international community providing reconstruction aid

Has JICA linked with and coordinated efforts well with other donors and NGOs? What relation did this have to peace-building initiatives?

3) Positive and negative impacts of JICA projects on Bosnia Herzegovina

Is development support promoting peace, or instead leading to further conflict?

4) What is the possibility of a collaboration with JICA and the OSCE's peace-building efforts?

4. Evaluation Results

(1) The extent to which peace-building consideration was taken into account when formulating and implementing JICA cooperation.

<Conclusion> Activities to enhance peace-building were implemented taking due consideration to prevent reigniting tensions and to reconcile ethnic groups.

<Evidence #1>: Rehabilitation of Public Transportation in Sarajevo city, Rehabilitation of Public Transportation System in Banja Luka (FY2000)

The project provided buses in each of the two entities' capital cities: Sarajevo, the Muslim/Croat capital, and Banja Luka, the Serbian capital. By helping both of the previously warring groups, the bus project has helped contribute to maintaining a good balance between the two cities and ethnic groups.

The Sarajevo buses are particularly important, as buses cross the border of the two entities, surpassing the ethnic barrier. As the traffic becomes more frequent, this should help contribute to further reconciliation between the ethnic groups. From this perspective, the bus project in the two cities has worked towards building peace.

<Evidence #2>: Rehabilitation of Public Transportation System in Mostar (FY2000)

Moves are being made to implement a new project to provide grant-aid cooperation for bus procurement to the city of Mostar, similar to the project in Sarajevo and Banja Luka. Mostar is a city inhabited by both Croats and Muslims, and heavy fighting broke out in January 1993 between the Muslims who resided mainly in the east-side of the city and the Croats in the west-side. Both sides suffered heavy damage.

The company that received aid, Mostar Bus Company, was located on the east (Muslim dominated) side of Mostar

before the civil war. Bus lines covered the entire city, and they also had international routes. However, after the war, the bus company has split into two as that of the west (Croat dominated) side of Mostar became independent and began providing city and international services.

Amidst these conditions, in 1998, the Ministry of Transport and Communications asked Japan to supply funding for the purchase of 52 buses for both companies. The Japanese side requested that, in order to promote cooperation between the two ethnically-separated companies, an agreement be committed to paper and agreed to between the two sides before the request was formally presented. The two ethnic groups accepted these conditions, ironed out an agreement (in September 1999), and presented a formal request to Japan regarding the provision of buses. Consequently in September 2000, the two bus companies from the east and west sides of Mostar merged again. Conventionally, Japan has refrained from attaching conditions to its aid, but the Mostar case is one noteworthy example of how conditions can be a success. In this case, they helped to promote reconciliation between ethnic groups, and this is a positive development from a peace-building perspective. In September 2000, a basic design survey was completed, and in the end the funds necessary for the purchase of 40 buses was planned to be provided. The buses should actually be handed over to the company in early 2002.


Building in downtown Sarajevo that remains in a state of disrepair

(2) Position of JICA within the framework of the international community providing reconstruction aid

<Conclusion 1>: JICA's cooperation is mostly viewed positively by the international community.

<Evidence #1>: An OHR staff member said that Japanese aid was "welcomed with pleasure." Assistance from Japan is appreciated as anti-American or anti-European sentiment is strong. However, there were some criticism as well, saying Japan is "known as a big spender, a rich country with no philosophy or mission behind its aid." The reason <conclusion 1> notes that Japanese efforts are "*mostly* viewed positively" is due to comments like this.

Needless to say, Japan's aid and support activities do have philosophy and mission. Humanitarian aid and emergency aid have been implemented for the best possible results in Bosnia Herzegovina. However, if local people cannot see the philosophy behind the aid, much will need to be improved.

Regarding this point, the UNHCR representative noted that "Japan should put more effort on public relations for its aid activities." The representative brought up the example of the European Union, saying, "Let's assume that the EU provides housing for people. In that case, the EU will make a video, and put up signs with ample funds for advertising. Basically, I just mean 'make sure to advertise your support activities well.' Japan should learn from the EU's example." This is a very important suggestion.

Perhaps another reason why people cannot see a mission or philosophy behind Japan's aid activities is the insufficiency of personnel contribution. From this perspective, a "contribution with a face" (aid in the form of personnel dispatch) is necessary, and during this evaluation trip alone, we heard various opinions regarding this issue. While recognizing the need for increased personnel at the JICA offices and Japanese embassies, there is a recognized necessity to improve the situation with the stationing of Japan Overseas Cooperation Volunteers (JOCV).

There was also a request from OHR representatives regarding the stationing of Japanese staff in their economic and legal departments.

In this respect, there are great expectations for the placement of Japanese personnel, and this "contribution with a face" should be realized in the near future.

<Evidence #2>

The department head of Bosnia Herzegovina's Foreign Ministry Reconstruction and Aid Coordination Office highly rated Japanese cooperation. The department head confirmed the necessity of Japan's development study covering transport infrastructure for the entire country (the "Study for Transport Master Plan in Bosnia Herzegovina"), and expressed an intention to welcome the support.

As mentioned earlier, the two entity governments in Bosnia Herzegovina hold sway over carrying out domestic political and economic activities. Because of this, it is extremely difficult to form a national consensus, making reconstruction efforts more difficult.

Under these conditions, Japan has continued its support activities while respecting local political structures, and basing its actions on decisions made through the central government. Aid has always taken particular consideration of the balance between the two entity governments and three ethnic groups. As a result, Japan has earned a high reputation and trust from the central government, which helped the country implement the "Study for the Transport Master Plan in Bosnia Herzegovina," the first national development plan, ahead of other donor countries.

Official requests to undertake a feasibility study to implement what was recommended in the Master Plan were turned in by the government. When the plan is realized, it will be considered as one part of the peace-building and stabilization activities aimed at rebuilding Bosnia Herzegovina.

<Conclusion 2> JICA has attained some progress in collaboration with other donor countries and NGOs.

<Evidence #1>: UNCHR representatives commented that "The UNCHR and JICA have strengthened cooperation regarding refugee issues, but as aid efforts in Bosnia Herzegovina are now shifting from humanitarian aid to development, we would like to cooperate with JICA in a pilot project on ethnic coexistence." Further cooperation and connection between JICA and the UNCHR is expected.

Market in Sarajevo. Artillery shells exploded here during the war.

<Evidence #2>: An information exchange between JICA and other NGOs, including JEN (which has been implementing a project to repair livestock shelters) and World Vision (which has been working to reconstruct elementary schools and rebuild housing), was being carried out.

World Vision also provides wheelchairs to people with physical disabilities, manages a rehabilitation center for mine victims, and also implements trauma counseling services (efforts to heal psychological traumas). The organization hopes for further cooperation with JICA and the Japanese government.

<Evidence #3>: There was a plan for Japan and the U.K. to construct power transmission lines between the two entities. Japan would provide the funds for purchasing materials, and the U.K. was scheduled to perform the construction. However, the plan was cancelled due to the change of policy in the U.K. The Bosnia Herzegovina government applied to the World Bank and other institutions for loans, and the World Bank approved. If the construction begins in 2001, the materials purchased through cooperation in grant aid by Japan will be used. However, delay in the construction by the World Bank is expected.

(3) Positive and negative impacts of the projects on Bosnia Herzegovina

<Conclusion #1> Positive impacts include results in promoting the prevention of a reemergence of conflict and encouraging ethnic reconciliation (as mentioned in the Conclusion of Section (1)).

<Conclusion #2> Negative impacts include signs of the country becoming dependent on aid, and lacking efforts for self-help.

<Evidence #1> Three hospitals in the two cities of Sarajevo and Mostar were visited, for this evaluation study. Grant aid from Japan was used to purchase medical equipment and supplies, which were all being utilized effectively, and well appreciated. However, there were requests for further supply of parts, equipment, and materials, and also orders and complaints regarding maintenance of installed equipment from hospitals. Behind these orders and complaints, a "dependence on aid" was likely to be found.

Although there was a severe shortage of both funding

and personnel, for the future of Bosnia Herzegovina, perhaps a way to provide aid that would enable the people to gradually work towards self-rehabilitation should be considered.

<Evidence #2>

Currently, the OHR handles most issues, including reformation of the legal system. However, if this continued long enough, the local politicians would lose all sense of responsibility, and come to depend on external assistance.

(4) What possibility of collaboration does JICA have with the OSCE's peace-building efforts?

Currently, the OSCE has 55 member countries and institutions. OSCE's activities are based on the principles of consensus rule, preventive diplomacy (aimed at the quick admonition to parties possibly in conflict, fact-finding missions, etc.), and non-coercive measures (dispatch of mission staff from a third-party country, common declaration of intentions from member countries regarding the conflict). Japan has participated since 1992 as a "cooperative partner," or advisor.

The OSCE mission stationed in Bosnia Herzegovina is a long-term arrangement, with 23 offices around the country. The OSCE is a large organization with international staff numbering 200, and some 1,200 local staffers as well. Since 1996, members of the OSCE have made various efforts towards national reconstruction, peace-creation, and peace-building activities through the monitoring and management of various elections, financial support, the protection and promotion of human rights, and the promotion of democratization. Its undertakings are all based on the framework outlined in the Dayton Peace Accords.

<Conclusion>: In order to gain more expertise in peace-building activities, JICA should strengthen its cooperative relationship with the OSCE. This is still possible.

<Evidence>: OSCE's Sarajevo Office is open to cooperation with JICA, saying "We hope that the experience and methodology regarding OSCE's peace-building can be spread throughout the world by the Japanese government and JICA." Regarding concrete examples of future cooperation, the following ideas were proposed: ① hope for financial cooperation with regard to specific projects designed to promote further self-reliance among Bosnia Herzegovina citizens, in order to return the country to local rule, and ② the stationing of staffs from the Japanese government at OSCE, so they can take back what they learn to Japan.

House-rebuilding conducted by a NGO "World Vision"

5. Lessons and Recommendations for More Effective and Efficient Cooperation in the Future

(1) Communicating Japan's philosophy and mission for cooperation

1) Realizing the provision of "cooperation with a face"

When considering Japan's international contribution for the 21st century, we are sure that personnel contribution will become more important. When personnel are dispatched, presumably more information is fed back, which allows for an accurate grasp of local needs. Using the fed back information in making Japan aid policies increases the relevance of the aid, thus raises the reputation of Japanese cooperation activities among the local people. This should help Japan communicate its philosophy and mission for cooperation.

The areas of humanitarian aid and development aid are particularly important in peace-building activities, and personnel contributions, in addition to financial cooperation, will be extremely effective. This is one area in which Japan can play a large role, and expectations from other countries are high.

It is certain that a balanced approach to international aid will be achieved and appreciated if Japanese people become active in working in international organizations or in this field. This should also help to collaborate with the nine Japanese NGOs currently working in Bosnia Herzegovina.

In addition, placing young Japanese in these positions, and having them gain experience and knowledge will help in the development of human resources.

The personnel cooperation measures listed below are all in non-military areas. These are topics that the Japanese government and JICA can accomplish immediately. They are expected to be implemented in the

near future:

a) increase staff at the Japanese Embassy in Bosnia Herzegovina, and in the local JICA office (including experts, project formulation and planning officer);

b)station Japan Overseas Cooperation Volunteers (JOCV) in Bosnia Herzegovina;

c) dispatch personnel to the OHR economic and legal divisions;

d) dispatch personnel to the OSCE Office in Sarajevo.

2) Enhancing advertising of Japan's aid activities

By advertising that Japan has set necessary conditions serving peace-building in the course of implementing an aid project, it will help to promote understanding of Japan's cooperation philosophy and contributions. This will also help to further promote effective ethnic reconciliation.

(2) Cooperating in peace-building activities

1) JICA teamed up with Canada to implement a plan to equip a "local rehabilitation center" for land-mine victims with both equipment and materials. In addition, there have been plans to construct elementary schools, and also a project to provide the equipment and materials necessary to detect and disassemble land mines.

2) JICA should strengthen its ties with Japanese NGOs in Bosnia Herzegovina. Currently, ties between JICA and the NGOs are being strengthened, but it seemed necessary for both parties to cooperate more by carrying out meetings and a detailed information exchange, and developing specific projects.

Repairing livestock shelters.

3) The construction of power transmission lines across the two entities is as important as developing a transport infrastructure. The equipping of lifelines will contribute to the citizens' lifestyle stability, and to the country's economic revitalization. The project has important significance for the prevention of future conflict. JICA should keep close watch over the progress of construction made by the World Bank, and should cooperate, for example, by considering to take on some of the construction fees.

4) JICA should also consider media support. The OHR media support supervisor said they expected to be provided with old (analog) television cameras, and filming and broadcast equipment no longer being used in Japan. Establishing and supporting a fair and neutral media in the beginning of the reconstruction process is an important factor in peace-building. One-sided media reporting often leads to a flare-up of old conflicts. JICA should examine what is needed when by the Bosnia Herzegovina media industry to actually carry out the aid.

6. In Conclusion

On February 5, 2001, full-fledged debate began in the United Nations Security Council in New York regarding the start of concrete action in comprehensive peace-building activities, covering the range from conflict prevention through post-conflict peace resolution.

Secretary General Kofi Annan stated that "The primary purpose of peace-building activities is to prevent conflict before it starts, and also to prevent the reoccurrence of conflict." He also stressed the necessity of forming an efficient system to carry this out by international organizations and member states.

The basis for discussion in the Security Council was the Brahimi Report (published in August 2000), which was put together by the "Panel on United Nations Peace Operations," a subordinate organization under the U.N. Secretariat.

The essence of this report is that: ① the purpose of U.N. Peacekeeping Operations (PKO) has changed in the ten years since the end of the Cold War, from a traditional format (ceasefire monitoring after wars between states, transfer of military power, etc.) to a new multi-purpose/composite format (resolution of internal conflicts within a state, duties including peace-building), and ② the importance of peace-building, is indicated that a combination of peacekeeping and peace-building is indispensable in multi-

purpose/composite format PKO.

The only Japanese member of the Panel, Hisako Shimura, President of Tsuda College, brought up the United Nations Transitional Authority in Cambodia (UNTAC) as an example. She noted that "Some member nations feel that peace-building activities are not a proper PKO activity. Then, the Brahimi Report emphasized that such idea was a mistake. Composite PKO forces should make efforts to incorporate peace-building into their operations. Otherwise, PKO forces will never be able to leave a country, and peace will not be maintained." This was an important point. In the Security Council, many voices were heard in response to the report that were in favor of requiring efficient coordination between organizations such as the U.N. headquarters, the United Nations Development Program (UNDP), the UNHCR and other groups, and also requiring the active participation of NGOs.

This debate in the Security Council shows the U.N.'s strong interest in peace-building activities, and means that concrete consideration on the issue has begun. With these developments afoot, the Japanese government must also realize the necessity of making active efforts towards peace-building.

The provision of cooperation in Bosnia Herzegovina could be described as a major, valuable experiment in peace-building activities. Recently among Western countries and international organizations there has been a sense of "aid fatigue," and moves to cut back on cooperation. However, it is considered very important to cooperate with peace-building activities for Japan as a new form of international contributions for the 21st century. Japan should continue to make long-term efforts in the region.

Indonesia, Sri Lanka, Philippines, Kenya and Mauritius

Follow-up Evaluation of Development Studies (Port and Water Supply)

Project Sites Indonesia, Sri Lanka, Philippines, Kenya, Mauritius

1. Background and Objectives of Evaluation Study

With a call for greater transparency in ODA projects, there is recognition that evaluations are also needed for development studies. For development studies, follow-up studies have already been administered from the perspective of post-project monitoring, as well as studies on the application of the contents of study reports. Evaluations on "Developments Studies" addressed with a stand-alone approach were administered on an experimental basis from FY1998. However, since this type of study is still in its initial stage, a clear record of evaluation results and establishment of evaluation techniques are essential. The sector-approach-based evaluation study aimed to utilize lessons from evaluation results and improve the quality of the development study scheme for the targeted sector, ports and water.

2. Evaluated Projects

This study, which examined development studies in the field of ports and water supply, which were conducted in Asia and Africa. The selected studies for evaluation were port studies in Indonesia, the Philippines, and Sri Lanka; and water supply studies in Kenya and Mauritius. Tables 1 and 2 refer to the list of evaluated projects.

3. Members of Evaluation Team

<Indonesia>

Team Leader:

Eiji TOMITA, Deputy Management Director Social Development Study Department, JICA

Evaluation Study and Study Planning:

Junko SAWADA, Planning Division, Social Development Study Department, JICA

Evaluation Study and Study Planning:

Mimi NISHIKAWA, International Development Center

Table 1 List of Evaluated Projects <Ports>

Country	Project	Type of Study	FY
Indonesia	Development Plan of the Port of Semarang (Phase I)	M/P+F/S	1978
Indonesia	Development Plan of the Port of Semarang (Phase II)	M/P+F/S	1986
Philippines	Development Study for Batangas Port Development	M/P+F/S	1985
Philippines	National Ferry Transportation Plan Study	M/P+F/S	1992
Sri Lanka	Study on theDevelopment Project of the Port of Colombo	M/P+F/S	1980
Sri Lanka	Study on the Development of the Port of Colombo	M/P+F/S	1989
Sri Lanka	Development of the New Port of Colombo	M/P+F/S	1996

Table 2 Evaluated Projects <Water Supply>

Country	Project	Type of Study	FY
Kenya	Water Supply Reinforcement Plan for the Mombasa District	F/S	1981
Kenya	Malewa Dam Construction Plan	F/S	1990
Kenya	Development Study on the Water Supply Plan for Meru County	M/P+F/S	1997
Mauritius	Water Supply Plan for Port Luis City	F/S	1989
Mauritius	Water Supply Plan for Port Luis City	D/D	1991

of Japan (IDCJ)

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Evaluation Study and Study Planning:

Yasuyuki KURODA, Japan International Cooperation Center (JICE)

<Mauritius>

Evaluation Study and Study Planning:

Yasuyuki KURODA, Japan International Cooperation Center (JICE)

4. Period of Evaluation

<Indonesia>

5 − 12 November 2000

<Sri Lanka>

12 − 16 November 2000

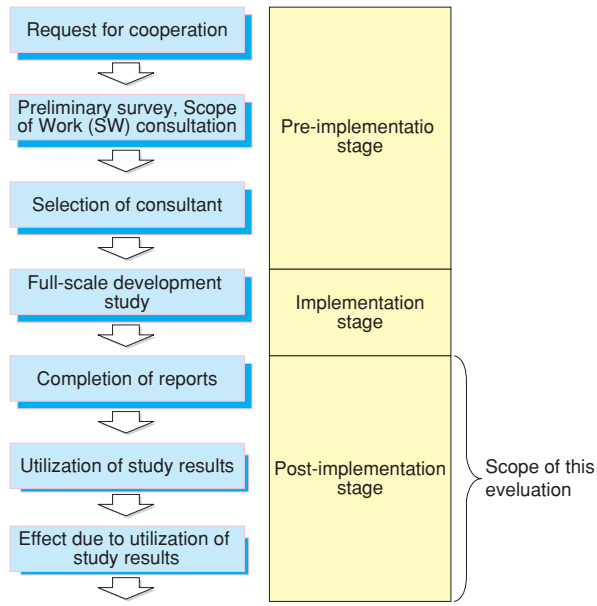
<Philippines>

16 − 24 November 2000

< Kenya >

19 November − 4 December 2000

Figure 1 Flow of Social Development Study



<Mauritius>

4 − 11 December 2000

5. Methods of Evaluation

(1) Scope of Evaluation

The scope of this evaluation study includes the whole procedure of development study, namely, 1) full-scale development study [1], 2) completion of reports [2], 3) utilization of study results [3], and 4) effects from the utilization of study results [4].

