Chapter 2 Synthesis Study of Evaluations (Project-level Ex-post Evaluations)

1 Outline of Evaluation Study

1-1 Background and Objectives

JICA conducted cross-sectoral analysis (synthesis study) on evaluations of individual projects in fiscal 2003 and 2004. The objectives of the synthesis study are to derive common features of projects from evaluation results on technical cooperation projects and draw out lessons for effective feedback. Tendencies of project effects and promoting and impeding factors were analyzed and lessons for effective feedback were extracted in fiscal 2003 from the terminal evaluation reports, and the same was done in fiscal 2004 based on the ex-post evaluation reports.

In fiscal 2006, cross-sectoral analysis was performed using the synthesis study method with the same viewpoints used in fiscal 2004, based on the results of ex-post evaluations conducted in fiscal 2005. In addition, a comparative study with terminal evaluation results was conducted to present a new viewpoint, thus extracting lessons from study results that will make implementation of projects effective for maintaining and expanding project effects, as well as lessons on ex-post and terminal evaluations.

1-2 Members of the Study

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1-3 Target Projects

In principle, JICA overseas office conducts ex-post evaluation on Technical Cooperation Project three years after its termination using local consultants. This system was adopted in fiscal 2002. For this year's study, we targeted 39 projects on which JICA conducted ex-post evaluations in fiscal 2005 (Table 2-1).

When looking at the targeted projects by regions, 17 projects were in Asia, 13 projects were in Latin America, five in Africa, four in Middle East, and one in Oceania (Figure 2-1). The number of projects implemented in Asia is the largest; among which Thailand and Philippines have the largest number of projects with four each, followed by Indonesia, Viet Nam and Sri Lanka with two each. Three projects in El Salvador, three in Chile, and two in Jamaica are included in the 13 projects in Latin America. These eight countries account for 56% of the total number of projects (22 out of 39 projects).

When looking at them by cooperation sectors, the largest number of projects was in the sector of agriculture/forestry/fisheries and in the sector of health/medical care with 10 projects each, followed by human resources with seven projects, and public works/utilities with five projects (Figure 2-2). The breakdown of the agriculture/forestry/fisheries sector indicates that target technologies vary although they are classified into one category: four projects in agriculture/rural development, three projects in forestry, three in fisheries. The same can be said of the human resources sector: three projects in information technology, two vocational training, and two in higher education. When referring to the results of evaluation study, it is necessary to pay attention to the regional and sectoral bias in targeted projects as described above.

1-4 Methods of the Synthesis Study

With the objectives of analyzing the tendency of project outcomes at the time of the completion of projects as well as promoting and impeding factors, and drawing out lessons for effective feedback, the following three evaluation questions were set (a, b and c) in the same way as fiscal 2004. In addition, for the analysis of this year, we created a new evaluation question (d) in order to conduct a comparative study between project outcomes expected at the time of terminal evaluations and results of ex-post evaluations.

a. Has the impact of a project emerged after termination? Is sustainability secured?
b. What are the major factors that promoted or impeded to the occurrence of outcomes at the planning and implementation stages?
c. What are the major lessons learned that should be considered at

the planning and implementation stages of a project for sustainable outcomes after the termination of cooperation?

d. What kind of lessons derived from a comparative study between terminal evaluation results and ex-post evaluation results will increase project outcomes?

The procedure of analysis and evaluation is described in detail below.

(1) Grasping General Tendency (Section 2)

1) Analysis of General Tendency of Ex-post Evaluation Results

Among the DAC Five Evaluation Criteria, impact and sustainability are the major criteria for JICA's ex-post evaluations of projects. They were rated on a scale of one to four. The rating aimed to grasp the general tendency seen in ex-post evaluation results of the target projects.

Impact was comprehensively examined from the standpoint of whether the project purpose was achieved and how much the overall goal was achieved. Sustainability was also comprehensively examined from the standpoint of whether project outcomes were maintained and expanded, as well as from the aspects of technical, organizational and financial sustainability. Details of the criteria for rating are described later in the section of each analysis.

Three members (one JICA staff and two external consultants) of the above-mentioned study team rated the results. First, the three members gave scores to several projects as samples. This was followed by the approximation of interpretations of evaluation criteria and differences in rating tendencies. All the ex-post evaluations were then read and evaluated. This process was adopted to avoid biased interpretation of evaluators as much as possible. Finally, the general tendency of impact and sustainability was analyzed based on the rated results.

2) Comparative Study between Terminal Evaluation Results and Ex-post Evaluation Results

Two evaluation results that had been conducted after a three-year interval were compared: namely, terminal evaluation and ex-post evaluation. In specific terms, feedback of terminal evaluation results to ex-post evaluations was examined to analyze whether impact and sustainability were achieved at the time of ex-post evaluations, as was expected at the time of terminal evaluation, how recommendations proposed in terminal evaluations were carried out in the subsequent projects, and whether outcomes were observed in the ex-post evaluations.

(2) Analysis of Promoting and Impeding Factors (Section 3)

1) Promoting and Impeding Factors Seen from the Ex-post Evaluation Results

Promoting and impeding factors at each stage of planning and implementation were extracted and analyzed in order to examine what the characteristics of factors are that promoted or impeded

Table 2-1 Target Projects (Ex-post Evaluation)

	Country	Project Name
1	Indonesia	The Project for the National Vocational Rehabilitation Center for Disabled People
2	Indonesia	Higher Education Development Support Project
3	Philippines	Capacity Building Project for Environmental Management in Mining
4	Philippines	Upgrading Project for Plastic Molding Tool Technology
5	Philippines	Bohol Integrated Agriculture Promotion Project
6	Philippines	The Project on Electrical and Electronics Appliances Testing
7	Thailand	The Project on Strengthening the National Institute for the Improvement of Working Conditions and Environment
8	Thailand	The Research Center for Communication and Information Technology (ReCCIT), King Mongkut's Institute of Technology, Ladkrabang (KMITL)
9	Thailand	Project for Model Development of Comprehensive HIV/AIDS Prevention and Care
10	Thailand	The Railway Training Center Project
11	Viet Nam	The Project of Viet Nam Information Technology Training
12	Viet Nam	Afforestation Technology Development on Acid Sulphate Soil in the Mekong Delta
13	Laos	The Agricultural and Rural Development Project in Vientiane Province (Phase 2)
14	Mongolia	Maternal and Child Health Project
15	Sri Lanka	Dental Education Project at University of Peradeniya
16	Sri Lanka	Nursing Education Project
17	Mexico	The National Center for Environmental Research and Training (Phase 2)
18	Argentine	The Research Project at the Faculty of Veterinary Science, the National University of La Plata
19	Brazil	The Urban Transport Human Resources Development Project
20	Paraguay	The Research Project on Soybean Production
21	Turkey	The Infectious Diseases Control Project
22	Egypt	The Water Supply Technology Training Improvement Project
23	Ghana	The Project of the Improvement of the Maternal and Child Health In-Service Training System and Program
24	Tanzania	Maternal and Child Health Services Project
25	Morocco	Upgrading Exploration Technology of Mineral Resources
26	Papua New Guinea	Forest Research Project (Phase 2)
27	El Salvador	Project for Strengthening Nursing Education
28	El Salvador	The Project on the Aquaculture Development in Estuaries
29	El Salvador	The Project for Strengthening Agricultural Technology Development and Transfer
30	Jamaica	The Technical and Vocational Education and Training Improvement Project at Technical High Schools
31	Jamaica	The Project for Strengthening Health Care in the Southern Region
32	Chile	The National Center for Environment Project
33	Chile	The Development of Benthonic Resources Aquaculture Project
34	Chile	The Erosion Control and Afforestation Project in Watersheds of Semi-Arid Area
		Integral Management of Watershed with Emphasis on Soil and Water Conservation (Third-country Training)
35	Colombia	Improvement of Mineral Processing Technology Concerning Medium and Small Scale Mines
36	Jordan	The Project for the Specialized Training Institute
37	Jordan	Information Technology Upgrading Project
38	Mauritius	Coastal Resources and Environment Conservation Project
39	Madagascar	Project for the Improvement of the Mahajanga University Hospital Center

Figure 2-1 Breakdown of Target Projects by Region

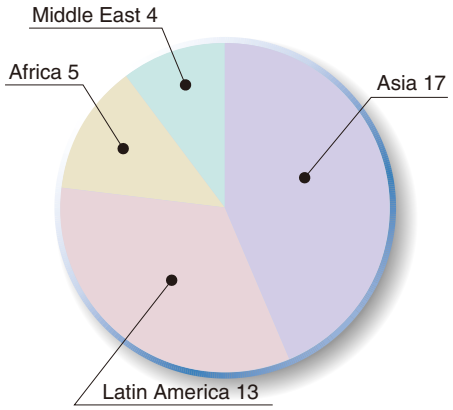
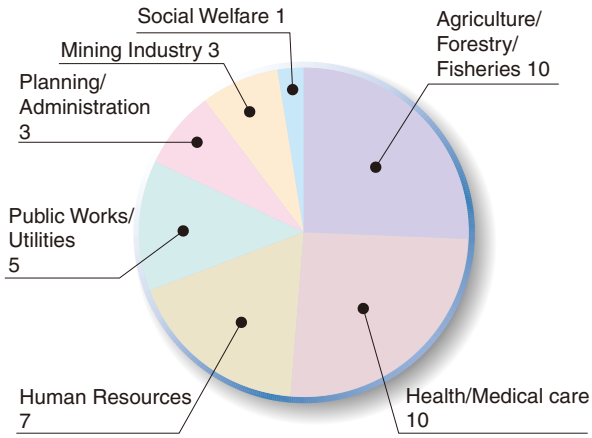


Figure 2-2 Breakdown of Target Projects by Sector



the occurrence of outcomes at the planning and implementation stages of a project and how these factors are related to the results of the above-mentioned section (1). Criteria for analysis are based on the classification of promoting and impeding factors used in fiscal 2004 when similar analysis was done. We also added major promoting and impeding factors derived from ex-post evaluation results of the target projects in this study. We then analyzed relationships between each promoting and impeding factor and the scores on impact and sustainability of projects, which were obtained in the section (1), and examined the influences of these factors on project outcomes.

2) Promoting and Impeding Factors Derived from Comparative Study between Terminal Evaluations and Ex-post Evaluations

Based on the study results of the above "(1)-2) Comparative Study between Terminal Evaluation Results and Ex-post Evaluation Results", we identified promoting and impeding factors in terminal evaluations and ex-post evaluations that have influenced project outcomes.

(3) Deriving Lessons (Section 4)

Based on the results of the above analysis, we summarized the lessons that are considered useful for formulating, planning and implementing projects more effectively and efficiently and for increasing impact and sustainability of projects.

In addition, lessons to ensure project outcomes at higher levels were derived especially from the results of the above-mentioned section "(2)-2) Promoting and Impeding Factors Derived from the Comparative Study between Terminal Evaluations and Ex-post Evaluations".

2 Tendencies of Impact and Sustainability

2-1 Impact

(1) Rating Methods and Procedures

The impacts observed in ex-post evaluations are examined to find how much of the overall goal was accomplished through the achievement of the project purpose and whether there are any positive or negative ripple effects. Focusing on these points, this analysis rated ex-post evaluation results on a scale of four from 1 to 4 points. The rating criteria for the scale are shown in Table 2-2. A score of 3 or above is given if an impact is observed towards achieving the overall goal at the time of ex-post evaluation carried out three years after the completion of a project.

The average scores of the three evaluators were rounded off to the whole number, reflecting the closest scale point order to obtain the score of impact of each project.

(2) General Tendency

The average score of impact of the 39 projects was 2.9.

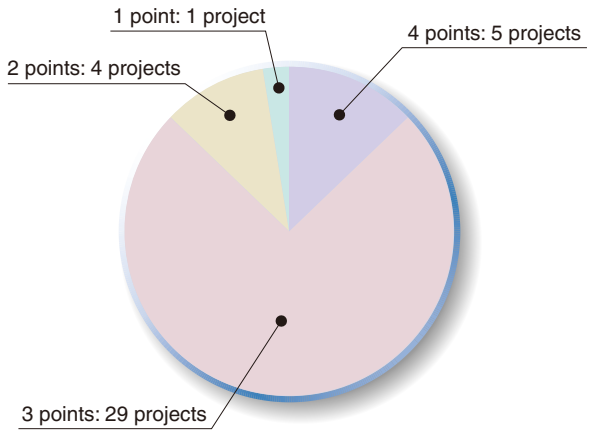
Table 2-2 Rating Criteria for Impact

4 points	The overall goal has been achieved. (The project purpose has also been achieved.)
3 points	The overall goal is in the process of being achieved, or a large positive impact has emerged. (The project purpose has already been achieved.)
2 points	Although the overall goal has yet to be achieved, a positive impact has been observed. (The project purpose has yet to be achieved.)
1 point	The overall goal has not been achieved and no positive impact has been identified; or a negative impact has been observed.