(2) Method of Implementation

Information for the study was gathered through questionnaires sent beforehand, interviews, the collection of related documents, and on-site studies.

1) The "full-scale Development Study" is the stage from when a study team comprised of Japanese consultants is dispatched and commences study with the counterpart government study team to when the final report of the study results is written.
2) "Completion of report" is when the study team submits the final report to the counterpart government.
3) Utilization of the study results points to where the counterpart government, based on the recommendations of the final report, applies the transferred techniques and technology to other cases, or where a continuing phase of the study based on the recommended framework is implemented, or preparations for the realization of the project are underway.
4) Effects from utilization of the study results point to the stage that, as a result of preparations for project realization, the counterpart government applies the transferred techniques and technology to other cases or obtains the initial objectives through project realization.

6. Results of Evaluation

<Ports Sector>

(1) Indonesia: Development Plan of the Port of Semarang Phases I and II (M/P and F/S)

1) Outline and Background of Project

The Semarang Port, one of Central Java'smain ports, is located on Java Island. When the government of Indonesia requested a development study on this port, the maximum water depth of the port was only 4m due to drift sand from littoral currents. As a result, medium- to large-sized boats was not able to enter the port directly and had to discharge cargo afloat.

		Objective	
Phase 1	1977.9～1978.8	M/P	To plan the enlargement of Semarang Port as a part of a long-term, comprehensive infrastructure development plan in Central Java
		F/S	To conduct an economic and financial analysis of the Semarang Port Emergency Rehabilitation Plan
Phase 2	1985.5～1986.8	M/P	To design the Semarang Port up to the year 2005
		F/S	To design an emergency rehabilitation plan

2) Evaluation results by the five evaluation criteria

a) Relevance

As the importance and necessity of rehabilitating the container cargo port was recognized in the National Development Plan during both Phases I and II of the study, relevance was very high.

b) Effectiveness

Plans designed under Phases I and II were based on sufficient socioeconomic analysis and met the expectations of the counterparts. However, the environmental assessment conducted in Phase I was not conducted in Phase II. Considering the occurrence of the land subsidence of Semarang City, which had affected port rehabilitation, it is deemed to be a necessary environmental assessment in Phase II as well. The plans formulated through both phases were materialized as recommended.

Panoramic view of the Port of Semarang

c) Efficiency

Overall, the efficiency of the study was high, as the scope of the JICA study team, data collection, and communication between the Indonesian counterparts and JICA study team was sufficient during both phases.

d) Impact

As a result of the Semarang Port Development Project, the amount of cargo handled increased and the number of docking days required at the port was reduced. In addition, the area surrounding the port has seen an increased number of manufacturing companies, which implied the project's contribution to the economic development of the area.

The Phase I study proposed the "improvement of the port administration and system" and the Badan Pengusahaan Pelabuhan (BPP), which, although responsible for port management, was recognized by the Indonesian side to be inefficient. As a result of this proposal, a new decree was issued in 1983 transferring port management to the public cooperation, PERSERO, resulting in improvement of port management efficiency. Furthermore, PERSERO was transferred to PERINDO Co. Ltd., which is 100% owned by the government.

The counterpart Directorate General of Sea Communications (DGSC) conducted its own Phase III of the development study based on the methodology used in Phases I and II. The Phase III report was completed in October 1999 and proposed projects in this report is to be implemented.

e) Sustainability

High levels of sustainability can be confirmed by the fact that DGSC has taken initiative for Phase III and was utilizing the study techniques transferred during the previous phases.

2) Lessons Learned

Phases I and II of the development study are judged to be successful as the studies were conducted efficiently and have led to other projects in addition to Phase III. In order to further improve the quality of development studies, the evaluation study has identified the followings.

a) Planning of the Semarang Development Plan from domestic and international comparative advantage as well as competitiveness point of view

b) Planning based on the decentralization of government functions
c) Socioeconomic impact of community relocation

(2) Sri Lanka: "Study on the Development Project of the Port of Colombo (M/P and F/S)," "Study on the Development of the Port of Colombo (M/P and F/S)" and "Study on the Development of the New Port of Colombo (M/P and F/S)"

1) Outline and Background of Projects

The port of Colombo is not only a key junction of marine transportation linking Europe and the Far East, but also one of the major ports of South Asia. In the late 1970s, port development became increasingly important for the Sri Lankan government in promoting economic development. Therefore, it became necessary to upgrade the facilities of the Port of Colombo as a major international port to cope with increased cargo volume and worldwide trends in cargo transportation. As a result of these changes, the Sri Lankan government requested a Development Study.

		Objective	
Project of Port of Colombo	1988.11～1989.11	M/P	To draw up a basic plan of development of the Port of Colombo up until the year 1988
		F/S	To draft an emergency rehabilitation plan with 1993 as its target year and to conduct an economic and financial analysis
Development of Port of Colombo	1985.5～1986.8	M/P	To draw up a Master Plan for 2001
		F/S	To draw up a short-term development plan based upon the framework of the Master Plan until 1993 and to implement an economic and financial analysis
New Port of Colombo	1985.5～1986.9	M/P	To draft a Master Plan for the development of the Port of Colombo until the year 2015 and Sri Lanka's port development policy
		F/S	To draft a short-term development plan until the year 2005 for the new Colombo port development with economic and financial analysis. The plan should also include an immediate plan for urgent needs.

2) Evaluation Results

a) Relevance

The "Study on the Development Project of the Port of Colombo" is deemed relevant as development of the Port of Colombo became indispensable in the 1980s when the Sri Lankan government promoted the establishment of free-trade, investment promotion zones, and trade liberalization policies.

Before implementing the "Study on the Development of the Port of Colombo," the Port of Colombo became the largest cargo transportation port in South Asia due to the government's active promotion of port liberalization. Consequently, the port was required to handle more cargo than predicted. Therefore, it can be concluded that this study, which aimed to draw up a new M/P, was highly relevant.


Container Terminal of the Port of Semarang

By the time the "Study on the Development of the New Port of Colombo" was conducted in 1995, it was expected that the amount of containers handled at the Port of Colombo would further increase as Sri Lanka was experiencing economic growth and neighboring India had shifted towards economic liberalization. Therefore, this study could be considered to be highly relevant as it aimed to draft a plan for existing facilities for the Port of Colombo, as well as for neighboring areas to develop new ports.

However, the Sri Lankan government issued a call to private companies for alternative development plans utilizing the BOT method at around the same time the "Study on the Development of the New Port of Colombo" was conducted. As a result, a consortium of private shipping companies submitted an alternative development plan. This occurred as a result of a change in administration just after the study commenced and the new government promised to promote privatization. This change was not predicted and was unavoidable.

b) Effectiveness

The final reports of all three development studies were in line with the original Scope of Work (S/W), structured logically, and achieved targeted objectives. All of the proposed projects, except several projects proposed in the "Study on the Development of the New Port of Colombo" were implemented. Techniques necessary for port development were transferred to the counterpart through each study and, as

counterparts utilized these techniques to further projects, it can be concluded that these studies have effectively achieved their objectives.

c) Efficiency

The study teams of the three studies were appropriate in terms of input sizes. The final report of the development studies were distributed to the ministries and institutions concerned. Discussions between concerned ministries and the study team after each study were particularly efficient.

d) Impact

Most of the projects proposed in the "Study on the Development Project of the Port of Colombo" and the "Study on the Development of the Port of Colombo" were implemented and the reports were fully utilized. Some project plans proposed in the "Study of the Development of the New Port of Colombo" were implemented. In addition, the study's demand forecast was utilized in the "National Port and Marine Policy (1996)" of the Sri Lankan government.

The direct impact of the project in terms of the development of the Port of Colombo is evidenced by an increase in foreign currency earnings as a result of handling reshipping cargo and strengthening cargo-handling capacity. In addition, indirect impacts were seen in the promotion of domestic industries mainly in export-processing zones. Overall, a favorable impact was observed as a result of the gradual implementation of the projects proposed in the three studies, and the fact that the Port of Colombo has become a hub port in the South Asian region.

Container Tarminal of the Port of Colombo


Panoramic view of the Port of Colombo (from South to Nerth)

e) Sustainability

Facilities constructed as a result of the three studies have been managed and operated by the counterparts. However, due to changes in the international trend in marine transportation and port management methods, as well as domestic considerations including civil war, there is some concern as to whether the studies can be utilized in the future. As these situational changes were not predictable at the time of the studies, it still could be concluded that the proposed projects in the three studies were fully sustainable at the time of the studies.

3) Lessons Learned

Although the objectives of the three studies were attained, in order to further improve the quality of development studies, it is necessary to involve capacity analyses of the institutions responsible for port development and management. It is also particularly necessary to explicitly refer to the necessary authority and roles of port development and management, expertise, and incentives in further studies.

This is because precedent development studies including the "Study on the Development of the New Port of Colombo" only touched on the issues of authority, roles, and expertise of implementing institutions. However, it did not actually refer to changes in these areas and necessary authority, role, and expertize to cope with them as a result of institutional reform. When those reforms are expected, the report of development studies should cover those issues as well.

In addition, lack of incentives for the implementing organizations may lead to the proposed projects not being implemented, which leaves room for examination of the structure of incentives surrounding the project.

(3) Philippines: Development Study for Batangas Port Development (M/P and F/S)

1) Outline and Background of Project

The Batangas Port is a good natural harbor situated approximately 100 km from the Greater Manila area on the southwest island of Luzon. However, the use of land

and water around the port has not been planned systematically. In addition, the facilities at the Batangas Port have deteriorated and port congestion has grown over the years. Therefore, the Philippine government requested the Japanese government to conduct a Development Study.

		Objective	
Study of Batangas Port development	1984.9～1985.12	M/P	To develop a long-term development plan up until FY2000 based upon the basic strategy and cargo demand projection
		F/S	To draft a short-term development plan up until FY1990, based upon the long-term development plan and to be able to handle the predicted cargo demand, as well as to conduct an economic and financial analysis


The Batangas Port

2) Evaluation Results

a) Relevance

The relationship between the study objectives at the time of the study, the Philippine National Development Plan (1984－1987) and the Southern Tagalog Region Development Plan (1984－1987) were consistent. In addition, the study was relevant since implementation of the proposed projects went underway soon after the study, and the project almost completely reflected that proposed in the study report.

b) Effectiveness

The objectives were fulfilled as the final report was based on the S/W. In addition, the contents were logical and easy to understand. However, environmental impact and community relocation analyses should have also been included in the study. The objectives of the study appear to have been achieved since most proposed projects in the "Short-term Development Plan" were implemented as proposed, and the implementation of proposed projects of the "Long-term Development Plan" were underway. Knowledge on port development was transferred to the counterpart throughout the study and those techniques and know-how were adequately utilized. Therefore, the technology transfer was achieved.

c) Efficiency

The implementation structure and scope of the study appeared to have been efficient, and the study team members were also judged as appropriate. However, there was some concern that the participation in the study of the Philippines Ports Authority (PPA) was limited due to the shortage of personnel of the PPA. Moreover, there seemed to be some degree of inefficiency in the schedule.

The study itself was conducted efficiently with adequate quantitative and qualitative data available. Feedback of the results and proposals of the study were obtained through seminars with the related institutions.

d) Impact

The results of the study have been utilized in JICA studies such as the "Calabarzon Integrated Regional Development Study (1991)" and the "Greater Capital Region Integrated Port Development Study (1994)".

In addition, OECF (currently JBIC) implemented the "Batangas Port Development Project (I)" based on the "Short-term Development Plan," and completed in March 1999. Projects (II)I through (IV) of the "Batangas Port Development Project" were also being implemented through JBIC loans based on the "Long-term Development Plan" of the study. Therefore, the overall goal of the study, which proposed projects to be implemented, has been achieved.

Examples of direct impacts from implementing the "Batangas Port Development Project" are the improvement in the efficiency and safety of port management through the construction of berths based on different objectives, such as Roll-on Roll-off (Ro/Ro) ferries, high-speed boats, and normal cargo. Examples of indirect impacts are the improvement of distribution and increase of passengers on routes to and from Mindoro Island, and establishment of industrial parks in Batangas, with the Port used as a shipping point.

e) Sustainability

The facilities constructed based on the "Development Study for the Batangas Port Development (I)" are being managed by the Port Management Office (PMO) under the PPA, which is privately operated.

Despite some minor problems with cargo handling, sustainability appears secure. However, it is noted that port management in the Philippines is undergoing decentralization and privatization, therefore it may greatly change in the future. Sustainability of projects after the "Batangas Port Development Project (II)" might be threatened, as there had been problems with land commissioning and a lack of road maintenance.

3) Lessons Learned

Since this study was conducted efficiently and effectively and the proposed projects were subsequently implemented, the study from an overall point of view is seen to have been a success. However, the following problems concerning project implementation must be solved to increase the quality of future development studies.

(a) Planning with consideration for squatters and community relocation

(b) Importance to integrate port and hinterland developments, including access roads.

(c) Analysis of development and management capacity of the port institution.

(4) Philippines: National Ferry Transportation Plan Study (M/P and F/S)

1) Outline and Background of Project

In an island country such as the Philippines, domestic passengers and cargo are transported mainly via roads and sea. Ferry transportation in particular is important means of transportation between main islands such as the island of Luzon, the Bisaya islands, and Mindanao. However, ferry transportation management administration was not established and the level of facility maintenance was low at the time of the study. Therefore, improvement in facility maintenance, transportation safety, and efficiency was in need. Under these conditions, the government of the Philippines requested assistance from the government of Japan in formulating a national ferry transportation plan. In response to this request, the Japanese government decided to conduct a Development Study.

The Batangas Port (Passenger ship terminal)

		Objective	
National Ferry Transportation Plan Study	1991.4～1992.8	M/P	To draft a Ro/Ro ferry transportation system M/P in the Philippines and to ensure efficient policy guidelines on Ro/Ro ferry transportation and to select priority routes
		F/S	To conduct an economic and financial analysis of Ro/Ro terminal facility maintenance of the Iloilo and Bacolod ports

2) Evaluation results by the five evaluation criteria

a) Relevance

In the infrastructure development plan of the 1991 Philippines Development Report, the improvement of ferry service efficiency was proposed to bring down local transportation costs. The JICA study on National Ferry Transportation was noted as a high-priority project. Therefore, the relevance of the study at the time of implementation is considered to be high.

The study itself proposed a plan to keep maintenance costs low by avoiding steel and using concrete for port structures. Such consideration by the study was deemed highly important as the financial situation of the country remained tight.

On the other hand, when examining the relevance from the point of view of project implementation based on the proposal of the study, there is a very low possibility that the proposed projects will be implemented.

b) Effectiveness

According to the counterpart, the final report followed the original scope of work, and the contents were easy to apply. Those comments show that the report was written in line with the expectations of the counterpart.

Transfers of study methods from the study team to the Philippine counterparts were conducted, and have improved the capacity of the counterpart.

c) Efficiency

The study was conducted efficiently as there were no communication problems between the study team and the Philippine government during the study period. In particular, the study team explained the implementation process and progress several times throughout the study, eliciting comments that this contributed to

raising the efficiency of the study.

d) Impact

The counterpart Department of Transportation and Communications (DOTC) distributed the final report to relevant authorities and the Asian Development Bank (ADB). The DOTC also made efforts to implement the projects proposed in the plan by constructing and maintaining several ports with its own finances.

As the use of M/P is not monitored by the DOTC, details of project implementation (implementation year, financing, and implementation contents) are not available. JICA experts dispatched to the DOTC were currently monitoring the progress of M/P implementation. Therefore, it was difficult to evaluate the socioeconomic impact of project implementation, as no information had been found on particular progress.

e) Sustainability

Due to the lack of information regarding whether or not the proposed project would be implemented, the sustainability of the project could not be examined for the moment.

3) Lessons Learned

The study itself was efficiently conducted with its proposals given high priority within the National Development Plan, thereby achieving its objectives. On the other hand, as the projects proposed in the study had not been implemented, the overall goal had not yet been achieved. Observations that could contribute to improving future development studies are as follows.

a) Staff from counterpart DOTC, as well as from the National Economic and Development Authority (NEDA), Philippines Ports Authority (PPA), Maritime Industry Authority (MIA), and the Department of Public Works and Highways (DPWH) was involved in the study. As it was necessary to study a wide area including not only the port itself, but also access road to the port, involvement of such relevant authorities contributed to data collection and the scheduling of appointments. However, it was pointed out that this also contributed to frequent interruptions in the study as decision-making authorities were not clearly allocated to any of these organizations.

b) The fact that the actual organization in charge of the execution of what was proposed in the study was unclear was seen as an obstacle to the implementation of projects. Therefore, it is important to develop a system whereby one certain institution is responsible for the entire process from study implementation to follow-up monitoring. This would be an important factor for leading to a smooth project implementation based on the proposal of the study.

The Batangas Port (Ro/Ro ferry terminal)

c) One of the reasons for the delay in project implementation was due to a lack of funding. Another reason for the delay was that the actual management of port development was not authorized to the DOTC, which was the counterpart organization of the study. If a review of the study is to be conducted, it is necessary to examine coordination of related implementing institutions and the procuring of financing for implementation of the proposed projects.