Figure 2-3 shows the tendency of impact based on the ex-post evaluations.

Thirty-four out of 39 projects were given either 3 or 4 points. In other words, 87% of the projects have either achieved the overall goal or shown a large positive impact towards achieving the overall goal. Among the five projects that were given 4 points, in the Urban Transport Human Resources Development Project in Brazil, training for local administrators progressed at a higher

Figure 2-3 Results of Impact Analysis Based on Ex-post Evaluation Reports



pace than expected due to high management capacity and flexibility of the implementing organization.

Although positive impacts have been observed, the overall goals have yet to be achieved in 29 projects with the score of 3 at the time of ex-post evaluations. Some projects suggest that contributions of external factors, which a project cannot control, are required.

On the other hand, five projects were given 2 points or 1 point since neither overall goals nor project purposes were achieved; this number accounts for 13% of all projects. The Research Project on Soybean Production in Paraguay scored 2 points. The dissemination of the cultivation technology developed in this project was not incorporated in the project activities, which was seen as an impeding factor to the occurrence of expected impacts. This project was later reviewed and modified. As a result, some efforts to expand project effects have been observed; for instance, two additional varieties were developed and research papers were published.

(3) Comparison between the Expectations at the Time of Terminal Evaluations and Results of Ex-post Evaluations

Evaluation on impacts of terminal evaluation reports were rated the same way as ex-post evaluation reports to compare the two evaluation reports. Two consultants gave scores to the terminal evaluation reports. The average score on impact of the 39 projects at the time of terminal evaluation was 2.8 points. Table 2-3 shows the scores of expectations at the time of terminal evaluations and the actual scores in ex-post evaluations.

Table 2-3 Change in Scores of Impact at the Time of Terminal Evaluation and Ex-post Evaluation

		Scores of Ex-post Evaluation			
		1 point	2 points	3 points	4 points
Expectations at the time of Terminal Evaluation	1 point				
	2 points		2 projects	7 projects	
	3 points	1 project	2 projects	19 projects	4 projects
	4 points			3 projects	1 project

Thirty-one projects scored either the same as or higher than the expectations of the terminal evaluations with scores of 3 or higher in ex-post evaluations, accounting for nearly 80% of the total 39 projects. Judging from the tendency of the overall scores, it is fair to conclude that project goals have been achieved as expected (or better than expected) at the time of terminal evaluations, generating positive impacts.

Turning attention to the change in the scores, one project out of four that had received 4 points at the time of terminal evaluations did indeed receive 4 points in ex-post evaluations, achieving the overall goals. The remaining three projects received 3 points, generating positive impacts although the overall goals were not achieved. Meanwhile, four projects that had received 3 points at the time of terminal evaluations achieved the overall goals, receiving 4 points in ex-post evaluations. It is assumed that the overall goals were achieved owing to the fact that the spread of the developed technologies was made more smoothly than the expectation of the terminal evaluation due to the consistency between the support of upper-level policies and the needs of beneficiaries. On the other hand, three projects that scored 3 points in terminal evaluations received either 2 points or 1 point in ex-post evaluations. The changes in the scores were the result of the following factors: projects did not fully analyze the path to achieving overall goals at the time of terminal evaluations; requirements listed in the terminal evaluations to achieve the overall goals were not sufficiently met at the time of ex-post evaluations; and policies were changed in the process.

Seven projects out of nine that received 2 points at the time of terminal evaluations got 3 points in the ex-post evaluations: a possible reason is that outcomes spread more widely than expected at the time of terminal evaluations, which led to the achievement of the project purposes. The remaining two projects scored 2 points as was expected at the time of terminal evaluations since external factors, such as economic conditions and security situation, contributed negatively.

In some projects that realized the same or better impacts as expected in ex-post evaluations than in the terminal evaluations, the terminal evaluations evaluated impacts by using appropriate indices, and some terminal evaluations appropriately incorporated approaches necessary for achieving expected impacts into recommendations. There were other ex-post evaluations that revealed the path of how the expected impacts of terminal evaluations had resulted in the current situation.

On the other hand, many of the projects that did not realize the expected impacts of terminal evaluations did not provide the judgment basis for evaluating impacts in the terminal evaluation reports.

(4) Other Ripple Effects

Various ripple effects were reported in the ex-post evaluations as a result of the projects in terms of policy, society, economy, organizations, and institutions. As an effect on policy, some governments formulated bylaws and policies based on the guide-

lines and recommendations developed by the projects. Some other governments also formulated new bylaws to extend the ripple effects of successful projects.

As for effects on society, changes are mainly observed in terms of environment, awareness, and living conditions in addition to the intended effects by training and disseminaion: for example, the spread of bio-fertilizers promoted in model villages, which provided a positive influence on natural environment: the change in awareness of the employers about employing persons with disabilities and ensuring occupational safety: and raised awareness of AIDS patients and persons with disabilities, which improved their living conditions.

Effects on the economic front include an improvement of livelihood of the local residents through afforestation and aquaculture using technologies developed and disseminated by the projects and through the use of seeds provided by the projects, as well as acceleration of external investments within the region. Some reports indicate that positive impacts were not attained due to inflation or decline in market prices at a macro level, even though positive economic effects were observed at a micro-level, which include the improved income of farmers and creation of employment opportunities in the target regions.

As effects on institutions and organizations, reinforcement of support systems has been seen to implement projects through the strengthening of positions of the implementing organizations and facilitation of partnership with related organizations and other donors. Many reports that refer to ripple effects on institutions and organizations mention the relationships with sustainability in view of organizational reinforcement through projects.

2-2 Sustainability

(1) Rating methods and Procedures

Sustainability is a criterion for asking whether the outcomes of a project have continued and expanded since the termination of projects. The analysis on sustainability involves the three aspects of technology, organization, and finance, and at the same time, considering these aspects comprehensively, overall sustainability should also be evaluated. Sustainability was evaluated using four raing levels as shown in Table 2-4.

(2) General Tendency

The distribution of total scores is shown in Figure 2-4. Twenty-eight projects received 3 points (72%), and four projects received 4 points (10%). Project outcomes in 32 projects out of 39 (82%) were judged in ex-post evaluations as having been either maintained or expanded. Six projects scored 2 points and one project got 1 point. The average scores of all the projects in the categories of overall, technology, organization, and finance are 2.9, 3.0, 2.9, and 2.7 respectively.

Table 2-4 Rating Criteria for Sustainability

Overall	
4 points	Projects effects have expanded.
3 points	Projects effects have been maintained.
2 points	Projects effects have been insufficiently maintained.
1 point	Projects effects have not been maintained.
Technology	
4 points	Technical and capacity levels have been improved from the time of terminal evaluation, and materials and equipment have been renewed or maintained and managed.
3 points	Technical and capacity levels at the time of terminal evaluation have been largely maintained, and materials and equipment have been generally renewed or maintained and managed.
2 points	Technical and capacity levels have declined from the time of terminal evaluation and some insufficiency is evidenced in terms of renewal or maintenance and management of materials and equipment.
1 point	Technology, materials and equipment provided by the project have not been utilized.
Organization	
4 points	The implementing organizations have been stably managed and supported by policies of the government.
3 points	With regards to support for management of the implementing organizations and policies of the government, they are generally well maintained although some minor problems in need of improvement have been observed.
2 points	With regards to support for management of the implementing organizations or policies of the government, impeding factors to the maintenance of project effects are observed.
1 point	Project effects have not occurred enough due to unstable management of the implementing organizations or no policy support from the government.
Finance	
4 points	Sufficient budget is provided to maintain project effects.
3 points	Budget is not always sufficient, but necessary budget is generally allocated or measures are taken to secure the budget.
2 points	Maintenance of project effects is becoming difficult due to insufficient budget.
1 point	Project implementation is impeded and no measures are taken due to insufficient budget.

(3) Sustainability by Subcategories

The distribution of sustainability scores in the aspects of technology, organization and finance is shown in Figure 2-5. The percentage of projects with 4 or 3 points is the highest in the category of technology with 34 projects (87% of total), followed

Figure 2-4 Results of Sustainability Analysis Based on Ex-post Evaluation Reports

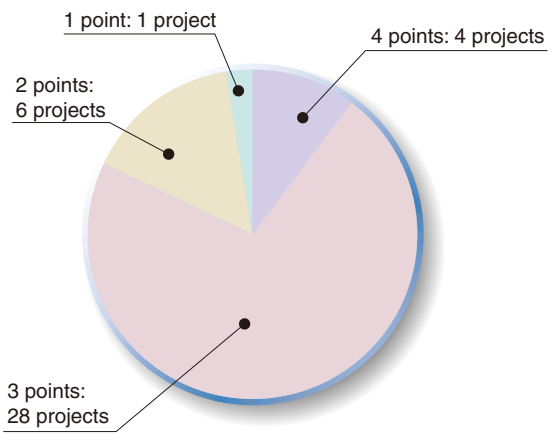
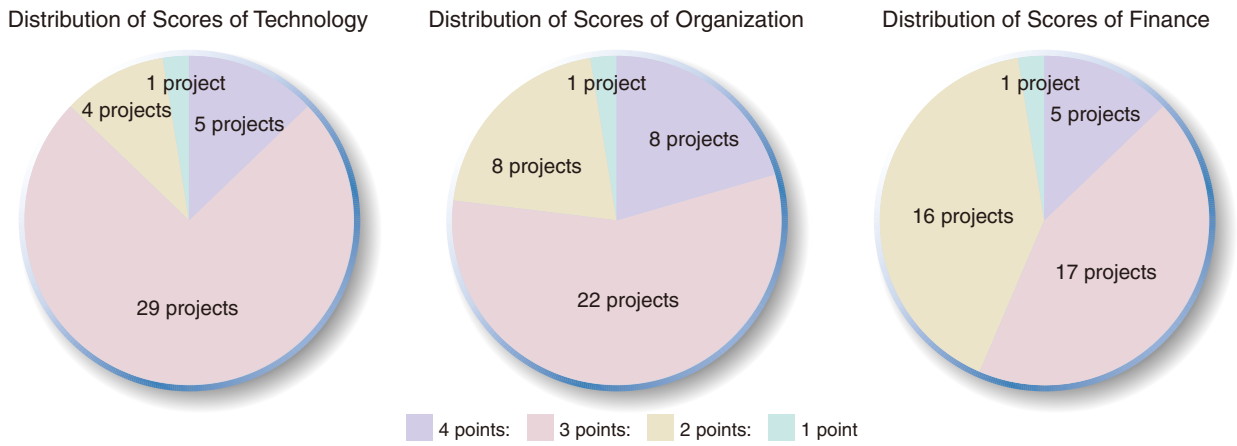


Figure 2-5 Distribution of Scores of Sustainability



by organization with 30 projects (77% of total), and finance with 22 projects (56% of total).

1) Overall Sustainability

The implementing organizations of more than 80% of the 39 projects have maintained activities after the termination of projects, and project outcomes were maintained or expanded (Figure 2-4).

Four projects (10%) gained the highest overall score of sustainability: namely, the Urban Transport Human Resources Development Projects in Brazil, the Erosion Control and Afforestation Project in Watersheds of Semi-Arid Area in Chile, Upgrading Exploration Technology of Mineral Resources in Morocco, and the Project for the Specialized Training Institute in Jordan. Particularly, the Project in Chile gained 4 points in all the categories: overall, technology, organization, and finance. Contributing factors in this case to the emergence and maintenance of project outcomes are thought to be the amendment of laws that promoted the dissemination of developed technologies during the project implementation and the selection of the stable implementing organization.

Twenty-eight projects (72%) had 3 points. The overall quality and quantity of activities have been well maintained although some of them had minor problems with the stability of human resources, provision of budget, and maintenance of materials and equipment.

The number of projects that have overall scores of 2 points or lower is seven (18%); some problems have been observed in sustainability of technology, organization, and finance. For instance, Forest Research Project (Phase 2) in Papua New Guinea was implemented with the aim of enabling the Forest Research Institute independently to conduct research activities concerning sustainable forest management. However, some delays have been found in research activities after the termination of the project. Impeding factors to the project effects were identified as being the diversion of governmental policy from natural forests to the creation of artificial forests, and the unclearly defined political position of the implementing organization after the termination of the project.