<Water Suppy Sector>

(5) Kenya: Development Study on the Water Supply Plan for Meru County (M/P and F/S)

1) Outline and Background of Project

Water supply facilities in Kenya's Eastern Province lagged far behind the level set as national goal. The water supply system of Meru city could only meet 20% of water demand and existing water facilities were in a deteriorated condition. At the same time, water was scarce in Isiolo city as the Isiolo River dried up during the dry season. Therefore, there was an urgent need to develop a filtration plant in order to meet the demand for water in Eastern Province. The Kenyan government requested the Japanese government to implement a study that would help improve the water supply system for six districts of Eastern Province.

The characteristics of this project are as follows: a) the investment and management capacity of the Kenyan implementation side was fully considered in the design of the facilities, the community participated from the planning stage, and many social aspects were fully exam-

		Objective	
Water supply plan for Meru County	1996.7～1997.11	M/P	To develop sewage works in 6 municipalities and 1 area in Kenya's Eastern Province by the year 2010
		F/S	To conduct an F/S targeting the year 2005 in areas that had been selected as priority improvement areas for the water supply system amongst the M/P target area of 182 km2

ined, and b) conditions were set that the plan would be implemented through grant aid, only with the full implementation of a metering system, and the commencement of a reduction program targeting non-revenue water.

2) Evaluation results by the five evaluation criteria

a) Relevance

This Development Study was conducted as part of a National Water Resources Master Plan conducted by JICA in 1992. After completion of the study, the projects proposed in the study were integrated within the National Development Plan. At the same time, the projects proposed through the study met needs at the time of evaluation, and basic designs for after implementation were currently being drafted. Therefore, this study could be considered relevant.

b) Effectiveness

The contents of the final report fully considered the financial state of the Kenyan implementing institutions and met the needs of the Kenyan side. Payment capabilities of the community were also carefully examined. Pipelines for the community were proposed in areas where the community could not bear the cost of household water pipes. The study can be highly evaluated as community participation was encouraged and the conditions of the community were fully considered.

A revision of water charges was proposed in the study. This was based on the fact that although the existing level of water charges could cover maintenance costs, they could not cover facility investment costs. Therefore, it can be concluded that the study was conducted effectively and achieved its objectives.

c) Efficiency

The study appears to have been conducted efficiently. There were no major communication problems between the Japanese and Kenyan teams during implementation, with reliable data from the Kenyan side greatly contributing to the efficiency of the study. On the other hand, as data was analyzed in Japan, the Kenyan counterparts could not acquire data analysis techniques. There were also some members that lacked adequate English communication skills, which led to some inconvenience in discussions, affecting the efficiency of the study.

d) Impact

For some time after the final report was submitted in September 1996, there was no action from the Kenyan side. After a while, some action was taken with a basic design study conducted by Japanese consultants under grant aid in November 2000. A detailed design study and construction of sewage facilities is planned for 2001 and beyond.

e) Sustainability

As this project was at the basic design stage, it is too early to make conclusions regarding sustainability.

3) Lessons Learned

The scope of the full-scale study depends largely on the study design at the preliminary study stage. Examination of the social aspects including the collection of water rates is indispensable for the implementation of water supply projects. Thus, it is important to draw a study design that encourages the examination of social aspects from the preliminary study stage.

In the proposal of the study, the following conditions were set based on the presumption that the proposed plan would be implemented by grant aid cooperation.

a) Full implementation of metering system
b) Commence non-revenue water reduction program
c) Provision of Japanese or foreign aid in the fields of non-revenue reduction, organizational capacity building, and construction management

Such conditions could have helped promote Kenyan initiatives. Therefore, it is concluded that although Japanese cooperation should be based on requests from the government, the Japanese stance should also be clearly communicated to the government.

(6) Kenya: Malewa Dam Construction Plan

1) Outline and Background of Project

This Development Study was implemented with the objective of developing and strengthening water supply to Kenya's Greater Nakuru District in the eastern part of Kenya's Rift Valley Prefecture, which includes three municipalities: Nakuru, Girugiru, and Naibasha; and two rural areas of Girugiru and Eburu.

		Objective	
Malewa Dam Construction Plan	1989.1～1990.11	F/S	To conduct an F/S of dam construction in the Malewa River Valley, which was planned as part of the Greater Nakuru District Water Supply Plan To decide on the appropriate scale and volumetric distribution of the Malewa Dam For the Kenyan side to acquire dam construction planning techniques through technology transfer

2) Evaluation results by the five evaluation criteria

a) Relevance

The basic concept was to construct a dam at the Malewa River and intake facilities at the Trashe River, using the surface water of both rivers. Discussions with the counterpart in November 2000 revealed that the construction of the Malewa Dam was regarded as the most effective way to cope with the increasing demand for water by the Nakuru municipality at that time.

There were high expectations that water supply volume would meet demand and a stable supply of water could be provided if the proposed projects of the study were implemented. In addition, it was expected to have a great impact especially in rural areas where the water supply volume was insufficient and the quality of water low.

b) Effectiveness

The study was conducted according to the scope set out in the scope of work. According to the Japanese study team, the proposed plan of the study i) reflected the budget capability of the Kenyan implementing institution for dam construction, and ii) carefully considered water charges by understanding the capacity of the investment recovery of Kenyan institutions and the community's capability. However, the Kenyan counterpart has pointed out that i) had not been fully considered. As for ii), examination of the decision-making process through community participation was not included in the S/W and therefore not included in the study.

c) Efficiency

The study appears to have been conducted efficiently. The Kenyan team participated actively in the study and there were no major problems, with smooth communication between the Japanese and Kenyan sides.

d) Impact

It was predicted at the preliminary study stage that the construction of the Malewa Dam would invite several environmental problems such as a fall in the water level of Lake Naibasha, increase in the water level of Lake Nakuru, and water pollution. There were requests from the Kenyan side to implement the study on dam construction. However, in the end, the government had to abandon the plan when an environmental conservation group campaigned against construction of the dam. As the proposed projects were deemed to cause environmental destruction, the plan has not been implemented.

Water purification plant under Greater Nakuru District Water Supply Plan (constructed by Yen-loan)

e) Sustainability

Although the proposed projects have not been implemented, counterparts have fully utilized the results of the study by giving feedback to the relevant institutions.

3) Lessons Learned

The study was conducted as a result of the strong initiative of the Kenyan government despite potential problems such as a reduction in the water level of Lake Naivasha, increase in the water level of Nakuru Lake, and pollution as predicted in the preliminary study report. This is because the Kenyan government prioritized increasing the water supply of the Nakuru city.

At the time of the study, the Malewa Dam construction project was a forced-choice between "development" or " environment." If construction went ahead as planned, the environment of the Naivasha and Nakuru Lakes could have been destroyed, but if the construction were abandoned, the development of Nakuru, which was experiencing economic and population growth, would have been hampered.

Lessons learned as a result were that there is a need to be flexible in the implementation of development studies even after formal commitment to a study. Also, when antagonistic issues such as "urbanization and

environmental conservation" are involved in a study, consideration should be given to methods such as the reutilization of water or water circulating systems that meet water supply demands as a result of population growth.

(7) Kenya: Water Supply Reinforcement Plan for the Mombasa District (F/S)

1) Outline and Background of Project

This study aimed to conduct an F/S to increase water supply and predict water demand up to the year 2000 for Mombasa city, seven small to medium rural villages, and the rural area extending from the Sabaki River in the North, the coastal area in the East, the Tanzanian border in the South, and the Tsavo National Park in the West.

		Objective	
Water Supply Reinforcement for the Monbasa District	1980.2～1981.9	F/S	a) To accurately predict water demand up until the year 2000 for the Eastern and coastal area and to study the potential of water resource development. b) To draft a medium-term water supply plan and conduct an F/S of the project as an imbalance of water supply and demand is predicted after 1985, although the Sabaki River may continue to be able to supply water until then. c) To transfer technology on water supply planning.

2) Evaluation results by the five evaluation criteria

a) Relevance

According to WHO statistics, the infant mortality rate was high in 1980 due to malaria, entertis, and diarrhea, and low sanitation levels were prevalent largely as a result of poor water quality. By recognizing this situation, the Kenyan government prioritized the improvement of the water supply and the level of people's health, and founded the Water Resources Ministry. In addition, water supply became a major topic in the Fourth National Development Plan (1979-1983).

This Development Study was conducted with the goal of increasing and stabilizing the water supply and was congruent to Kenyan government policy at the time. The Kenyan counterpart remains committed even today to the implementation of the plan once financial resources can be procured.

b) Effectiveness

According to the Kenyan counterpart, the final report met the expectations of the Kenyan government. The community's payment capacity for water rates was also adequately analyzed with the proposed projects meeting almost all the needs of the community.

c) Efficiency

The study was conducted efficiently. Communication between the Japanese and Kenyan teams was fairly smooth and there were no major problems. The Kenyan team provided reliable data.

d) Impact

In 1992, bidding for consulting services on the F/S and Detailed Design Study of the World Bank financed Mombasa Water Supply Plan, which included the Second Mujima Pipeline Plan, was held. As a result, an Italian consulting firm won the bid in 1994 and implemented the F/S and D/D from 1996 to 1998. At a field study in November 2000, the Kenyan counterparts stated that they would like to implement this series of plans once financial resources were secured.

It is too early to discuss impact, as the proposed projects of the study have not yet been realized.

e) Sustainability

Although the proposed projects of the study have not been implemented yet, the counterpart credits this study as a link to the World Bank loan financing study. In addition, the counterpart commented that the report was distributed to relevant ministries and institutions and were effectively utilized.

3) Lessons Learned

This study points out the importance of the investment screening capacity of implementing institutions. To be more precise, it is important to 1) estimate the approximate investment costs of the proposed project at the preliminary study stage and 2) judge whether these costs can be procured by the implementing institution. Proposing alternative plans or scaling-down

Sewage disposal facility in Nakuru District

project investment costs at an early stage of a study for implementing institutions in case project investment costs cannot be procured.

(8) Mauritius: Water Supply Plan for Port Louis

1) Outline and Background of Project

The water demand increased rapidly in Port Louis city as a result of quantum development of light industries and population concentration. Meanwhile, problems of supply had emerged such as deteriorated water pipelines, seasonal differences in water supply. The study was conducted to formulate a water resource plan to improve water supply for Port Louis by understanding the above-mentioned situation.

		Objective	
Water supply plan for Port Luis City study	1988.4～1989.6	F/S	a) To draft several dam development plans and to select the best plan b) To conduct an F/S on the best water supply plan c) To draw up a detailed design of the dams and water filtration facilities proposed in the F/S d) To transfer techniques on water supply planning to the study counterparts, the Ministry of Energy, Water Resources and Postal Services and the Central Water Authority (CWA)

2) Evaluation results by the five evaluation criteria

a) Relevance

This study was highly relevant to Mauritius government policy at the time of implementation. However, when completed, the government decided not to implement the projects proposed in the study, and the plan was consequently left out of Mauritius' Five-Year Development Plan and regional development plans. This was due to the fact that the amount of the proposed investment was too high at the time and the proposed project's water production cost per 1m³ was larger than the Midland Dam Plan, which was already underway.

b) Effectiveness

The proposed projects and the final report of the development study have met the needs of the community and the Mauritius government. However, the Mauritius counterpart commented that the study did not fully consider the financial capacity of the implementing institution.

c) Efficiency

The study appears to have been implemented without any major problems with active participation of the Mauritius team and smooth communication between the Japanese and the Mauritius teams.

d) Impact

The proposed projects in the study have not been implemented. Therefore, it is not possible to gauge its socioeconomic impact.

e) Sustainability

The proposed projects in the study have not been implemented. It is not possible to judge sustainability of the project.

3) Lessons Learned

A lesson learned from the study is that it is important to analyze the investment capacity of the implementing institution. If the investment cost of a project is larger than the implementing agency can procure, it is necessary to scale down the project or propose an alternative plan to the implementing institution at the beginning of the study.

7. Lessons Learned and Recommendations

(1) Ports Sector

1) Formulate National Port Plan consistent with public benefit and efficiency

In recent years, decentralization and privatization to improve the efficiency of the public sector and reduce the fiscal burden of the central government has become a trend in both developing and industrialized countries. This trend is also being found in the development and management of public facilities including the ports sector. In Sri Lanka, for example, the participation of private companies has been promoted through the introduction of BOT in the development and management of the port. In Indonesia, it was predicted that port management would change as the central government decentralized its functions. The decentralization and privatization of port management were also considered in the Philippines.

This trend is particularly visible in container ports where international competitiveness is required and cost reduction to pursue efficiency became the major theme. At the same time, BOT is slowly being recognized as a valuable container port development method, which may reduce the enormous investment required for port development under the tight fiscal conditions of the government.

2) Analysis on the development and management body of the port sector

As mentioned above, port development and manage-

ment have gradually been transferred from a public port corporation under the central government to various other bodies as a result of decentralization and privatization. As a result, each port has come to deal with development and management individually, which may result in posting difficulty for the national marine transport and port development policy. At the same time, although a reduction in the number of workers is in sight to pursue efficiency, this needs to be carefully examined since public facilities, including ports, provide employment opportunities.

Reflecting the situation, there is an increased importance to draft a comprehensive national port development plan, supervising various plans executed by individual port management bodies. Development studies concerned with national ports are now required to analyze the financial, human and other organizational capacities of the current port management body, and to help their capacity building which can achieve both efficiency and a public nature of the ports.

3) Introduce social analysis and consideration to the targeted area to promote efficient implementation of the proposed project in the study

In the Batangas Port, for example, community relocation created a problem that consequently delayed project implementation. At the same time, it is predicted that similar problems may occur in the Semarang Port development for many squatters that inhabit the intended project area.

Problems related to community relocation, as mentioned above, are considered to be the responsibility of the counterpart government. However, as long as the objective of development studies is to implement projects by utilizing the result of studies, the social aspects of the targeted area must be considered and the scope of study must include countermeasures for these factors.

In many developing countries, land ownership is frequently unclear and it is difficult to distinguish legal and illegal occupation. Therefore, social surveys should be conducted of not only landowners, but also squatters. This is particularly important for port development in coastal areas where many squatters live.

(2) Water Supply Sector

1) Implement policy proposal-type study that includes revision of water rates and management capacity building

Promoting investment without consideration for management problems of the implementing bodies has the potential to aggravate the problems. Japan may be able to assist with investment funds, but cannot support maintenance costs. Therefore, it is indispensable to develop management capacity including to recover investment for sustainable water project development. Policy studies that examine the revision of water rates, investment recovery, and management capacity should be introduced.

2) Implement studies focusing on urbanization and environmental protection

As seen in the example of the Kenya Nakuru River area, it appears that there will be an increase in development studies focusing on urbanization and environmental protection. Therefore, it may become increasingly important to plan a water supply for urbanization by recognizing the possibility of environmental destruction, and that environmental destruction has to be avoided. Measures such as water recycling or circulatory water supply systems are specific examples and possibilities that might meet the growing demand for water supply as a result of population growth.

3) Promotion of designs that examine social aspects from the preliminary study stage

The Study on the Water Supply Plan for Meru County demonstrates that the study design at the preliminary stage defines the scope of the study itself. In order to implement the proposals of water plans, considerable examination of both the infrastructure and social aspects are required, with a study design that examines the social aspects introduced from the preliminary stages of a study.

(3) Process of Development Studies

1) Rough estimates of investment costs and projection of fund raising capacities of local implementing bodies

As mentioned in evaluations of the "Water Supply Reinforcement Plan for the Mombasa District" and the "Water Supply Plan for Port Luis City," it is important to roughly estimate the costs of the envisioned project at the preliminary study stage and to determine whether the local implementing body is able to raise these funds. If the funds cannot be procured by the local implementing body for the envisioned project, it is necessary to propose a scaling-down of plans or an alternative plan to the implementing institution at an early stage of the study.

2) Flexibility in study implementation post-adoption

Despite predictions of grave environmental problems

of the Malewa Dam in the preliminary study report, the Kenyan counterpart continued to request a full-scale study for dam construction. It must have been difficult for the Japanese side to reverse the decision regarding the already approved construction plan. In future cases, it is important to be able to reverse decisions to implement or provide assistance in the form of development study if new facts are found after project approval.

3) Further efforts on technology transfer

In the hearing conducted in Kenya in November 2000, the counterparts of the three development studies that were evaluated pointed out that "as data analysis was conducted in Japan, the Kenyan team had little opportunity to learn the process." This highlights the need for JICA to further clarify in the terms of reference issued before the bidding for the study, and what techniques are to be transferred by the consultants to the counterpart.

Philippines, Thailand

Follow-up Evaluation of Development Study (Agricultural Irrigation)

Project Sites Philippines, Thailand

1. Background and Objective of Evaluation Study

With a call for greater transparency in ODA projects, there is a recognition that evaluations are also needed for development studies. For development studies, follow-up studies have already been administered from the perspective of post-project supervision, as well as studies on the application of the contents of study reports. Evaluations on "Development studies" addressed as a stand-alone approach were administered on an experimental basis from FY1998. However, since this type of study is still in its initial stage, a clear record of evaluation results and the establishment of evaluation techniques are essential. This study evaluated development studies in the field of agricultural irrigation in order to improve the quality of future development studies by using the lessons that are derived from the evaluations.

2. Evaluated Projects

This study examined a total of nine development studies (four from Thailand and five from the Philippines) in the field of agricultural irrigation. These studies were chosen from the group of completed development studies in this field. In order to highlight various dimentions of the targeted development study taking a macroscopic approach to address development studies in the field, the targeted studies were chosen so that were likely to have different applications for the study results.