2) Sustainability of Technology

Thirty-four out of 39 projects received 3 points or higher in this subcategory and it is fair to state that approximately 90% of the targeted projects maintained the technical level that had been attained at the time of the termination of the projects.

Five projects (13%) received 4 points in sustainability of technology. With regard to the Research Center for Communication and Information Technology (ReCCIT), King Mongkut's Institute of Technology, Ladkrabang (KMITL) in Thailand, the technology level of Thailand was improved and maintained. This is attributed to the facts that efficient research management systems were established in the implementing organization and experts were dispatched with an appropriate level of technology to local needs. In 29 projects (74%) that received 3 points, the provision of services (training, practice, research & development, education and medical care) was generally maintained at the organizational level.

Five projects (13%) received 2 points or less in sustainability of technology. Although the number of teachers who received diplomas increased in the Higher Education Development Support Project in Indonesia, no positive impact was observed in the improvement of quality of engineering education. Higher education-related projects, such as this one and Dental Education Project at University of Peradeniya in Sri Lanka, achieved outcome in technology transfer; however, issues have been raised about maintenance and management of equipment.

3) Sustainability of Organization

The distribution of scores of organizational sustainability is lower and wider than that of technical sustainability (Figure 2-5). Thirty projects out of 39 (77%) have scored more than 3 points. Nearly 80% of projects generally attained sustainability in terms of organizational management of the implementing organizations and policy support of the government.

Eight projects (21%) gained the highest scores (4 points) in organizational sustainability, among which four projects (10%)

also received high overall scores. These projects secured stable organizational management even after the termination of projects owing to solid manpower and availability of support through policies of the government (or advancement of the implementing organizations) and from international organizations.

Twenty-two projects (56%) that received 3 points in organizational sustainability show some positive factors, such as a certain degree of stability of human resources and stable status of the implementing organizations.

On the other hand, nine projects (23%) received scores of 2 points or less in organizational sustainability. Seven projects (18%) of these nine scored 2 points or less in overall sustainability as well. The remaining two projects are the Research Project on Soybean Production in Paraguay and Project for the Improvement of the Maternal and Child Health In-Service Training System and Program in Ghana. Both projects were faced with such problems as the inability of the implementing organizations to use their own income due to insufficient policy support from the government and lack of stability on the part of counterparts.

4) Sustainability of Finance

The scores of financial sustainability were lower than those of technical and organizational sustainability (Figure 2-5). The number of projects that scored 3 points or more was 22 out of 39 projects (56%), and nearly 60% of projects were provided with sufficient budget or took measures to secure the budget.

Five projects (13%) scored 4 points in the category of finance, among which three projects (8%) scored 4 points in the overall category. The remaining two projects (5%) were Project for Model Development of Comprehensive HIV/AIDS Prevention and Care in Thailand and the Water Supply Technology Training Improvement Project in Egypt. The former received increased budget allocation and support from international organizations, and the latter was provided with a budget, including funds for renewing materials and equipment.

Seventeen projects (44%) that received 3 points in financial sustainability maintained their activities at the time of the ex-post evaluations despite difficulty in securing funds. This was made possible by ensuring expenditures from allocated budgets, their own revenues and donors' funds, or by reducing the costs. Although the National Center for Environment Project in Chile, a university affiliated agency, was faced with a decrease in the government's financial support, it achieved the expansion of public and private orders. Despite job transfers of counterpart personnel, two of the three targeted laboratories maintained the project outcomes and the project was able to maintain the implementation of training courses and activities in the area of information and telecommunications.

Seventeen projects (44%) scored 2 points or less in financial sustainability. Maintenance and expansion of the achievements of projects, maintenance and management of materials and equipment, and securing of human resources were becoming difficult due to financial constraints. In some cases, their own revenues declined due to external factors.

On the other hand, some projects generated their own revenues and became financially independent. This study found that 38 projects indicated whether they has generated their own revenues. Among them, 21 (54%) had generated their own revenues and three projects (8%) attained financial independence. More than half of the projects were making efforts to generate their own revenues. The projects planning to be financially independent are the Urban Transport Human Resources Development Project in Brazil, the National Center for Environment Project in Chile, and Information Technology Upgrading Project in Jordan.

(4) Comparison between the Expectations at the Time of Terminal Evaluation and Results of Ex-post Evaluation

With respect to terminal evaluations, as in the case of ex-post evaluations, evaluators conducted evaluations on sustainability of overall, technology, organization and finance based on the evaluation reports. The sustainability was rated on a 1-4 scale (1=lowest 4=highest) and average scores were calculated*.

Table 2-5, 2-6, 2-7 and 2-8 show the changes in the scores of sustainability from the time of terminal evaluations to ex-post evaluations. The number of projects that scored the same points at both terminal and ex-post evaluations (in the boxes outlined in bold lines) is relatively large: 29 projects (74%) for overall sustainability, 28 projects (72%) for technical sustainability, 27 projects (69%) for organizational sustainability, and 24 projects (62%) for financial sustainability. Also, the number of projects that scored the same 3 points at the times of both the terminal evaluations and the ex-post evaluations in all of the aspects is the largest at more than 20 projects.

When looking at the changes in scores from the time of terminal evaluations to ex-post evaluations, the number of projects whose scores were raised or lowered in overall sustainability (Table 2-5) and technical sustainability (Table 2-6) is small, showing a similar pattern of distribution. In the aspect of organizational sustainability (Table 2-7), eight projects (21%) scored 2 points at the time of ex-post evaluations although the scores at the time of terminal evaluations had been 3 points. In the aspect of financial sustainability (Table 2-8), as in the case of organizational sustainability, eight projects (21%) were rated 2 points in ex-post evaluations due to difficulties in securing budgets although they had been given 3 points in terminal evaluations. Nonetheless, four projects (10%) that had scored 2 points in terminal evaluations were rated 3 points in ex-post evaluations by generating their own revenues.

From the above results, the following could be said about the projects that have been evaluated as having sustainability at the

* As in the case of impacts at the time of project termination, sustainability was evaluated on a four point scale rating by two consultants.

Table 2-5 Change in Scores of Sustainability (Overall) at the Time of Terminal Evaluation and Ex-post Evaluation

		Scores of Ex-post Evaluation			
		1 point	2 points	3 points	4 points
Expectations at the time of Terminal Evaluation	1 point				
	2 points	1 project	1 project	3 projects	
	3 points		5 projects	25 projects	1 project
	4 points				3 projects

Table 2-6 Change in Scores of Sustainability (Technology) at the Time of Terminal Evaluation and Ex-post Evaluation

		Scores of Ex-post Evaluation			
		1 point	2 points	3 points	4 points
Expectations at the time of Terminal Evaluation	1 point				
	2 points		1 project	5 projects	
	3 points	1 project	2 projects	25 projects	2 projects
	4 points			1 project	2 projects

Table 2-7 Change in Scores of Sustainability (Organization) at the Time of Terminal Evaluation and Ex-post Evaluation

		Scores of Ex-post Evaluation			
		1 point	2 points	3 points	4 points
Expectations at the time of Terminal Evaluation	1 point				
	2 points	1 project			
	3 points		8 projects	23 projects	2 projects
	4 points			1 project	4 projects

Table 2-8 Change in Scores of Sustainability (Finance) at the Time of Terminal Evaluation and Ex-post Evaluation

		Scores of Ex-post Evaluation			
		1 point	2 points	3 points	4 points
Expectations at the time of Terminal Evaluation	1 point				
	2 points	1 project	1 project	4 projects	
	3 points		8 projects	21 projects	2 projects
	4 points				2 projects

time of ex-post evaluations as expected or more than expected at the time of terminal evaluations: some projects were evaluated for sustainability at the time of terminal evaluation by appropriately considering factors of concern over future activities; and some projects properly utilized recommendations in the subsequent activities.

On the other hand, among the projects that have been evaluated by ex-post evaluations as having not as much sustainability as expected, the recommendations were not realized by the time of ex-post evaluations although the terminal evaluations had predicted that the recommendations would be put into practice.

2-3 Utilization of Recommendations of Terminal Evaluation Reports at the Time of Ex-post Evaluations

In section 2-2, the results of ex-post evaluations on impact and sustainability have been analyzed. Since it was found that the utilization of recommendations drawn out of terminal evaluations has influenced the occurrence of impact and sustainability, the analysis was made on the relationships between the utilization of results and recommendations in terminal evaluations and the occurrence of the subsequent project outcomes based on the terminal evaluations reports.

The utilization of recommendations of terminal evaluations is described below.

(1) Recommendations for JICA

Most of the recommendations for JICA in terminal evaluations had to do with the follow-up activities and extension of project period. The recommendations were made for JICA about the follow-up cooperation when achieving the project targets seemed difficult at the time of terminal evealuation. These examples were found in the Afforestation Technology Development Project on Acid Sulphate Soil in the Mekong Delta in Viet Nam, the Project for the Improvement of the Maternal and Child Health In-Service Training System and Program in Ghana, Maternal and Child Health Services Project in Tanzania, and Forest Research Project Phase 2 in Papua New Guinea.

It can be concluded that these recommendations were used since the follow-up activities were conducted, according to the ex-post evaluations. However, the ex-post evaluation reports did not specify what specific inputs and activities were done during the follow-up period, whether any accomplishments were made as expected and what promoting or impeding factors were.

Recommendations on projects were not only for JICA's project teams but also for the implementing organizations of the partner countries, and aimed to achieve project purposes before the termination of projects, including capacity development of instructors, strengthening of training implementation system, compilation of guidelines, and reinforcement of maintenance and management system of equipment. Some projects used these recommendations after the terminal evaluations (the Project on Strengthening the National Institute for the Improvement of Working Conditions and Environment in Thailand) and some projects incorporated them into the activities of the subsequent projects or during the follow-up period (the Project on the Aquaculture Development in Estuary in El Salvador).

(2) Recommendations for the Governments of Partner Countries

Recommendations for the government of partner countries were listed as activities that seemed necessary to expand impact and increase sustainability to be taken by the time of the termination of projects, including development of upper level policies and systems, clarification of the position of the implementing organizations, securing of budget, improvement of labor conditions of counterparts, maintenance and management of equipment, allocation of manpower, and so on.

Some projects achieved project purposes at the time of ex-post evaluations since they were able to secure budgets and devel-

oped legal systems in line with recommendations, even if the scores for impact were 3 points or less at the time of terminal evaluations. For instance, support from other donors to secure a budget was recommended for the Infectious Diseases Control Project in Turkey. In response, EU has taken charge of the succeeding project. The epidemiological surveillance system was established by the project and is continuously in operation, and the study results of the project are used in the succeeding project.

On the other hand, even though the scores for impact were 3 points or more with high expectancy of achieving project purposes at the time of termination of the projects, some projects were evaluated by the ex-post evaluations as having failed to achieve expected project outcomes, due to the fact that organizational development, securing budgets and management of materials and equipment were not carried out as recommended. Recommendations were made for the Higher Education Development Support Project in Indonesia about establishment of a scholarship system for instructors and formulation of a plan to establish a graduate school, and they were realized; however, recommendations on industry-academic joint research and securing funds were not realized, and the ex-post evaluation pointed out the financial issues of the implementing organization

3 Promoting and Impeding Factors

As seen in "2. Tendencies of Impact and Sustainability," different projects show different patterns of emergence for impact and sustainability. There are two types of factors: promoting and impeding factors.

First, in sections 3-1 and 3-2, promoting and impeding factors that influenced the impact and sustainability of projects at the planning and implementation stages* were extracted from the ex-post evaluations. They were then classified into categories and analyzed. The classification was based on one used in fiscal 2004 when a similar analysis was performed, and we additionally added and classified new categories, based on the results of ex-post evaluations of fiscal 2006 (Table 2-9). With regard to the classification items that were referred to in many projects, analysis was made on the relationships with rating results of impact and sustainability described in "2. Tendencies of Impact and Sustainability," and studied the influences on project outcomes.

Next, in the section 3-3, based on the analysis results of the relationship between terminal evaluations and ex-post evaluations, promoting and impeding factors that have influenced project outcomes were summarized.

3-1 Promoting and Impeding Factors at the Planning Stage Derived from Ex-post Evaluation Results

(1) General Tendency

Items described as promoting and impeding factors at the planning stage in the ex-post evaluation reports were derived in line with the categories summarized in Table 2-9. The results are shown in Figure 2-6 and Figure 2-7. The total number of referrals is shown since some projects referred to more than one item.