3. Members of Evaluation Team

Team Leader:

Hideo OSAWA, Deputy Director, Planning Division, Agriculture, Forestry and Fisheries Development Study Division, JICA

Evaluation Study and Study Planning:

Katsuhiko HOGA, Deputy Director, Office of Evaluation and Post Project Monitoring, Planning an Evaluation Department, JICA

Evaluation Study and Study Planning:

Kazunori HORIGUCHI, International Development Center of Japan

Evaluation Study and Study Planning:

Yoshio AIZAWA, International Development Center of Japan

4. Period of Evaluation

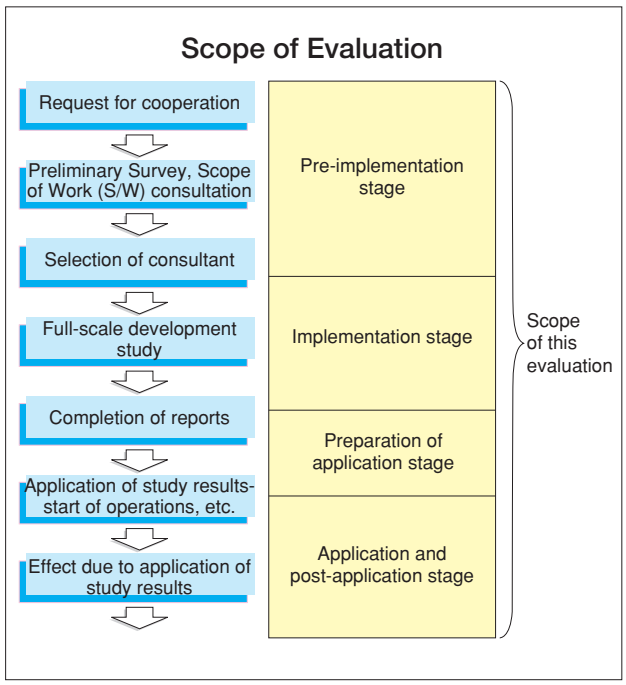
(Thailand)
26 June − 14 July, 2000
(Philippines)
26 June − 14 July, 2000

5. Evaluation methods

(1) Scope of evaluation

The scope of this evaluation includes the "implementation stage" [1], "application preparation stage" [2], and

1) The "implementation stage" denotes the period from the time the study group composed of Japanese consultants is dispatched to the recipient country and begins full-scale survey with the recipient country's cooperation team until the time that the study is completed and the report results are summarized in the final report.
2) The "application preparation stage refers to the preparatory work before application, such as the preparation involved before the recipient country's government applies the transferred technology to other cases based on the recommendations in the final report or makes specific preparations for the next study or start of operations.
3) The "application/post-application stage" indicates the stage until the recipient country applies the transferred technology to other cases and succeeds in its initial goals in bringing projects to operability, all as a result of the specific preparations made by the government at the application preparation stage.



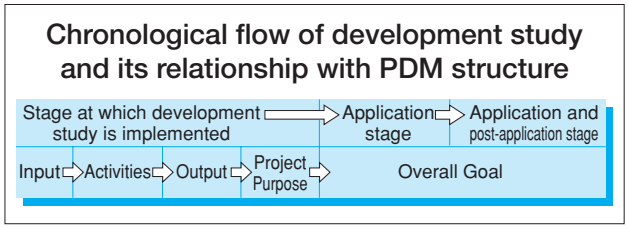
"application /post-application stage" [3]. The development study follows the process shown below.

(2) Evaluation Methods

The basic policies concerning this evaluation method consist of the following three points.

1) Scope of evaluation is based on the PDM logic configuration;
2) In line with the PDM, five evaluation criteria (relevance, effectiveness, efficiency, impact and sustainability) are used for evaluation.
3) Using an evaluation grid for each of the five evaluation criteria, a more specific perspective for the evaluation is maintained.

Since the development studies are summarized in a PDM form at the time of evaluation, efforts were made to derive information with as much accuracy as possible from the existing information and to incorporate it into the PDM.



(3) Methods of Implementation

Information was gathered through questionnaires, hearings, literature review and on-site studies. These efforts were carried out mainly by the Royal Irrigation Depart – ment (RID) in Thailand, the counterpart institution for the proposals targeted for evaluation – and, the National Irrigation Administration (NIA) in the Philippines.

Explanation of the evaluation methods; PDM and 5 five evaluation criteria. (RID HDQs, Thailand)

6. Results of Evaluation: Thailand

(1) Feasibility Study for Kamphaen Sean Irrigated Agricultural Development Project in the Mae Klong River Basin

1) Outline and background of project

The development study targeted for evaluation was part of the Master Plan of the Mae Klong River Basin implemented by JICA in 1977. The study ran from January to October 1979, aimed to set up terminal agricultural fields on 17,200 ha of irrigated land where main water channels had been completed in 1972 by aid from the World Bank. This development study is characterized by the following.

a) This was the first JICA project in Thailand in the field of agricultural irrigation.
b) The World Bank was responsible for the large-scale development of the backbone facilities, while JICA developed the terminal portions, thus dividing roles.
c) There was a difference between the World Bank and Japan in regard with development methods and concepts. The World Bank is skilled in large-scale agricultural development using the U.S. intensive method [4] and Japan is experienced in the extensive method [5] and irrigation ditch, dike and farm road method [6]. Moreover, as seen in the "Ditches and Dikes Act" enacted in 1964, and the "Land Consolidation Act," enacted in 1982,

4) An irrigation development method consistent with x and land substitution.
5) An irrigation development method that sets up waterways dividing the plot as necessary.
6) An irrigation development method that sets up only irrigation ditches and dikes.

the Thai legislation related to development methods was upgraded to catch up with the implementation of the agricultural irrigation projects.

2) Evaluation results

a) Since approximately 20 years have passed since the development study was implemented, it was not possible to receive proper responses from counterpart interviews or questionnaires. As a result, it was difficult to evaluate based on the five evaluation criteria.

b) Although there were primary waterways serving as channels in the eastern Kamphaen Sean District that was the target area of the evaluation study team, these were implemented in 1990 using the extensive method recommended in the "The Master Plan of the Mae Klong River Basin" (1977) and funds provided by the World Bank. It could not be ascertained whether the dikes, drains and farm roads recommended in the "Feasibility Study for Kamphaen Sean Irrigated Agricultural Development in the Mae Klong River Basin District" had been materialized.

(2) Feasibility Study for Agricultural Irrigation Development in the Mae Kuang River Basin

1) Outline and background of project

The development study was carried out from february 1981 to February 1982 with the aim of establishing irrigation works that would provide sufficient water in both rainy and dry seasons. A total of three dams were planned on the left, main and right bank to cover 20,000 ha from Chiang Mai Province to Lamphun Province, as well as water storage facilities and main and supporting canals for dikes and ditches.

On-site study at Kamphaen Sean District (Agricultural Irrigation Development in the Mae Klong River, Thailand)

2) Evaluation Results

Almost 70% of the irrigated area targeted in the development study was completed. There was no delay in carrying out the projects recommended in the development study, and thus the implementation process was ideal. Furthermore, ancillary projects have been continuously implemented by RID.

According to the JICA senior overseas volunteer dispatched to the region, the water storage is currently insufficient to cover the developed irrigation area.

a) Relevance

The Mae Kuang River region suffers from severe water shortage in dry seasons and floods in rainy seasons, making this research study relevant in solving these problems.

b) Effectiveness

It was obvious that the scope of this development plan was dam construction and establishment of an irrigation development plan in the targeted region. The final report made clear that the development study was implemented in line with those goals.

After the development study was completed, a study of next stage was implemented from 1982, expecting loans from the OECF (currently JBIC), and construction began from 1984. Judging from the OECF's 1982 study report and RID activities, the content, scale, implementing conditions and technology recommended in the development study were adequately considered.

Also, basic policies for projects such as dam construction and the establishment of an irrigation development plan were sufficiently examined in the report. The report gave sufficient consideration to technical analyses. However, it is rather difficult for current readers to understand the prospects of agricultural irrigation development policies at that time, water resource policies, agro-economic perspective and the socio-economic impact on the target area.

c) Efficiency

As the whereabouts of the members from this period are no longer known, study activities such as information on Thailand and Japan's input, communication or data collection in those days could not be obtained and thus could not be evaluated.

d) Impact

The recommendations of this development study were analyzed and supplemented in more detail when applying for loan aid from the OECF soon after the study. The recommendations of the development study and analysis conducted therein created the im-

pact described below in the target region through the projects.

i) The irrigated area has steadily increased due to urbanization, afforestation and inland aquaculture, and almost 70% of the initially planned area has been irrigated.
ii) Dam construction resulted in water control and prevented loss of 27 million baht (based on value conversion of the 24% estimated water lost in floods in 1997).
iii) Land use within the region targeted in the project has increased every year due to urbanization. After irrigation development, agriculture began to be focused on chili peppers, vegetables, fruit, and inland-fishery rather than traditional rice cultivation.
iv) A comparison of the harvests in 1992/1993 and 1996/1997 shows that while yields did not change in the rainy seasons, yields in dry seasons increased by 45.5%. The Lampuhn region saw a 78.6% increase in yield in dry seasons.
v) Inland aquaculture: Fish catches increased 120 tons in the weir and 150 tons in fish hatcheries.
vi) As of 1999, there were 130 Water Users' Groups (WUGs) and 12 Water Users' Associations (WUAs).
vii) Dam water has not only been used for irrigation, but also supplied to the Doi Salet District in Chiang Mai Province.

e) Sustainability

The RID is the primary supporter of sustainability, and regional offices still continue activities in line with the farmers' organization and irrigation development as part of the Mae Kuang Operation and Management Project (MKOMP). Sustainability has been achieved.

The office of the Mae Kuang Irrigation Agriculture Development Project (MKIADP) strengthens the roles and responsibilities of WUGs. In 1995, the total number of MKIADP staff exceeded 124 people. Among them, 22 are in charge of water management, taking responsibility for 1,300 ha in area and 31.3 km in distance.

As described above, after the development study was implemented, offices were set up in the applicable regions under the MKIADP and MKPMP and efforts were made to ensure the project's sustainability.

(3) Feasibility Study for Sakae Krang River Basin Irrigation Project

1) Overview and background of study

The evaluated development study targeted 6,300 km^2 of the Sakae Krang River Basin in the northwest region of the central Chao Phraya Plains. The study, conducted between September 1984 and March 1986, aimed to review a water resource development plan for the Sakae Krang River, select dams to be launched and establish an irrigation development plan. The study was implemented and planned in line with the national goals advocated in Thailand's Fifth National Economic and Social Development Plan (1982 − 1985).

Since resolving environmental problems had become an essential issue, debate over the start of projects recommended in this development study centered on development and the environment. This evaluation considered the relationship between the development study and environment from the following perspectives.

a) Was environmental assessment included within the scope of study?

Based on the S/W of the study, three environmental experts participated in the development study group. RID described its appointment of environmental experts from related organizations using RID funds. Judging from items included in the overview (work allocation) of the environmental assessment's implementation plan submitted to RID by the JICA study group, it is clear that environmental problems became one of the study themes upon implementation.

b) How was work allocated for the environmental study?

The implementation plan for the environmental study clarifies which environmental assessment items are allocated to the JICA study group and to RID. The JICA group was responsible for forestry study and RID was primarily responsible for investigating resident transfers in the target region and its influence on the local community.

In order to bring projects into operation, RID independently entrusted Chiang Mai University with an environmental-impact assessment in January 1991, and the plan to alleviate environmental impact in February 1994. These were done in preparation for applying for the 20th OECF loan.

c) In preparation for operation, what factors (conditions) had to be resolved to conserve the environment, and what efforts were sustained to do this?

The goal during implementation of the development study was to satisfy the Environmental Impact

Assessment (EIA), which is the environmental guideline for the National Environmental Board (NEB). After completion of the development study during the period leading up to the execution of what was proposed in the study, EIA became stricter, creating the necessity to implement additional studies to correspond to this issue.

At the same time, a public hearing was held and a survey to study the awareness of the local community was conducted, both mandatory before operations could commence. RID prepared the necessary materials for the public hearing. If the EIA were satisfied and NEB provided the approval (decision), it would mean that the operation is approved.

2) Conclusions derived from evaluation study

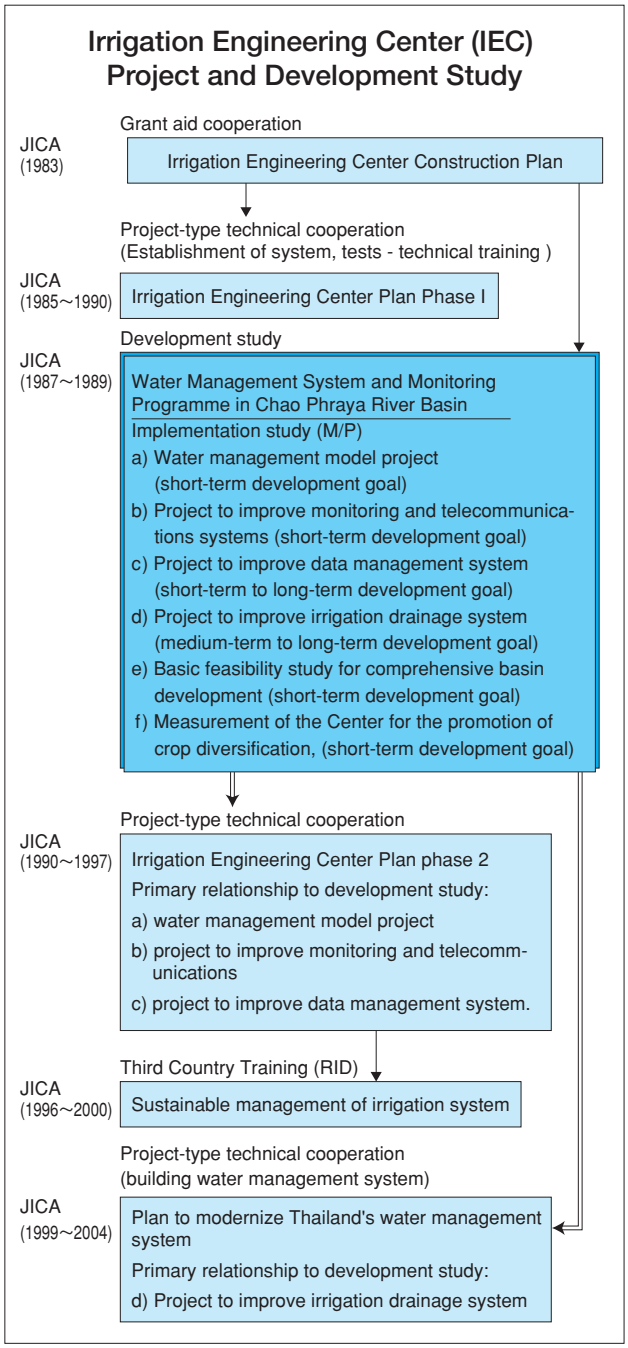
After completion of the development study, the EIA became stricter, and since the execution of proposed project has been under preparation, it was difficult to evaluate using the five evaluation criteria. The projects recommended in the development study still need to seek the a path of coexistence of the environment and development. As seen in the implementation of the OECF's SAPROF study, although prospect for a funding source was realized, the projects have yet to be materialized, in spite of RID's best efforts to resolve the environmental problems.

(4) Water Management System and Monitoring Programme in Chao Phraya River Basin

1) Overview and background of targeted proposals

The development study evaluated was conducted from January 1987 to March 1989. Its goal was to establish a plan to implement the six short, medium and long-term goals described below to ensure efficient and adequate management of water resources in the Chao Phraya River.

a) Water management model (short-term development project)
b) Project to improve monitoring and telecommunications systems (short-term development goal)
c) Project to improve data management and telecommunications system (short to long-term development goal)
d) Project to improve irrigation and drainage systems (medium to long-term development goal)
e) Basic feasibility study for comprehensive basin development (short-term development goal)
f) Study for the Center for the Promotion of Crop Diversification (short-term development goal)



Prior to the development study, the Irrigation Engineering Center (IEC) project was conducted in 1983 using grant aid. After the completion of IEC, RID employees received training intended to augment institutional development and testing and technical abilities through the "Irrigation Technical Center Plan, Phase I" project-type technical cooperation. The development study was implemented to prepare the conditions for promoting the series of projects described above. The followings are the characteristics of this development study.

a) It was a technology transfer-type (know-how support) development study, and a pioneer for its

encouragement of collaboration.

i) It aims to establish the content of the IEC constructed in 1983 with grant aid.

ii) It was coordinated with and have synergic effect with the "Management Plan for a Flood Prevention System" study done by JICA Social Development Study Division, that was implemented during the same period.

iii) It considered even the contents of some of the proposed projects including the "Water Management Model".

iv) It reviewed IEC policy objectives, short, medium and long-term goals were set, and concrete projects were presented accordingly.

v) The content of the development study report was incorporated into the plans for the "Irrigation Technology Center Plan, Phase II" project-type technical cooperation that followed the study.

b) Unlike the other development studies implemented at the time, this study was not influenced by the change of government policy that shifted its direction from large-scale irrigation development to small-scale irrigation development.

2) Conclusions derived from evaluation study

The report can be categorized as a technology transfer type M/P development study, and the points outlined below are its distinguishing aspects. The series of IEC projects have been continuously implemented for over 20 years since the grant aid cooperation in 1983, involving a dispatch of experts, provision of equipment and the implementation of development studies and JICA cooperation, targeting a specific counterpart organization and theme.

a) Relevance

The development study was implemented in line with the Water Resource Policy in the Sixth National Economic and Social Development Plan (1987 to 1991). This plan discusses the need for irrigation facilities based on the growth by improved productivity, based on the premise that farmland is a limited resource, where the conventional method simply expands farmland. The plan points out the necessity of a more efficient use of farmland through the improvement of production process and water distribution system for the Chao Phraya River Basin. Given these needs, this development study is considered relevant.

b) Effectiveness

Since all recommendations made in the development study have been implemented, the study content, scale, prerequisites for implementation and technology was considered to have been adequately planned and suggested.

"Basin Observation point" constructed under Improvement of Communication / Observation System from the suggestion in the "Water Management System and Monitoring Programme in the Chao Phya River Basin"

c) Efficiency

This development study coordinates with JICA technical cooperation schemes such as grant aid in the past and project-type technical cooperation currently in progress. This aspect in itself testifies to the efficiency of the study.

d) Impact

Through surveys and interviews, the points listed below were confirmed as impacts secured in the six projects recommended in this development study.

i) Regarding water management, the project-type technical cooperation project "Irrigation Technology Center Plan, Phase 2" was implemented.

ii) Regarding improvement of monitoring and telecommunications systems, RID facilities (four observation stations donated by JICA) improved their management, reduced breakdowns and adapted to telecommunications systems.

iii) Regarding improvement of irrigation and drainage systems, an irrigation and drainage system intended to countermeasure floods in the Kawling region is under construction using a loan from the World Bank.

iv) Regarding improvement of data management systems, it is currently underway as part of the abovementioned project-type technical cooperation, the "Irrigation Technology Center Plan, Phase 2."

v) Regarding the basic feasibility study for comprehensive basin development, it was implemented under the name "Water Management Study in Chao Phraya Basin." It had an impact

on counteracting droughts during the dry season in irrigated regions and also on developing new water resources and environmental management.

vi) Regarding the Study for the Center for Promotion of Crop Diversification, a crop diversification program to expand the land capable of producing crops other than rice in the dry season has already been completed.

e) Sustainability

With JICA's continuous cooperation, RID was enriched in knowledge covering general water management. Also, RID is now capable of conducting studies related to Irrigation Drainage System Improvement Project (Kamling Project) by itself. However, it is necessary to further obtain knowledge and know-how regarding new issues such as environment protection, methods such as development through participatory approach, and creation of organizations among local residents.

7. Evaluation results: Republic of the Philippines

(1) Ilocos Norte Irrigation Project (F/S)

1) Outline and background of project

The development study targeted the irrigated region (22,600 ha) of Ilocos Norte in the First Administrative Block. The study was implemented from August 1978 to December 1980, aimed to establish irrigation facilities and water source development projects.

2) Conclusion derived from the evaluation study

The development study is understood as the most utilized study among the five development studies of the Philippines in this evaluation. The projects were implemented as recommended in the development study (Phase 1), with the exception of some minor changes due to the including of farmer's participation. One of the main reasons for this positive impact was that the project was implemented immediately after the planning. The L/A was actually agreed by the time Phase 1 was completed. Priority given to this project as a national issue ensured that the environment was conducive to operability.

"Sol Sona Head Works established through the realization of Phase 1 of this Project (Ilocos Norte Irrigation Project(F/S)), Republic of the Phillipines

a) Relevance

The development study is understood to be consistent with the Philippine Mid-Term Development Plan (1978 − 1982). The objectives of the Mid-Term Development Plan were to promote employment in rural villages, raise farmers' incomes and increase the productivity of grains. In line with the above, recommendations of the study aimed for were to (i) increase agriculture productivity, (ii) create employment opportunities within nearby areas, and (iii) provide basic infrastructure in rural areas such as drain and dike facilities, roads, agricultural extension system, and electricity.

On the other hand, the study did not include the scope of irrigation management by using the indigenous farmers' organization, Zanjera [7]. Therefore, the study was not relevant to some extent since the recommended project did not fully reflect the needs of farmers. However, at the end, the needs of the farmers were incorporated by including Zanjera in the design of the loan aid.

b) Effectiveness

In the period between completion of Phase I's on-site study in November 1978 and the start of Phase II in January 1980, the E/N for the "Ilocos Norte Irrigation Project (Stage I)"-a loan aid project through OECF that incorporated Phase I recommendations-was agreed in November 1979 and the L/A was agreed in July the following year. Thus, it could be understood that the Philippine side had a certain idea that this study could be implemented as a loan project by the OECF. The Philippine side was capable for implementing the project because they saw high possivility of yen-loan although the proposed project targeted as large area as 10,200ha.

c) Efficiency

The Philippine side actively participated in the

[7] Zanjera is a traditional irrigation system dating from the 1630s. This method is still used in the Ilocos region. In this system, members work together in democratic collectives to collect funds for building irrigation facilities, providing materials and labor, allocating water and managing irrigation facilities

development study actively and cooperated with the Japanese team. The study was efficient, although a lack of sufficient communication between both parties occurred from time to time. Concerning technology transfer, the Philippine side was able to gain additional knowledge in specific areas through F/S and formulation of the project.

The final report of the study included both sufficient qualitative and quantitative data. However, the final report did not include the description on research on Zanjera the traditional irrigation association, and it should have been referred to at least in the section on farmers' organizations. This is probably due to the fact that the study team did not include members specializing in farmer organizations or irrigation management.

d) Impact

The proposals from the development study that were implemented include the grant aid "Ilocos Norte Region Outskirt Irrigation Facility Project" and the loan aid "Ilocos Norte Irrigation Project (Stage I)." These projects had been already in formulation during the development study, while they were included in the recommendations in Phase I of the study.

The impact by implementing "Ilocos Norte Irrigation Project (Stage I)" includes increased productivity, increased income, and more systematic organization of water utilization associations in the targeted regions.

There is clear evidence of an increase in the yield per hectare in the target region. Before the project was completed, the average yield during the dry season was 2.51 tons per hectare per year (1983－1986), which increased to 4.42 tons per hectare per year (1997－1999). In the rainy season, the annual yield per hectare almost doubled as well. Average farmer's income increased from 8,075 pesos in 1982 before project implementation, to 66,381 pesos in 1996.

Furthermore, only four agricultural organizations were registered to NIA in 1980, however by 1999, this had increased to 28. Currently, irrigation management is implemented under a system resembling a more systematic Zanjera organization with NIA cooperation and has created a more systematic and effective management in the region.

e) Sustainability

As a result of implementation of the "Ilocos Norte Irrigation Project (Stage I)", which led to the development of a national irrigation system in the targeted areas, a more systematic irrigation management based on the Zanjera system was organized. In 1994, NIA's gate manager was responsible for managing the head works, and the management of channels for irrigation and ancillary facilities was entrusted to Zanjera. Furthermore, NIA and Zanjera representatives agreed that Zanjera would pay the equivalent of 1.5 kg cavan [8] per hectare per year for over 50 years to cover the project development costs. Management of irrigation facilities by Zanjera has become even more active than before. Given these facts, the development study is sustainable.

(2) Mabini Agricultural Development Project (F/S)

1) Outline and background of the project

This development study targets 11,500 ha in the Mabini irrigation region, aiming to improve agricultural production, increase stable rice production, improve farmers' income and increase employment opportunities by establishing a project that develops water sources and prepares irrigation facilities. The study was implemented from September 1981 to March 1982.

The need for the development study was based on the Philippine Mid-Term Development Plan (1978－1982), which stressed the expansion of irrigation facilities in order to increase rice production to meet the increasing demand.

Although the proposed projects of this development study have not been not implemented, the China Chen South American Construction Contractor Co. Ltd. expressed interest in the development study and has begun to implement a more detailed study. According to NIA, the study by China could be set as one of the priority projects if it met the submitted NIA standards. The development study has the possibility to be implemented as a loan project by China, if approved by the Investment Coordination Committee (ICC).

2) Conclusion derived from the evaluation study

The evaluation has found that the condition for technology transfer was not satisfied during the study implementation stage. It has been pointed out that there was insufficient mutual understanding particularly due to the lack of language ability of the Japanese team. In addition, both parties did not regard technology transfer as one of the purposes of the study.

After completion of the development study, the recommendations of the study were not been utilized mainly due to the unclear priority for the irrigation development plans in the first half of the 1980s. However, there is a possibility to utilize the results of the study as a loan

[8] One Cavan is equivalent to approximately 50 kg of Palay Rice.

aid project by China.

Since the development study's recommendations are currently in the preparation period for operation, it is difficult to evaluate using the five evaluation criteria.

(3) Improvement Project for the Operation and Maintenance of National Irrigation Systems (AMRIS [9], 18 districts) (F/S)

1) Outline and background of the project

The development study targeted the 35,000 ha AMRIS irrigation region stretching across the Bulacan and Pampanga provinces. The goal was to establish a project to improve existing irrigation facilities and strengthen irrigation management. The study was implemented from September 1982 to February 1984.

Although the recommendations of the development study have not been directly implemented, the following projects related to the targeted regions have been implemented since the study.

i) "Up-land Field Irrigation Technology Development (Phase I)", project-type technical cooperation, 1987 to 1992
ii) "Up-land Field Irrigation Technology Development (Phase II)", project-type technical cooperation, 1993 to 1998
iii) "Repair Plan for Irrigation Regulating Reservoir in the Angat River", grant aid, 1996
iv) "Part of Irrigation Operation Support Project I", World Bank, 1988 to 1992
v) "Part of Irrigation Operation Support Project I" , World Bank financing, 1993 to 2000
vi) "Part of Water Resource Development Program" , World Bank financing, 1997 to 2002

2) Conclusions derived from the evaluation study

Since information during the study stage was not fully available, it was not possible to evaluate the cooperation process between the Philippine team and Japanese team and the efficiency of technology transfer. Based on the fact that the scope initially described in the S/W was well-covered and that sufficient data and necessary items were explained, it appears that the study was thorough.

It addition, Philippine government policy has changed its priority area from developing new irrigation schemes to rehabilitating existing irrigations after this development study. As the feasibility study recommendations were not implemented as originally intended, it was not possible to conduct an evaluation using the five evaluation criteria.

(4) Improvement Project for the Operation and Maintenance of National Irrigation Systems (UPRIIS) (F/S)

1) Overview and background of targeted proposal

This development study targeted 112,000 ha of the UPRIIS irrigation region spanning the Nueva Ecija, Bulacan and Pampanga states. Similar to the AMRIS irrigation region, the goal was to establish a project to improve existing irrigation facilities and strengthen irrigation management. The study was implemented from September 1982 to February 1984.

2) Conclusions derived from the evaluation study

The proposal concluded an L/A in September 1998, 13 years after the development study was implemented, as the loan aid "Central Luzon Irrigation Project" and was then made operable. As the project has just started, it has not been completed yet. The development study consists of three parts: (i) repair existing facilities, (ii) expand irrigation facilities, and (iii) establish irrigation management organizations for newly expanded facilities. Although part of the recommendations of the development study, regarding to the repair of existing facilities, the actual implementation will be little different from the original recommendations as government policy has changed in the course of the 13 years.

The Mid-Term Development Plan (1983 to 1987) emphasized repairing existing irrigation facilities rather than developing new large-scale irrigation facilities. As a result, the development study did not include projects for new irrigation facilities. However, 13 years later, the 1999 to 2004 development plan emphasized both new irrigation facilities and existing irrigation facilities.

Consequently, in addition to improving existing facilities, the "Central Luzon Irrigation Project" included new development of large-scale irrigation facilities. This is distinctive as a case that was applied after a considerable length of time.

a) Relevance

The development study was relevant since it was consistent with the Mid-Term Development Plan of the Philippines in those days, which aimed to improve agricultural productivity by repairing existing irrigation facilities and enhancing water/irrigation facility

[9] Upper Pampanga River Integrated Irrigation Systems (UPRIIS), AMRIS and the Magat irrigation region are all irrigation regions with large-scale water reserve ponds, and the target of this development study is the Angat-Maasim irrigation region.

management capacity.

b) Effectiveness

The final report of the development study was well covered the scope initially described in the S/W. The structure of the report was also clear.

The development plan was primarily set to (i) upgrade and repair existing facilities, (ii) establish a central supervisory system for water management, and (iii) establish farmers' organizations. For the irrigation facilities, only the rehabilitation of existing facilities was planned and the expansion of facilities was not included.

Regarding strengthening of the operation and management system, establishment of the farmers' organization for water management was based on the needs of those farmers. From these perspectives, recommendations made in the study are likely to be applicable

c) Efficiency

Concerning the efficiency of technology transfer and communication during the study, it was not possible to obtain answers during the evaluation period, since most of the counterparts have either transferred to other institutions or retired. As a result, assessment regarding efficiency was not possible.

d) Impact

The recommendations of the development study were partially applied to the loan aid "Central Luzon Irrigation Project". The loan aid project employed what was recommended in the development study, in terms of rehabilitation of existing facilities, though recommendations regarding the central supervisory system was excluded, and the number of farmer organizations to be established was reduced.

e) Sustainability

Since the "Central Luzon Irrigation Project" to which this development study's recommendations were applied has just started, it is not possible to conclude the sustainability made possible thorough project implementation.

(5) Improvement Project for the Operation and Maintenance of Magat River Integrated Irrigation(M/P)

1) Outline and background of the project

This M/P study targeted the 102,000 ha Magat River Integrated Irrigation System (MARIIS), spreading across the Isabela, Quirino and Ifugao provinces. A study was implemented from February 1986 to March 1987 to establish an overall plan for strengthening the operation and manegement system.

The Magat Irrigation System has been one of three major national irrigation systems, the others being UPRIIS and AMRIS described earlier. Feasibility studies for UPRIIS and AMRIS were already implemented before the implementation of this development study. The Philippine government requested Japanese cooperation for a study that would serve as a summarization of irrigation management plans to establish a plan to strengthen the Magat region's irrigation management system. This later led to the implementation of an M/P study.

Although it could not be ascertained that the recommendations of the M/P led directly to projects, the following projects related to the regions targeted in this M/P were implemented.

i) "Irrigation Operation Support Project I" (partial), World Bank financing, 1988 to 1992

ii) "Irrigation Operation Support Project II" (partial), World Bank financing, 1993 to 2000

iii) "Water Resource Development Program" (partial), World Bank financing, 1997 to 2002

2) Conclusions derived from the evaluation study

The stance taken in M/P studies somewhat differs from that in F/S and this M/P study has developed a framework to strengthen the irrigation system management of the entire targeted region.

The M/P study report thoroughly covered the scope of the S/W and the structure of the final report was clear. The framework suggested in the recommendation could be understood as capable for the Philippine government, apart from specific items and methods suggested.

Since there are no projects directly related to the recommendation of the M/P, it was difficult to conduct evaluation based on the five evaluation criteria.

8. Recommendations Regarding Evaluation Methods for Development Studies

(1) Clear distinction between evaluation of past development studies and the future studies

In order to examine evaluation methods for development studies, it is essential to clearly distinguish the evaluation methods of past development studies and newly formed development studies. The main difference between the two is that the former did not have evaluation plans at the initial stage, whereas the latter undergoes ex-ante evaluations.

1) Evaluation of development studies implemented in the past

Since these types of studies were implemented when evaluation was not a major concern at the initial planning stage, monitoring or ex-post evaluation plans, in other words the baseline of the project, were not established before the full-scale study. This is true of almost all development studies implemented until the time of this evaluation.

Because there has to deal with the studies with no ex-ante evaluations for a while, it is essential to gather sufficient information to accurately comprehend the circumstances when initially planned when implementing ex-post evaluations of development studies. Therefore, not only report and documents on the full-scale study are required, but also preliminary study reports are quite valuable sources of information. It is particularly important to clarify which elements had been chosen for study and which had not, by ascertaining what was included in the initial scope from the preliminary study report. By examining the documents, it becomes clear how and why problems have developed in certain cases.

2) Evaluation of future development studies

In the case of new developpment studies planned for future implementation, it is possible to consider the evaluation plan in advance. It is necessary to create a PDM after implementing preliminary studies prior to the full-scale study. By doing so, a base for preparing the respective PDM for evaluation would be prepared before the terminal evaluation or the ex-post evaluation. It will clarify what were set as outputs and the project purpose initially.

It is also preferable to clarify the goals in terms of utilization, i.e., the ways in which the development study is used. By doing this, the direction of the study will become more obvious even at the ex-post evaluation stage.

Pustos head works, which it was made related to AMRIS study

(2) Review Evaluation Methods for Future Development Study

1) Development of evaluation methods integrating all stages from pre- to post-development studies

As described earlier, it is essential to consider evaluation methods that integrate every stage of the development study. One of the ways to do this is to prepare and utilize the PDM from before to after the implementation of the study, as in this evaluation. Also, setting application goals in the ex-ante evaluation document is another method for integrated evaluation. In any event, it is important to examine the role and how (who, when, how) to use evaluation methods in development studies.

2) Necessity to examine the evaluation perspective for each cooperation scheme

In addition to an integrated evaluation technique that covers all stages of a study, there is need to review evaluation perspectives that correspond to the diverse forms of development study in recent years. Two perspectives are needed to categorize cooperation schemes. One by format (e.g. studies that include M/P, F/S, D/D, with pilot study, etc.) and one by field (agriculture, forestry, fishery, etc.). Evaluation perspectives should be examined for both. For example, for format categories M/P can be further divided into policy-support types that set up development strategies in specific fields, or types that establish long-term or short-term plans taking execution into consideration. For field categories, for example, irrigation types and rural development types in agriculture can be considered.

(3) Set Up an Evaluation Implementation System

In the future, when establishing evaluation methods for development studies, not only should evaluation methods be examined, but it is also necessary to consider the structure for implementing evaluations.

This evaluation targeted development studies implemented in the 1980s when evaluation plans were not included at the planning stage, so the background of the request for the development studies could only be picked up from limited available information. In this case, substantial effort is needed to obtain reliable information. The following two points are recommended to improve the current situation and the efficiency and quality of the evaluation studies.

First, in order to conduct an evaluation based on highly

reliable unbiased information, a new system should be built, a system that is capable of attaining necessary information for evaluation in every stage of the development study, starting from the time of request to its completion.

For example, after receiving a request and before conducting a study, documents including important information, such as the background for requesting the study, the process of deciding the scope of the study, and why the study has been approved are prepared. By making these documents accessible at the time of evaluation, the necessary background of the study would be easily clarified. This includes what the original need of the study was, how the scope was revised through negotiations, what was finally included in the scope, and what was expected by utilizing the study.

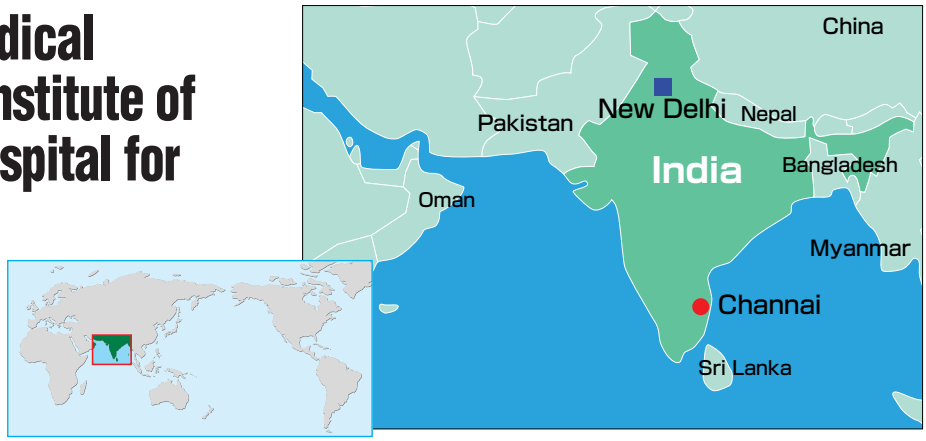
Second, it is important that necessary information for evaluation be included in the related documents. Even if a system that ensures easy access to information were built, it would be meaningless if the necessary information for evaluation was not included.