The largest number of 15 projects selected "policy of the government" as the promoting factor at the planning stage. This was then followed by "consistency between the needs of the ben-

Table 2-9 Classifications of Promoting and Impeding Factors

Fiscal 2004	Fiscal 2006	
	Planning Stage	Implementation Stage
Policy of the government	Policy of the government	Policy of the government
Collaboration and cooperative relationships among related organizations	Shared awareness with the partner country and organizations	Communications within the implementing organization and with related organizations
External factors	External factors, etc.	External factors, etc.
Organizational management of the implementing organization**	Incorporation of the mechanism for sustainability	Incorporation of the mechanism for sustainability
Demand for activities of the implementing organization	Consistency between the needs of the beneficiaries and the cooperation sector	—
—	Selection of target area and organization	—
—	Selection of cooperation method and technology	—
—	Setting overall goal	—
—	—	Appropriateness of the allocation of experts and C/P
—	—	Flexibility of progress management
—	—	Appropriateness of input of equipment and budget

Note: Yellow section indicates common categories through fiscal 2004 and fiscal 2006, and green (planning stage) and light blue (implementation stage) sections indicate categories added in fiscal 2006.

* JICA Evaluation Handbook stipulates that promoting and impeding factors shall be described under the section for "those related to planning" and "those related to implementation process" in the evaluation report.

** Since this category focuses on organizational management associated with sustainability, the wording was revised in fiscal 2006 to be more appropriate.

eficiaries and the cooperation sector" with nine projects, and "selection of target area and organization" and "selection of cooperation method and technology" with eight projects each.

The largest number of 14 projects selected "selection of cooperation method and technology" and "incorporation of the mechanism for sustainability" as impeding factors at the implementation stage.

It was pointed out that failing to incorporate the mechanism for sustainability at the planning stage and select an appropriate cooperation method and technology contributed to the impeding factors at a later stage.

(2) Relationship between Rating Scores and Promoting and Impeding Factors

Figure 2-8 shows the differences between the average score on impact (2.9 points, Figure 2-3) of all the 39 projects and the average scores on impact in relation to promoting and impeding factors at the planning stage. The numbers in brackets next to yellow and blue dots indicate the corresponding number of projects. In the same way, Figure 2-9 shows the differences* between the average score on sustainability (2.9 points, Figure 2-4) of all 39 projects and the average scores on sustainability in relation to promoting and impeding factors at the planning stage. Here, it is assumed that the greater the difference from the overall average score is, the greater the influence of the factor on impact or sustainability. Nonetheless, it must be noted that the difference may not be significant if the corresponding projects are few in number.

Based on the distribution of differences of project scores by factors in Figure 2-8 and Figure 2-9, now the analysis focused on the items that a relatively large number of projects described as factors. First, in the item of "incorporation of the mechanism for sustainability," not much difference was observed between the overall average score of the 39 projects and the average scores of the corresponding projects. Therefore, we examined the degree of variation of the scores of corresponding projects in terms of promoting and impeding factors on both impact and sustainability. As a result, it is found that the scores do not cluster around the average score (2.9 points) and there is a variation above and below the average score. Based on this finding, it is assumed that the average scores for this item became close to the overall average since many projects, including projects with high scores and those with low scores, described this item as the factor. Therefore, while there are projects in which "incorporation of the mechanism for sustainability" greatly influenced project outcomes, regardless of whether it acts as a promoting factor or an impeding factor, there are projects over which the item did not exercise a decisive influence. Although no quantitatively signifi-

Figure 2-6 Promoting Factors at the Planning Stage

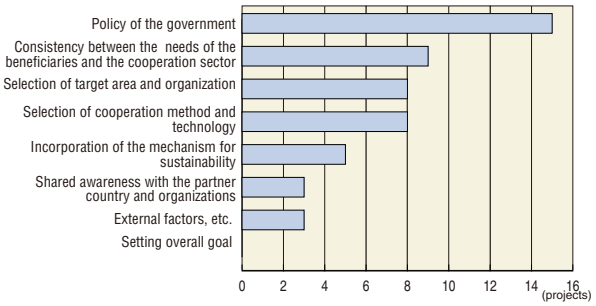


Figure 2-7 Impeding Factors at the Planning Stage

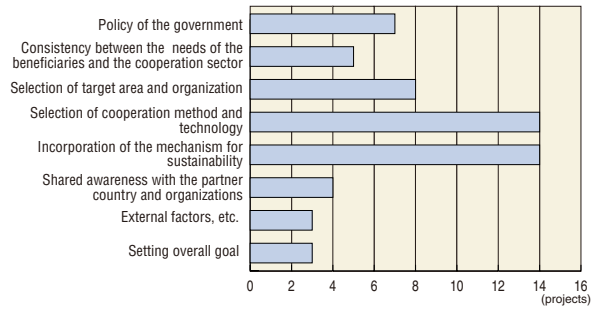


Figure 2-8 Difference between the Scores on Impact and the Overall Average Score by Promoting and Impeding Factors at the Planning Stage

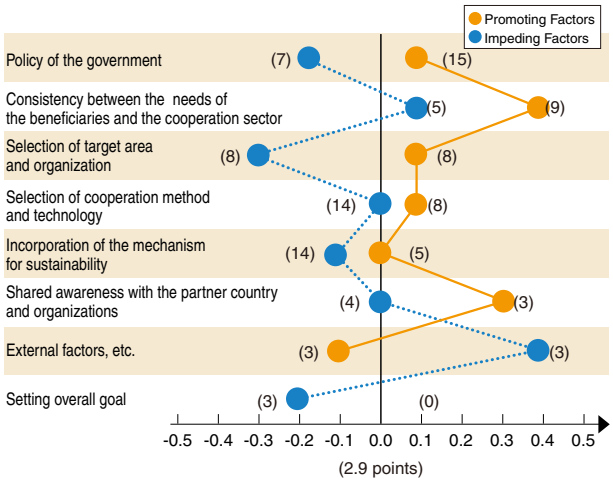
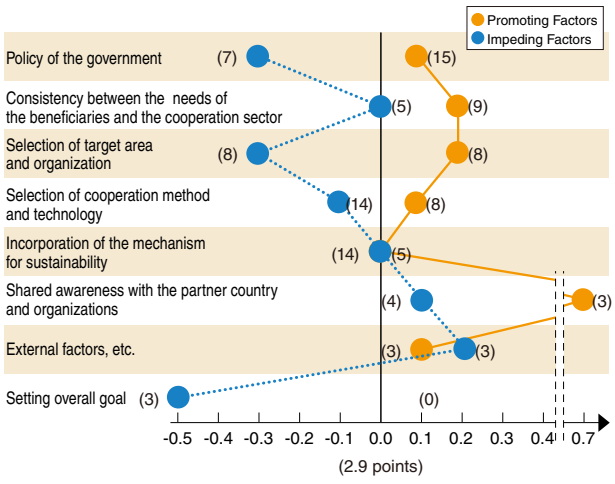