The most important information for evaluation studies shows how the study output was expected to be applied. This clarifies the perspective necessary for measuring the use of a particular study, for example the implementation of an ex-post evaluation.

The goal for application is not only important when implementing the evaluation, but is also very important when implementing development studies. By clarifying the goals for application in advance, more feasible proposals could be derived from the full-scale study. As a result, the overall effectiveness of the development study would further improve.

India

Improvement of Medical Equipment for the Institute of Child Health and Hospital for Children in Madras



Project Sites Channai (Madras)

1. Background of Project

The Institute of Child Health and Hospital for Children (537 beds), located in Channai (formerly Madras,) one of the major cities in Tamil Nadu, India, has been playing a central role in the nation's pediatric medicine since 1968. Since then, the hospital has been providing pediatric medical care to children aged 12 and under. The Institute is also known for its free medical care activities for children from impoverished families, and in fact, 85% of its patients are comprised of such individuals. It also assumes a role of a medical education facility, owing to its affiliation with Madras Medical College. However, factors such as the lack of equipment and the worsening condition of the existing equipment have been an obstruction to the hospital in providing sufficient medical services at all levels − from primary to advanced. The situation prompted the Government of India to draw up a plan called "The Project for the Improvement of Medical Equipment for The Institute of Child Health and Hospital for Children in Madras" and to request the Government of Japan to provide Grant Aid.

2. Project Overview

(1) Period of Cooperation

FY1997

(2) Type of Cooperation

Grant Aid

(3) Partner Country's Implementing Organization

Tamil Nadu Health and Family Welfare Department
Institute of Child Health and Hospital for Children

(4) Narrative Summary

1) Overall Target

Maternal and child health situations are improved in Tamil Nadu.

2) Project Purpose

Maternal and child health situations are improved at the Institute of Child Health and Hospital for Children.

3) Outputs

Medical equipment and facilities are improved at the Institute of Child Health and Hospital for Children.

4) Inputs

Japanese Side

Grant	667 million yen (E/N amount)

3. Members of the Evaluation Team

JICA India Office
(Commissioned to FAITH Consultant)

4. Period of Evaluation

11 December, 2000 − 15 December, 2000

5. Results of Evaluation

(1) Relevance

Despite the fact that children at the age of 15 and under account for as much as 35% of its total population in India, pediatric care in India has been quite inadequate. This project met the Government of India's agenda, as, in an attempt to address this situation, the Government had set pediatric health and medical care improvement as its primary objective under its 9th Five-year Health Care Plan (1998 − 2002)'s. In addition, an influx of the poor from the surrounding areas to Channai has been steadily increasing, further worsening the city's health and medical services to the poor both in terms of quality and quantity. The younger the children, the more vulnerable they are to illnesses. Since this project helped reduce both the morbidity and mortality rates among children, in this sense, too, the project met the interests of the poor household, provincial and national governments. At the same time, this project contributed to the improvement of The Institute of Child Health and Hospital for Children's functions, which has been in the vanguard of Indian pediatric medicine for many years. Therefore, in this regard, too, the project was also highly relevant.

(2) Effectiveness

A total of 214 pieces of medical equipment, including ones for ultrasonography, have been installed in the hospital's 27 departments through the project. This improved the hospital's ability in providing medical treatment and strengthened the medical facilities' capability. For example, in 1997, before the medical equipment was improved, surgery conducted at the hospital numbered 9,136. After the improvement, however, this number increased by about 27% to 10,349 in 2000. Moreover, the improvement can also be seen in the hospital's ability to provide medical treatment, as, in comparison to 1997, the ultrasound and biochemical examination rates rose by about 41% and 44% respectively in 2000. Similarly, in comparison to 1997, the institute saw a 19% increase in the number of outpatients in 2000. Although the number of emergency cases doubled from 3,036 in 1997 to 6,797 in 2000, the number of deaths in such cases almost halved from 144 to 74. These numbers suggest that the hospital's ability to render medical treatments and operate facilities properly has dramatically improved through the equipment installed.

After the project implementation, the number of degree holders in pediatric medicine increased from 27 in 1998 to 32 in 2000. Background factors for this include the fact that the medical students now have more clinical training opportunities due to the increase in the number of patients. In other words, with the increase in the number of patients, students have more opportunities to study various cases and to treat serious cases. Another factor, among others, is the fact that the project-provided monitor has enabled students to observe more operations.

In addition, in order to promote public health education for local residents, the project provided a vehicle to travel from 20 to 30 km a day to visit various places including schools.

(3) Efficiency

The quality, quantity and performance of equipment provided met the hospital's expectation. The costs spent on transportation etc. were also appropriate. Moreover, there were no delays in delivery, therefore, the procurement of equipment was judged to have been carried out smoothly.

(4) Impact

According to a statistics in 2000, more than one third of the hospital's patients are from outside of Channai and its surrounding areas. About 5% of the total number of patients are from neighboring provinces. Moreover, the number of patients transferred to other facilities significantly decreased from 3.85% in 1998 to 0.84% in 2000. These numbers suggest that the improved rates of effectiveness of treatment and complete cure have promoted patients' trust more than ever.

(5) Sustainability

The Government of Tamil Nadu has already staffed the hospital with such personnel as specialized engineers and physicians. In addition, the Government also appropriated about 40 million yen as equipment maintenance costs in FY1999/2000. Similar kinds of assistance from the Government can be expected continuously in the future, therefore, overall, the project's sustainability is recognizable.

Pediatric Operating table

However, some uncertainties remain. First of all, necessary manpower to operate equipments may remain insufficient, as there is a shortage of specialized engineers etc. in India. Also, there is a lack of awareness in the necessity of preventive maintenance among the personnel involved. Moreover, the annual maintenance contract between the hospital and supplier is yet to be agreed for some of the equipment. Therefore, the equipment maintenance system is not completely established at this point.

6. Lessons Learned and Recommendations

(1) Lessons Learned

In projects aiming to provide equipment such as this, end-users sometimes depend heavily on delivery and/or maintenance venders and thus fail to clearly understand how to/how often they should do maintenance on the equipment after the delivery. Therefore, it is desirable to provide end-users with training to learn the basics on maintenance and preventative maintenance techniques, if necessary.

(2) Recommendations

The significant increase in the number of patients that The Institute of Child Health and Hospital for Children is experiencing may cause a shortage of beds in the future. Thus, it is deemed necessary for the hospital to consider expanding its facility as well as to improve its management efficiency.

Philippines

National Maritime Polytechnic Training Center Project

Project Sites Tacloban

1. Background of Project

The Republic of the Philippines has traditionally supplied large numbers of people as maritime manpower to foreign vessels. Therefore, the National Maritime Polytechnic (NMP) was established as a retraining institution for maritime officers. Although the institution had been attempting to provide special training for maritime officers to have adequate knowledge and skills, it was difficult to organize such training to meet the qualifications regulated in the STCW [1)] International Convention of 1978. This is because the institution had facilities, equipment, and training staff in short supply due to budgetary constraints.

In order to strengthen the capacity of the NMP, the Government of Philippines formed an expansion plan of the NMP, and requested that the Government of Japan provide Grant Aid as well as technical cooperation for its operation.

Complying with the request from the Government of The Philippines, the Japanese Government provided Grant aid to construct the National Maritime Polytechnic Training Center between 1984 and 1985. Shortly after its completion, the National Maritime Polytechnic Training Center Project (1985~1989) under the project-type technical cooperation scheme was introduced. The result of the terminal evaluation of 1989 led to the extension of the project period in order to offer further technical advice for preparing trainer's manuals. Moreover, the project was again extended as a follow up cooperation between 1991 and 1993 because the new curriculum was needed to add for adopting the revised STCW International Convention.

2. Project Overview

(1) Period of Cooperation

June 1985 − June 1989
June 1989 − December 1989 (Extended period)
December 1991 − December 1993 (Follow-up period)

(2) Type of Cooperation

Project-type Technical Cooperation

(3) Partner Country's Implementing Organization

National Maritime Polytechnic (NMP)

(4) Narrative Summary

1) Overall Goal

To ensure that the Filipino maritime officers have further employment opportunities on foreign vessels, and stretch their career field.

2) Project Purpose

Improved training and ratings given to maritime officers at the NMP obtain appropriate maritime knowledge and skills in compliance with the STCW Convention of 1978.

3) Outputs

a) The appropriate training module is developed.
b) Capacity of the NMP training staff is upgraded.
c) Facilities and equipment, in compliance with the STCW Convention of 1978, are set up in order to provide appropriate maritime technical training.

4) Inputs

Japanese Side

Long-term experts	18
Short-term experts	23
Trainees received	15
Local cost	299 million yen

Philippine Side

Counterparts	52

3. Members of Evaluation Team

JICA Philippine Office
(Commissioned to Local Consultant: Mr. Tito T. Oria, Sr.)

4. Period of Evaluation

15 February 2001 − 30 March 2001

5. Results of Evaluation

(1) Relevance

The Republic of the Philippines has had an abundant experience in supplying maritime manpower for foreign vessels. In addition, the maritime related business is regarded as being promising in terms of employment opportunities for the Philippines. Considering the importance of maritime human resource development , and its influence on their economic development, this project is deemed to be relevant, as it aimed at training maritime officers in response to the industry's needs.

(2) Effectiveness

The capacity of NMP staff has been upgraded through the training based on the training module developed as a part of this project. The NMP has also been providing training for students from the entire Philippines, and the newly installed facilities and equipment under this project allowed to conduct training and ratings directly for maritime officers. The numbers of training participants have increased, rising from 1138 per annum at the beginning of the project, to 3646 in 1989.

(3) Efficiency

In terms of schedule, the equipment were delivered and installed, and Japanese experts were dispatched as originally planned. The project was smoothly operated in coordination with the preceding Grant Aid project of 1984 − 85. For example, the NMP staff training was held even before the completion of the facility construction, which enabled the project activities to be started immediately once the facility was ready to use.

(4) Impact

The numbers of maritime officers who trained has become 107 thousand in the cumulative total between 1986 and 2000. Looking at this, the project can be recognized to have contributed to the maritime industry, by increasing and improving knowledge and skills of maritime officers. Recently, it has been made mandatory to take NMP maritime training courses as the pre-requirement in taking the maritime related licensure examinations.

Radar used in training

(5) Sustainability

Due to the shortage in budget for operation and management, the renewal of its facilities and equipment have fallen short of keeping up with the speed of degradation. In such a situation, providing updated training courses for maritime officers becomes increasingly difficult.

6. Lessons Learned and Recommendations

(1) Lessons Learned

It is necessary to be aware of the management capacity of an implementing organization, as its insufficiency will lead to a negative influence on the project itself.

(2) Recommendations

The NMP needs to establish a self-supporting system in terms of its budget to alleviate financial difficulty.

Maritime technology has shown significant changes as well as the private sector entry into the maritime officers' training business has been prominent Therefore, to secure sustainability, the NMP needs to reconsider their role in the field, and to review the present training including the curriculum. In so doing, it is necessary to give serious thought to the compliance of the maritime related licensure examination system, with the new conditions demanded under the revised STCW Convention.

1) International Convention on Standards of Training, Certification and Watch-keeping for Seafarers, 1978

Philippines

The Establishment of the SEAMEO Regional Center for Educational Innovation and Technology

Project Sites Quezon

1. Background of Project

The SEAMEO Regional Center for Educational Innovation and Technology (INNOTECH) is an international organization established in November 1965. INNOTECH aims at the development of educational methods, curriculums and teaching materials to meet regional needs with the cooperation of Southeast Asian countries and developed countries. The headquarterof INNOTECH had been moving among Thailand, Singapore and Vietnam in a 2-year period until the headquarter was settled in the Philippines in 1981. Taking this opportunity, the Government of the Philippines planned founding the Center of the Southeast Asian Ministers of Education Organization (SEAMEO) as a subordinate organization of INNOTECH. SEAMEO provides educators including teachers with the opportunity for training and research through education technology. They are actively involved in the development of human resources and teaching materials with the cooperation of neighboring nations. Given such circumstances, the Government of the Philippines requested from Japan a Grant Aid to supply equipment and construction of the facility for the establishment of the center.

2. Project Overview

(1) Period of Cooperation

FY1981

(2) Type of Cooperation

Grant Aid

(3) Partner Country's Implementing Organization

INNOTECH

(4) Narrative Summary

1) Overall Goal

The development of human resources in Southeast Asia is promoted.

2) Project Purpose

A center of excellence in educational innovation and technology is established.

3) Outputs

a) Construct and establish educational training center and other related facilities.

b) Supply equipment for the development of teaching materials.

4) Inputs

Japanese Side

Grant	1.02 billion yen (E/N amount)

3. Members of Evaluation Team

JICA Philippine Office
(Commissioned to Mr. Tito T. Oria, Sr., Consultant)

4. Period of Evaluation

15 February 2001 − 30 March 2001

5. Results of Evaluation

(1) Relevance

INNOTECH is an international organization established to meet the needs of the development of teaching materials and human resources in the educational field of the Southeast Asian regions. Contributing to the development of the organization through grant aid means benefiting the entire Southeast Asian region. The establishment of the center to execute educational training was proposed

when the INNOTECH headquarters were settled in the Philippines. Therefore, this project also responded of the needs of the Government of the Philippines, which was the originator. The achievements of INNOTECH regarded as satisfactory on the bases of the number of trainees accepted and number of trainings enforced, which indirectly confirms the relevance of the project.

(2) Effectiveness

INNOTECH has become able to accept 353 trainees on average per year by utilizing the accommodations and seminar rooms constructed by this project. Period and contents of the training courses vary, from an advanced three-month-course of to provide skills in educational planning and decision-making for senior officers. to cost-benefit analysis in education administration. During the 16 years from 1983 to 1999, the total number of trainees from Southeast Asian countries reached 5,292. Considering all of these aspects, it is concluded that the project has achieved its project purpose of playing a leading role in the development of educational innovation and technology in the region.

(3) Efficiency

The training center was constructed and audiovisual equipment were installed through this project without delay. The project was carried out smoothly and as planned.

(4) Impact

INNOTECH has greatly contributed to the development of human resources of the educational field in the Southeast Asian region. Also, the teaching materials developed in the organization are widely used in the region. Most notably, audiovisual equipment installed by this project led to the creation of many educational videos. Those educational videos have been used in the remote education programs of the region.

(5) Sustainability

INNOTECH is an international organization and is financially supported by contributions from member countries, meaning financially sustainability is ensured. INNOTECH is attempting to strengthen the system of accepting trainees by constructing more computer education classrooms and accommodation facilities besides the one constructed by this project.

INNOTECH

6. Lessons Learned and Recommendations

(1) Lessons Learned

The most important factor for success is that the partner country's implementing organization is stable and has an operating capability with high sustainability.

(2) Recommendations

INNOTECH is presently executing a Third-country Training Program called "Technology Applications in Education: Teachers and Teacher Trainers" (fiscal 1999 − fiscal 2003) with JICA. Considering INNOTECH as the foremost international organization of the region. It is expected that it is more actively committing and contributing to regional cooperation.

Kenya

The Kenya Medical Research Institute (KEMRI) Technical Cooperation Project

Project Sites Nairobi

1. Background of Project

The diseases of diarrhoea, hepatitis and schistosomiasis were the third leading cause of death in Kenya, behind malaria and respiratory diseases, accounting for 10% of all deaths. The Government recognized the importance of a healthy population for national development and put a top priority on preventive medical care. This Project developed and strengthened a research system for controlling infectious diseases, particularly viral diarrhoea, viral hepatitis, bacterial diarrhoea, and schistosomiasis at KEMRI, a biomedical research institute established in 1985 with grant aid from Japan.

2. Project Overview

(1) Period of Cooperation

11 May 1985 − 30 April 1990

(2) Type of Cooperation

Project-type Technical Cooperation

(3) Partner Country's Implementing Organization

Kenya Medical Research Institute (KEMRI)

(4) Narrative Summary

1) Overall Goal

The capability of KEMRI is strengthened to control infectious diseases in Kenya.

2) Project Purpose

Human resources at KEMRI are developed by research activities in model areas.

3) Outputs

a) Community-based studies of infectious diseases are promoted.

b) A study of rota virus gastroenteritis for infants is promoted.

c) A community-based study of hepatitis B is conducted in a rural area.

d) Diagnostic reagents for hepatitis B are put to trial.

e) Schistosomiasis control in Kware is improved.

4) Inputs

Japanese Side

Long-term experts	28
Short-term experts	29
Trainees received	21
Equipment	683 million yen

Kenyan Side

Counterparts	31
Local cost	

3. Members of Evaluation Team

JICA Kenya Office
(Commissioned to Almaco Management Consultants)

4. Period of Evaluation

7 November 2000 − 25 January 2001

5. Results of Evaluation

(1) Relevance

The Government of Kenya had outlined the strengthening of infectious disease control, preventive medical care, more training opportunities for medical personnel, promotion of community-participation, and strengthening the role of KEMRI in infectious disease control in the National Development Plan and the Ministry of Health (MOH) Development Plan for 1984 − 88. The Project was in line with these Government policies.

(2) Effectiveness

Human resources at KEMRI were successfully developed. A total of 57 Japanese experts were dispatched for training and technology transfer to counterparts, and 31 counterparts were involved in the Project as investigators or administrators, of which 21 were trained in Japan. During the Project period, the counterparts trained a total of 5,000 community people including health officers.

The technology transfer and modern equipment introduction improved the efficiency of research activities and the overall research level at KEMRI.

(3) Efficiency

The Project was carried out on schedule and at the anticipated budgets. Dispatch of experts and acceptance of trainees were also on schedule.

(4) Impact

KEMRI developed a blood screening kit for Hepatitis B (KEP-CELL kit) that was approved by the MOH. Approximately 800,000 kits were ordered for tests countrywide. KEMRI's capability was also strengthened. One of the project's results is the significant reduction in the prevalence of schistosomiasis: the infection rate in Mwachinga and Mtsangatamu decreased from 68% to 37% and 60% to 29% for adults, and from 92% to 45% and 72% to 35% for children, respectively.

(5) Sustainability

Since 1979, government policies have supported KEMRI's activities of research, provision of human resources, and improvement of public health. However, the country's severe financial conditions forced the Government not to allocate sufficient budget to KEMRI, hindering KEMRI's research and the implementation of the infection control measures that were developed in the Project.

The maintenance system of equipment in KEMRI has also been inadequate for sustainability. No detailed records existed, and damaged equipment was found not repaired due to lack of expertise, spare parts or funds. Annual maintenance schedules were also not prepared.

6. Lessons Learned and Recommendations

(1) Lessons Learned

The project agreement must clearly identify and allocate responsibilities to participating parties. Adequate consultations between implementing teams and other interested parties are crucial for effective project planning and implementation. Networks and good relationships should be established between experts and counterparts in order to realize the project purpose.

KEMRI

(2) Recommendations

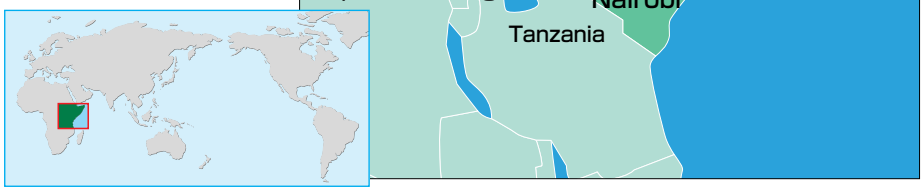
For site selection, infection rate should be considered. The Project contributed to a decrease in the infection rate, particularly of schistosomiasis of all ages in model areas. The participation of the community and other concerned people must be promoted for an effective and sustainable project. For appropriate management of the introduced equipment, reinforcement of the maintenance system, including registering is necessary.

7. Follow-up Situation

The Research and Control of Infectious Diseases Project, Phase I was implemented from May 1990 to April 1995 with a one-year follow-up, followed by the Research and Control of Infectious Diseases Project, Phase II from May 1996 to April 2001. The Project for Research and Control of Infectious and Parasitic Diseases is planned from May 2001.

Kenya

The Horticultural Development Project in Kenya



Project Sites Thika

1. Background of Project

The Government of Kenya has introduced macadamia nuts as a cash crop alternative to tea and coffee since 1964. With little progress after efforts for production improvements, the Government requested Japan to assist in increasing production. In response, the Government of Japan dispatched an expert to Kenya for the quality improvement of macadamia nut strains. The expert confirmed the high potential of macadamia nut production and the project-type technical cooperation "The Horticultural Development Project" was commenced in 1985.

The Project ended up with a one-year extension and two-year follow-up.

2. Project Overview

(1) Period of Cooperation

4 December 1985 − 3 December 1990
4 December 1990 − 3 December 1991 (extension)
4 December 1991 − 3 December 1993 (follow-up)

(2) Type of Cooperation

Project-type Technical Cooperation

(3) Partner Country's Implementing Organization

Kenya Agricultural Research Institute (KARI)

(4) Narrative Summary

1) Overall Goal

Macadamia nut production in Kenya is promoted.

2) Project Purpose

Research activities of the National Horticultural Research Institute are promoted by developing macadamia nut growing technology. Personnel engaged in macadamia nut production are trained.

3) Outputs

a) Superior strains are selected.
b) Surveys are carried out and information is extended on 1) macadamia nut growing, 2) pest control, and 3) soil and plant nutrition.
c) Human resources in macadamia nut production are developed.

4) Inputs

Japanese Side

Long-term experts	11
Trainees received	22
Equipment	210 million yen

Kenyan Side

Counterparts	29
Local cost	

3. Members of Evaluation Team

JICA Kenya Office
(Commissioned to Almaco Management Consultants)

4. Period of Evaluation

15 March 2001 − 31 March 2001

5. Results of Evaluation

(1) Relevance

The 1979/83 Development Plan stipulated that horticultural development and related research and development would receive high priority. The 1984/88 Development Plan focused on development of technologies appropriate to specific agro-ecological zones and for specific crops in the agricultural research policy. Since macadamia nuts are well adapted to the climate in the wide area of

Kenya, they appear promising as a cash crop, but there had been little extension, so the project is considered to be relevant.

(2) Effectiveness

The Project selected the best strains for the project site, and identified the appropriate nature of soil, depth for growing, and nutrition necessary. Technologies for higher yield, such as pruning, were transferred to rural areas through training. Extension activities, and publication of 14 magazines and 3 leaflets were other achievements. Training in Japan and technology transfer by experts enhanced the capabilities of farmers and improved the function of KARI.

Time constraints caused some issues to remain. For instance, relevance between pruning technique and planning density, identification of suitable intercrops, and pest control of fruit trees other than macadamias were not sufficient. Another constraint was of the insufficient duration of short-term experts that caused some survey results to be confirmed after the experts left the country.

(3) Efficiency

The Project was undertaken efficiently within the designed frame of time and budget.

Some issues found regarding the Japanese side included language constraints, delayed dispatch of experts, and insufficient duration of short-term experts.

Issues found regarding the Kenyan side were personnel transfers, low remuneration to researchers, and inadequate budget allocation.

(4) Impact

KARI recognized that the Project contributed to the improvement of production efficiency of macadamia nut and increased the export volume. The export increased from 250 million tons in 1985 when the project commenced, to 810 million tons in 1999. The volume is expected to further increase with expansion of the global macadamia nut market. It is promising as a source of acquiring foreign currency. The project findings are expected to apply to neighboring countries with similar agro-ecological zones including Tanzania, Uganda, and Malawi.

(5) Sustainability

Many activities at KARI have been sustained, albeit at a slow pace, for seven years since the project termination. Sustainability for a longer term will require linkage between the public and private sectors, advanced policy for human resource development, and infra-structural development.

Seedlings ready for grafting (KARI)

6. Lessons Learned and Recommendations

(1) Lessons Learned

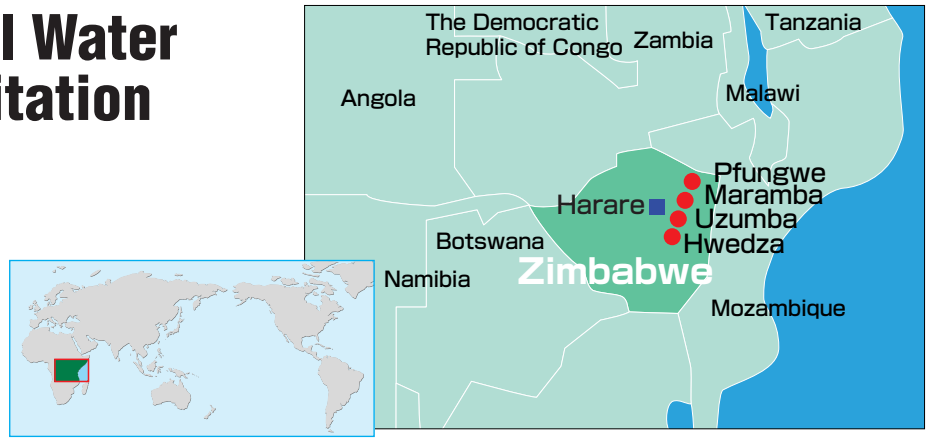
Issues found during the project, such as language constraints by the Japanese, delayed dispatch of experts and insufficient duration of short-term experts were mostly related to the dispatch of experts. When securing them, special attention beforehand is needed.

(2) Recommendations

For the sustainable development of activities in, for instance quality improvement, farm management, soil and nutrition, pests and diseases, it is necessary to reinforce the prompting of the implementing organization's financial self-sufficiency within the project cooperation period.

Zimbabwe

Integrated Rural Water Supply and Sanitation Project



Project Sites Uzumba, Maramba, Pfungwe, Hwedza

1. Background of Project

In the rural area of Zimbabwe, there still remains difficulties in obtaining safe water, causing many disadvantages such as the spread of waterborne deseases, or having to walk long distances to reach the places with water. Since its independence, the Government of Zimbabwe has placed the supply of safe water to citizens as an important policy matter. In recent years, the Government formulated the "Integrated Rural Water Supply and Sanitation Program" (1985－2005), which focused comprehensively on the water and health issues of citizens. Based on such situation, the Government of Zimbabwe requested Grant Aid from Japan with the aim of the setting water sources by drilling to improve the rural water situation. In the past Japan has implemented similar projects (1983 and 1988), and this project targeted East Mashonaland.

2. Project Overview

(1) Period of Cooperation

FY1993－FY1994

(2) Type of Cooperation

Grant Aid

(3) Partner Country's Implementing Organization

Department of Water Development (DWD) Ministry of Health and Child Welfare (MOHCW) Ministry of Local Government, Public Works and National Housing (MOLGPWNH) Ministry of Land, Agriculture, and Water, State Office of Mashonaland.

(4) Narrative Summary

1) Overall Goal

By improving the access to safe water, to reduce the outbreak of waterborne diseases.

2) Project Purpose

By improving the water supply situation, to supply safe drinking water to the people in the target area.

3) Outputs

The necessary equipment for deep well drilling is installed.

4) Inputs

Japanese Side

Grant	941 million yen (E/N amount)

Zimbabwean Side

Approx. 29 million yen
(Management and maintenance costs)

3. Members of Evaluation Team

JICA Zimbabwe Office
(Commissioned to Ernst and Young Associates (Private) Ltd.)

4. Period of Evaluation

February 2001

5. Results of Evaluation

(1) Relevance

Since its independence, the Government of Zimbabwe has made efforts to achieve safe water supply for all citizens. It formulated "The Integrated Rural Water Supply and Sanitation Program" as a basic plan in 1985－2005 and focused on the implementation of the Program as one of the most important policy measures. The access ratios to safe water, for example, were as low as18% in the UMP and 46% in the Hwedza, the two targeted areas of

this project. Therefore, there used be chronic occurrence of waterborne diseases and water drawing labor entailed by women and children due to the poor access to water. This project was useful for the improvement of such conditions, and met with the needs of the local people.

(2) Effectiveness

In the project, a total of 432 boreholes with the planned depth were completed, with the initiative of the DWD staff in carrying out the drilling. Out of these, 364 holes successfully provided water at the time the boreholes were drilled. This represents a success rate of 77% of drilled boreholes, which was higher than the estimated rate of 70% at the planning period.

The number of the people that benefited from this situation was estimated as 156,283 at the Basic Design Report of the project, however; it reached up to 195,391 according to the survey in December 1999. Therefore, it can be said that the project purpose has been achieved.

(3) Efficiency

Prior to the actual drilling in the project areas, test drillings of 40 boreholes were conducted mainly by the Japanese contractors. These test drillings were primarily meant to provide training for the the DWD staff. The necessary techniques such as how to operate the equipment were transferred, and thus all drillings in the project areas by DWD staff were completed smoothly. However, the cost per borehole of the drilling was about 70,000 yen, which was higher than the estimated cost of 56,000 yen in the initial plan. Moreover, it took about four years to drill around 400 wells due to the lack of the DWD budget, not the one year in the original plan.

(4) Impact

As for the socio-economic impact of this project, the average distance to water supply points has significantly reduced from the previous 5-7 km to around 1.5 km. Moreover, the incidence rate of waterborne diseases decreased because more people became able to access safer water than before. The number of people who suffered from diarrhea caused by water was 5,877 in the UMP area in 1996, it decreased to 4,133 in 2000. Also, in the Hwedza area, the 4,529 in 1997 decreased to 2,273 in 1999. Moreover, the advantage of borehole water has gradually been recognized by the local beneficiaries for the prevention of water-born diseases such as cholera.

(5) Sustainability

In the project areas, an increasing number of local people were willing to be involved in activities such as making fences for preventing accidents around the boreholes or repair and maintenance of the pump system. Therefore, it can be said that ownership among the people is becoming stronger. Moreover, because the project selected the boreholes and the pumps taking the sustainability into consideration, the maintenance would not be difficult either technically or financially. Hence, the sustainability of the effect of the project is deemed to be high.

6. Lessons Learned and Recommendations

(1) Lessons Learned

Awareness that borehole water is useful for preventing waterborne disease from spreading quickly among the people. Therefore, health education to provide the knowledge such as the relationship between water and health are desirable to be conducted to make projects more effective. Furthermore, community-based management systems for the maintenance and the reserve fund system should be established in accordance with projects.

Bolivia

Urban Sanitary Equipment Project (Phase 2)

Project Sites Oruro, Potosi, Talija, Trinidad

1. Project Background

The "National Program for Urban Development and Sanitation in Bolivia (PRODURSA)", and "the City Solid Waste Environment Plan of Bolivia (GARSU)" are two national plans for waste disposal. Out of the nine subject cities in the latter plan, excluding Sucre, Cochabamba and Cobija, where the plan has already been implemented, cleaning equipment service plans was going to be promoted in six cities (Santa Cruz, El Alto, Oruro, Potosi, Talija, and Trinidad). However, as a result of the shortage of equipment and the inappropriate waste disposal system in each city, waste used to be left uncollected and the cities thus face serious environmental hygiene problems such as bad smells and occurrences of cholera. As a result of this situation, the Government of Bolivia requested Grant Aid from Japan for the acquisition of equipment needed for waste collection and disposal.

This evaluation was enforced in cities that were the subjects of cooperation in the second phase.

2. Project Overview

(1) Period of Cooperation

FY1992 − FY1993

(2) Type of Cooperation

Grant Aid

(3) Partner Country's Implementing Organizations

Ministry of City Management, National Fund for Regional Development (FNDR), and the Urban Cleanliness Municipal Companies in Oruro, Potosi,Talija and Trinidad.

(4) Narrative Summary

1) Overall Goal

By the year 2000, 95% of the solid waste in Potosi, Oruro, Talija and Trinidad is processed .

2) Project Purpose

The solid waste collection and disposal capacity is improved in the cities of Potosi, Oruro, Talija and Trinidad.

3) Output

a) Distribution in each city of solid waste collection conveyance equipment.

b) Provision of equipment for burying waste in each city.

4) Input

Japanese Side

Grant	1.134 billion yen (1/2)
	1.736 billion yen (2/2)
	(E/N amount)

Bolivian Side

Land for solid waste treatment site

3. Members of Evaluation Team

JICA Bolivia Office
(Commissioned to Local Consultant Ramiro Arzabe V, Mario Saravia, Brian Terceros V., and Gabriela Palao B)

4. Period of Evaluation

17 October 2000 − 15 December 2000

5. Evaluation Results

(1) Relevance

This project installed equipment for waste disposal based on the needs of the targeted cities, as part of the improvement of the cleaning system in each city. As a result, many citizens were able to access the waste disposal service including low-income groups who were not able to receive the service. before The relevance of this project can be evaluated as high since the scale of the equipment was appropriate, and it was suited to the geographical features and the road conditions of each city.

(2) Effectiveness

The operation of the waste collection systems improved in each city, with proper disposal occurring for 85%-95% of the solid waste. In the future, if awareness and cooperation for city cleaning services from citizens is attained, the effectiveness of the project can be even higher.

(3) Efficiency

In Oruro City, equipment was insured and a maintenance management system was established as a result of entrusting operation and management of the supplied equipments to a private company. On the other hand, these measures were not implemented in Potosi City, where the supervision of the private company was insufficient, and in Trinidad City and Tarija City, where they did not entrust operation and management to a private company.

Most of the equipment provided was properly used. In Oruro and Potosi, the activities to transport and dispose waste into reclaimed land were proceeding smoothly. On the other hand, there were problems in Talija, where waste was lying exposed on the surface of the reclaimed land due to negligence of the cleaning company. In Trinidad, access to the reclaimed land became impossible during the rainy season, and thus the waste had been left temporarily at the entrance of the reclaimed land. Although the situation in Tarija and Trinidad raised concerns vis-`a-vis environmental pollution, there were no major effects.

(4) Impact

By executing this project, the area covered by the waste disposal service increased three-fold from before the project in Trinidad and four-fold in Talija. In addition, waste disposal began to take place not only in the four cities subject to this project, but also in the surrounding areas.

As the covered area of waste disposal service expanded, the demand for manpower increased, creating new employment opportunities in the area, especially that of unskilled workers. In Potosi city, not only simple waste disposal was being carried out, but also activities went one step further, such as the manufacturing of recycled paper and organic waste resolution by compost bins.

(5) Sustainability

The cleaning companies in both Oruro and Potosi cities have efficient organization. However, for the cleaning companies in Talija and Trinidad city, the personnel systems and the various contracts are not systematized, which means that the organizational structure is somewhat weak. This implies difficulty in continuing the operation. Financially speaking, all the cleaning companies can manage their current expenses with the fees collected from citizens. However, regarding the repayment of money loaned and the expenses for the coming renewal of equipment, there are few prospects and the sustainability is deemed to be low.

Provided vehicles

6. Lessons Learned and Recommendations

(1) Lessons Learned

In the future, when similar cooperation is carried out, the operation and management of the provided equipment should be entrusted to private companies to raise its efficiency. At the same time, it is important to carry out public relation activities on waste disposal to promote participation of the local residents. In addition to this, it is desirable to develop new technologies and a method of recycling waste that foresees the future activities such as that observed in Potosi.

(2) Recommendations

The level of cleaning fees should be re-examined to make the cleaning company financially sustainable, while taking into consideration the income level of the local residents and financial assistance from the local government, so that equipment can be purchased and loans can be repaid. Moreover, each cleaning company should improve its operation by strengthening the personnel system, as well as equipment maintenance and the management system. In particular, as for the cleaning companies in Trinidad and Talija cities, it is necessary to entrust the operation and management of the installed equipment to private companies.

Each city should carry out research regularly to make possible the comparison and measurement of the influence of different types of waste, and to explore the feasibility of introducing new technology.

Chile

Plant Genetic Resources Conservation Project

Project Sites Vicuña, La Serena, Santiago, Chillán, Vilcún

1. Background of Project

Chile has a variety of crop production and plant resources owing to the varied climates found within its land that runs 4,300 km north and south along with the Andes Mountains. Agriculture is the main industry accounting for 16% of total employed population and about 40% of exports. Through the Chilean National Agriculture and Livestock Research Institute (INIA), the Government has exchanged information with foreign and international agricultural research organizations, promoted production of wheat, maize and rice, and endeavors toward breed improvement for promoting export crop production.

Chile received loans from the Inter-American Development Bank (IDB) in March 1986 for equipment for plant genetic resource research, and made a request to Japan for a project-type technical cooperation for human resource development.

2. Project Overview

(1) Period of Cooperation

1 January 1989 − 31 December 1993
1 January 1994 − 21 December 1995 (follow-up)

(2) Type of Cooperation

Project-type Technical Cooperation

(3) Partner Country's Implementing Organization

Chilean National Agriculture and Livestock Research Institute (INIA), Ministry of Agriculture

(4) Narrative Summary

1) Overall Goal

The qualities of products for export and domestic consumption that adapt to the Chilean agricultural environment are improved.

2) Project Purpose

A modern management system that collects, conserves, evaluates and uses plant genetic resources is consolidated.

3) Outputs

a) Construction of Seed Banks and other facilities (Chile and IDB):
   1) Seed Banks are constructed with appropriate functions.
   2) A quarantine greenhouse is constructed with appropriate functions.

b) Genetic resource program:
   1) Genetic resource management and research is conducted.
   2) A quarantine system for genetic resources is established.
   3) Resources including biotechnology are utilized.

c) Exchange of necessary information and research materials is carried out.

4) Inputs

Japanese Side

Long-term experts	4
Short-term experts	34
Trainees received	33
Equipment	292 million yen
Local cost	29 million yen

Chilean Side

Counterparts	36
Local cost	107 million yen

Establishing Base Banks, Active Banks and labs (incl. loans from the IDB)

3. Members of Evaluation Team

JICA Chile Office
(Commissioned to local consultants)

4. Period of Evaluation

3 December 2000 − 30 March 2001

5. Results of Evaluation

(1) Relevance

This project was the first attempt for conservation of plant genetic resources in Chile. Coupled with IDB loans, this project of human resource development in this field had high relevance.

(2) Effectiveness

The storage rate in the Base Banks was less than 20% due to funding shortage, but utilization of genetic resources has been rapidly growing in the last five years except for that of biotechnology for breeding programs.

Quarantine facilities have been used for other purposes for the last two years, since the number of plant quarantine requests has been decreasing in the past eight years, down to not more than a few hundred per year. This is because the Chilean Agricultural and Livestock Public Cooperation (SAG) took over the functions of quarantine, and the number of imports of tissue culture plantlets in a method that does not require special isolation increased.

(3) Efficiency

The partnership among four project sites became weak due to decentralization of the INIA and resulting distinctive character of each sites.

Base and Active Banks had too much empty space while requiring high maintenance fees. In addition, uneven-sized containers and hand-written labels were used, and computers needed repair.

On the other hand, good research results were obtained regarding use of genetic resources within limited budget and resources.

(4) Impact

A significant number of researchers were trained for management and research of genetic resources. Third-country group training trained human resources of surrounding countries after this Project.

Grant of expensive equipment, lectures by experts, and counterpart training in Japan have made positive impacts on the successive research activities.

The Seed Bank

(5) Sustainability

The INIA has financed salaries of highly specialized researchers for the past 10 years, but the rest of the budget is just enough for the maintenance fee for the Banks and hence could not finance new equipment. It is difficult for the conservation of plant genetic resources to be self-sustained because private companies and other funding sources do not opt to fund long-term projects.

6. Lessons Learned and Recommendations

(1) Lessons Learned

Installed equipment in the Project seemed excessive. A project with plural donors requires careful coordination between the donors and the recipient country and within the Project. The finance plan after project termination as well as the cooperation period should determine the project size.

The number of project sites should enhance the sustainability of project impacts.

(2) Recommendations

The Government of Chile gives weak support and inadequate budget for genetic resource conservation. The INIA should select research contents that can help to establish effective partnership with private companies as users, so as to obtain funds from these companies.

The INIA should drastically reduce the size of quarantine operation that is not effectively utilized.

7. Follow-up Situation

Third-country group training was held five times between 1995 and 1999.

El Salvador

JOCV Activities in the area of Education

Project Sites San Salvador City, San Miguel, La Liberta, La Union, Santa Ana, Chalatenango, Sonsonate

1. Background of Project

The Japan Overseas Cooperation Volunteer program to El Salvador was started in 1968 with the dispatch of eight volunteers in physical education in order to reinforce the National Olympic team for the Mexico Olympic Games.

Although the JOCV activities broadened the area of cooperation thereafter, the dispatch was halted in 1979 due to the civil war. As the civil war ended in 1992, the dispatch was restarted in 1994, volunteers for human resource development were sent to a variety of areas of education since then, such as physical education, science, mathematics, and Japanese language.

This evaluation was for the technical assistance by JOCV given to the Ministry of Education (MINED) from 1994 to the above date.

2. Project Overview

(1) Period of Cooperation

FY1994 − FY2000

(2) Type of Cooperation

Japan Overseas Cooperation Volunteers

(3) Partner Country's Implementing Organization

Ministry of Education (MINED)

(4) Narrative Summary

1) Overall Goal

Qualified educators continue to be nurtured by training and reeducation in various areas of education

2) Project Purpose

The national education level is enhanced by the training and reeducation of educators.

3) Outputs

A number of graduates, as well as long- or short-term trainees to Japan, are produced.

4) Inputs

Japanese Side

JOCV members 36

El Salvadorian Side

Facilities and equipment

3. Members of Evaluation Team

JICA /JOCV El Salvador Office
(Commissioned to Mr. Bameiro & Katsumata Association)

4. Period of Evaluation

December 2000 − March 2001

5. Results of Evaluation

(1) Relevance

The purpose of the dispatch of JOCVs was to transfer knowledge and skills in education to El Salvadorian counterparts. It is deemed to contribute to promoting economic and social development of the country, meaning that the relevance of the JOCV dispatch is recognizable.

(2) Effectiveness

Educational cooperation was conducted in seven areas, including physical education, natural sciences, mathematics, and the Japanese language. The counterparts evaluated the performance of 33 out of the 36 volunteers with a five-level rating system (A: excellent, B: good, C: average, D: poor, E: almost no outcome). According to the

results, 18 JOCV members were evaluated as "good" which forms the majority of the responses, 6 volunteers were evaluated as "average", 4 volunteers were evaluated as "poor" or "almost no outcome", and 1 was evaluated as "excellent". The mean value of the evaluation results is "average" and it is considered that the transfer of skills and knowledge is being advanced on average.

(3) Efficiency

The implementing framework of the El Salvador side was well prepared. This is partly due to the fact that some of the executive officers of MINED and other major institutions had experiences in working with the JOCV before the civil war, and they cooperated with the JOCV activities very well. Therefore, the cooperation worked efficiently.

(4) Impact

The project provided not only the transfer of skills and knowledge, but also good practices such as greetings at the beginning and end of classes, keeping rooms neat and organized, and punctuality. The counterparts and the students responded to the JOCV members' persistent efforts, and gradually accepted these practices. These contributed to efficient class operations and maintenance of order in the workplace.

These practices also developed people's understanding towards the Japanese people and culture. Besides, it is considered another impact that some counterparts started teaching Japanese language courses after they finished training in Japan.

(5) Sustainability

The JOCV members tended to teach in classes instead of training teachers, meaning their activities were somewhat service rendering. Consequently, it is not easy to see how much the transfer of skills and knowledge was accomplished. It is also difficult to assess how much the system to reinforce sustainability has been functioning, such as the mechanism to improve the teaching methods applying the result of JOCV cooperation.

6. Lessons Learned and Recommendations

(1) Lessons Learned

As the project dispatched most JOCV members upon request by El Salvador, the overall plan covering the whole cooperation period did not exist and thus each dispatch could not always be strategic. In the future, the dispatch plan should be designed by the Government of El Salvador, taking the specific outcome of each volunteer's activities into account.

Gymnastics training

The volunteers need to acquire a higher level of language proficiency in training counterparts and conducting classes. They can work more efficiently if they take extensive language lessons in the first year of the 2-year assignment [1]. Taking the dispatch period of each JOCV member into account, appropriate support should be provided in order to realize efficient JOCV activities.

(2) Recommendations

Communication between JOCV members and the accepting organizations should be improved so as to make the best of the volunteers' expertise.

7. Follow-up Situation

Based on the recommendation, the JICA Office holds meetings with each concerned section of MINED after receiving the above recommendations. The JOCV members also participate in monthly meetings for physical education, which functions as a valuable opportunity to exchange information. Meetings for science and mathematics education as well as computer education have already been held several times, although its regularization has not been decided yet.

[1] The volunteers take intensive language lessons for 1.5 months before their arrival, and for 1 month after the arrivals. In addition, some countries provide brush-up language courses one year after arrival

Nicaragua

Project for the Improvement of Garbage Collection Equipment in the City of Managua

Project Sites Managua

1. Background of Project

The urban infrastructure of Managua, the capital of Nicaragua, had not been adequately developed until the 1990's, since it was destroyed by the earthquake in 1972 and afterwards suffered from civil war and economic crisis. Lack of adequate roads hindered waste collections and caused very poor environmental and sanitary conditions there.

Since the early 1990's, the authorities of Managua City have tried to address these situations. However, as 52% of the waste collection trucks owned by the city authoritiy were obsolete at that time, and since it was impossible to acquire alternative parts, these trucks could not be used for the long term.

In order to cope with the situation, the Government of Nicaragua, which has set forth an environmental conservation policy, made a request to the Japanese Government for a Grant Aid to cope with this situation in Managua.

2. Project Overview

(1) Period of Cooperation

FY1991

(2) Type of Cooperation

Grant Aid

(3) Partner Country's Implementing Organization

Municipality of Managua (ALMA)
Ministry of Health (MINSA)
Ministry of the Environment and Natural Resources (MARENA)

(4) Narrative Summary

1) Overall Goal

The environmental and sanitary conditions of Managua are improved.

2) Project Purpose

The Managua citizens will be provided efficient collection and disposal services of solid waste.

3) Outputs

Equipment and vehicles necessary for the disposal of solid waste will be provided.

4) Inputs

Japanese Side

Grant	403 million yen (E/N amount)

Nicaraguan Side

Facilities

3. Members of Evaluation Team

JICA Nicaragua Office
(Commissioned to local consultants headed by Mr. Alejandro Maltez Montiel).

4. Period of Evaluation

18 December 2000 − 10 March 2001

5. Results of Evaluation

(1) Relevance

The project has been confirmed to be consistent with the Nicaraguan governmental policy on the environment, which prioritizes greening movements, although the did not directly has conformity with it. Also, it responded to the high demands of the Managua citizens to improve waste collection facilities, which would serve sanitary development, urban development, environmental conservation, job creation and streetscaping. Thus, this project was confirmed to be largely relevant.

(2) Effectiveness

64% of the waste collection vehicles owned by Managua city authorities were replaced with new vehicles and new waste disposal equipment was introduced. This upgrading enhanced the waste collection rate from 55% before the project to 77% in 1995. Also, the enforcement of the project led to practice in disposal activities, such as the removal and compression of waste. Moreover, in order to prevent a breakdown of the supplied equipment, the systems for periodical equipment inspection and parts management in the Managua authorities were established.

Therefore, it can be concluded that the goal of this project has been accomplished.

(3) Efficiency

The operation rate of the provided facilities was high, since the technical level necessary for operation of the equipment supplied was adequate and the Nicaraguan staff was selected properly. It is believed that the efficiency in the input of Japan's side was high.

(4) Impact

The enforcement of the project improved the collection and disposal of waste, resulting in a decrease of bad odor and diseases, and in an improvement in the cityscape.

Also, the introduction of new facilities created new employment opportunities in the Managua city authorities for the operation and maintenance of new facilities.

(5) Sustainability

By the enforcement of the project, the revenue of the city authorities in the collecting and disposal fee increased from 9 million yen in 1996 to 46 million yen in 2000. However, it was still insufficient to cover the operation and maintenance cost of facilities, which was 49 million yen for 1999.

Moreover, malfunctions were found in those supplied facilities due to high usage frequency, such as refuse collection vehicles. Difficulty remained in coping with machinery problems for the city authorities, who had a shortage of self-income and could not acquire financial support from the central government, while the procurement of some alternative parts was also difficult.

Therefore, the sustainability of this project is considered to be low, unless any improvement on these issues are made.

A tractor at work in a dump site


After garbage collection, the collection vehicles are returned to workshop at Los Cocos to be washed and undergone minor maintenance

6. Lessons Learned and Recommendations

(1) Lessons Learned

The Managua authorities were able to receive very little support from the Nicaraguan Government in this project and not enough revenue was collected from the citizens as well. In future projects on the city government level, support and understanding of the central government and targeted people should be secured by encouraging them to participate in the project, starting at the planning stage.

(2) Recommendations

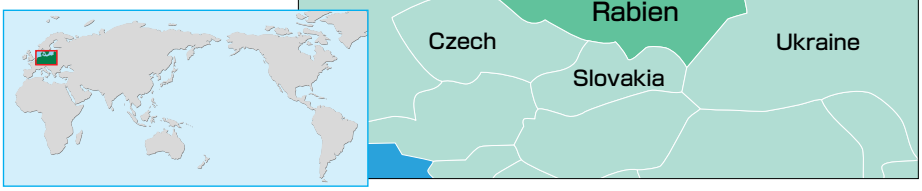
The Managua city authorities are in need of reconsidering the organizational management and securing of the revenue source. Especially, a collection system for the refuse collection fee from citizens and a budget allocation for the maintenance of supplied equipment should be improved. The authorities also need to strengthen cooperative relationships with the central governmental organizations and to create regulations and civic education on solid waste.

7. Follow-up Situation

Based on the request for a follow-up project in July 2001, overhauls of bulldozers and spare parts for refuse collection vehicles were provided.

Poland

Supplying Rehabilitation Equipment to the Social Aid Home in Rabien



Project Sites Rabien

1. Background of Project

In Poland, the Constitution guarantees aid for the disabled , and social aid policy has been developed though self-governing institutions, such as the Social Aid Home (SAH). Social Aid Home Rabien (SAH Rabien), an implementing agency of the project, is an authorized aid home for mentally disabled adults, according to the ordinance on the social aid home.

Since it is the sole institution to support the disabled in its area, SAH Rabien has significance in this region. SAH Rabien, which has been operating for almost 30 years, started to renovate the house in the 1990s to meet residents' needs. The new rehabilitation pavilion was constructed between 1994 and 1996. However, the State Fund for the Rehabilitation of Disabled Persons (PFRON) could not finance all the necessary rehabilitation equipment. Under these circumstances , the Government of Poland made a request to Japan for provision of equipment and the dispatch of Japan Overseas Cooperation Volunteers (JOCV) to finance the rehabilitation equipment to the SAH.

2. Project Overview

(1) Period of Cooperation

FY1998 − FY2000

(2) Type of Cooperation

Provision of Equipment

(3) Partner Country's Implementing Organization

Social Aid Home (SAH) in Rabien

(4) Narrative Summary

1) Overall Goal

a) Social policy in Poland is strengthened.
b) Social aid in rural area in Poland is developed.
c) Social aid home activities in the regions are strengthened.
d) The health of mentally disabled adults is improved.

2) Project Purpose

a) Rehabilitation equipment is supplied to the SAH Rabien.
b) Rehabilitation services of the SAH Rabien are increased to include both SAH residents and external local patients.
c) The health of SAH residents and local patients is improved through the effective utilization of supplied equipment.

3) Outputs

The number of rehabilitation treatments is increased with the rehabilitation equipment provided.

4) Inputs

Japanese Side

Equipment 9.70 million yen

3. Members of Evaluation Team

JICA Poland Office
(Commissioned to Mr. Roman Izdebski)

4. Period of Evaluation

March 2001

5. Results of Evaluation

(1) Relevance

Poland shows a strong commitment to social aid for the disabled as it is guaranteed in the Constitution. Severe economic conditions of the country, however, could not finance physical therapy equipment with high specifica-

tions, which was necessary to provide good combined physical therapy treatments of such items as massage, thermotherapy, electrotherapy, muscle building, functional training, and walking training. With consideration of both financial conditions and the government policy, the project that aimed at strengthening the function of SAH Rabien through the provision of equipment is deemed to be relevant.

(2) Effectiveness

The Project provided 1,039 pieces of physical therapy equipment of 34 varieties. This enabled the SAH to conduct five types of physical therapy treatment every day. As a result, the number of treatments that can be provided by SAH Rabien increased considerably. For example, in January 2000, 963 treatments were offered, which was 40 times more than before the project. Thus, the SAH Rabien has acquired the capacity to offer wider and higher levels of physical therapy treatments. It is concluded that the project purpose has been accomplished.

(3) Efficiency

No major problems in the project implementation were reported. The results of the questionnaires to the SAH Rabien staff shows that the quality, quantity and convenience of the equipment were as good as expected, and that the project cost was also appropriate. The equipment was selected by the SAH Rabien staff at the planning stage of the project. As a consequence, the Japanese side agreed to purchase the European-made equipment as requested, judging from its cost efficiency, although Japanese-made equipment was chosen in the original plan. SAH Rabien acknowledges that this flexible approach allowed them to receive more equipment.

(4) Impact

The number of the physical therapy treatments has been increasing not only for in-patients but also outpatients by utilizing the new equipment and introducing a working system on a two-shift basis. Such efforts expanded the number of physical therapy treatments to outpatients and the outpatients' share increased from 11% of all treatment in 1998 to 15% in 2000. The number of outpatients doubled from 900 in 1998 to 1,990 in 2000. These figures prove that services of SAH Rabien are extended more to the local community and that the Project contributes to strengthening the role of SAH Rabien.

(5) Sustainability

The major concern for the sustainability of SAH Rabien is finance. The central government is the main source of income at SAH Rabien, accounting for 71.6% of the total income, whereas income from in-house treatment and donations account for 21.3% and 2.5% respectively. The government, however, is not always financially stable nor can it always respond to the needs of SAH Rabien on time. For sustainable treatment activities, SAH Rabien has to depend on the treatment charges of outpatients, and funding aid from both in and outside the country.

Rehabilitation excercise at Rabien Welfare Center for the handicapped

6. Lessons Learned and Recommendations

(1) Lessons Learned

The Project can be referred to as a reference for future support to Poland in terms of its uniqueness, meaning that it put the social policy into effect by strengthening the social aid institution with a clear understanding of beneficiaries' needs and scope.

(2) Recommendations

To enhance the effect of the project, SAH Rabien should further widen its coverage of the physical therapy treatment in the region. Some activities, such as the attaining of skill and knowledge from JICA experts should be considered in order to retain and enhance the outcomes of the Project.