Figure 2-9 Difference between the Scores on Sustainability and the Overall Average Score by Promoting and Impeding Factors at the Planning Stage



* In both impact and sustainability, average scores by factors and the overall average score were calculated to the hundredth place and the final differences are rounded to the tenth place.

cant results were obtained from this analysis about the influence of "incorporation of the mechanism for sustainability" over impact and sustainability, it still seems necessary to continue considering this item as an important factor because it exercised great influence over some projects and many projects described this item as a factor at the planning stage.

Next, with regard to the item "consistency between the needs of the beneficiaries and the cooperation sector," the degree of contribution as a promoting factor was large while the degree of contribution as an impeding factor was small. On the other hand, the degree of contribution of "policy of the government" and "selection of target area and organization" as impeding factors was large while the degree as promoting factors was small. From this, preconditions necessary for the emergence of impact and sustainability of projects are to plan a project consistent with the policy of the government and to select an appropriate region and implementing organization. In the meantime, it is suggested that designing a project with proper understanding of the needs of the beneficiaries is important to promote the emergence of sustainability and impact.

(3) Major Promoting and Impeding Factors

From the result of (2), we now analyze and summarize the characteristics of categorized items deemed important among the factors that may influence the emergence of impact and sustainability at the planning stage, while referring to specific projects.

1) Policy of the Government

The policy of the government becomes a promoting factor when the government provides support by clearly identifying the position of a target project and the implementing organization or when the policy promotes the transfer of technology that has been developed by the project. The role of the policy of the government is also important in the following cases: when the target project deals with new issues, such as environmental issues and occupational safety; and when the target groups are the socially vulnerable, such as persons with disablities and AIDS patients. On the contrary, the policy of the government may become an impeding factor when the implementing organization is not officially acknowledged or when the budget is not allocated to the implementing organization for the project due to, for example, privatization of the organization.

For the Project for the National Vocational Rehabilitation Center for Disabled People in Indonesia, a policy measure was taken to make the employment of the disabled persons mandatory. In the Erosion Control and Afforestation Project in Watersheds of Semi-Arid Area in Chile, revision and enforcement of the Forestry Promotion Law and the Agricultural Soil Improvement Law was the promoting factor for achieving the overall goal of the project. Enforcement of the policy, which had been enacted in relation to the WTO, was the promoting factor in the Philippines' Project on Electrical and Electronics Appliances Testing.

The Project on Improvement of Mineral Processing Technology Concerning Medium and Small Scale Mines in Colombia is one of the examples of a project in which the policy of the government was an impeding factor. The government was not able to control illegal or informal mining operations, which had a negative influence on the project activities. In the National Center for Environment Project in Chile, the implementing organization was positioned as the private sector and had to secure its own financial resources; the project was not managed as planned.

2) Consistency between the Needs of the Beneficiaries and the Cooperation Sector

"Consistency between the needs of the beneficiaries and the cooperation sector" is an important factor for increasing impact. In the sector of agriculture, forestry and fisheries, high scores on impact were the result of the consistency between the developed technology and the needs of the farmers and fishermen. In the sector of human resources, the performance of target projects clearly demonstrates the importance of designing the training programs in such a way that they meet the needs of private companies and the market, as well as the target organization.

Examples of projects in which the "consistency between the needs of the beneficiaries and the cooperation sector" was a promoting factor include Afforestation Technology Development Project on Acid Sulphate Soil in the Mekong Delta in Viet Nam and the Project for the Strengthening of Agricultural Technology Development and Transfer in El Salvador. In both projects, technology that met the needs of the local farmers was developed and transferred, leading to high impact.

In the Information Technology Upgrading Project in Jordan, a system was established in which needs of the private sector were incorporated into project activities through follow-up activities carried out by the ex-trainees, which was a promoting factor to carrying out training activities based on local needs.

3) Selection of Target Area and Organization

Some projects select a pilot area or model farmers by designating specific provinces, rural communities, or groups of farmers, thus concentrating the inputs. In this case, what is important is which place and who is selected as the pilot area and model farmers, considering the interests of the partner country or residents in the vicinity.

The Project for the Improvement of the Maternal and Child Health In-Service Training System and Program in Ghana and Maternal and Child Health Services Project in Tanzania report that the pilot areas were selected based on certain criteria for the establishment of models. It is indicated that these projects would have generated more impact if the pilot areas had been selected in view of expansion to other areas or other organizations. The same can be said about the Agricultural and Rural Development Project in Vientiane Province (Phase 2) in Laos. The evaluation concluded that although the project was quite successful in the model village, it would have been easier to expand the accom-

plishments to other areas if the model village had been selected at the planning stage in anticipation of the expansion.

4) Selection of Cooperation Method and Technology

A promoting factor in the "selection of cooperation method and technology" is the selection of a technology and expansion approach that meets the local technology levels and existing organization systems. On the other hand, if no measures are taken in the project for new technology and equipment associated with advanced technology, such as information and telecommunications, it may be an impeding factor.

In Afforestation Technology Development Project on Acid Sulphate Soil in the Mekong Delta in Viet Nam, a proper level of technology was developed in consideration of the local traditional technology. With respect to transfer of technology, establishment of an expansion system to transfer the technology from one farmer to another and empowerment of farmers were described as promoting factors.

High sustainability was achieved in the Information Technology Upgrading Project in Jordan; for example, they secured their own revenues and renewed manuals and equipment, and conducted training continuously. On the other hand, the impact of this project was not as great as expected at the time of the terminal evaluation because the training system could not fully respond to the rapid development of information technology, thus lowering the effectiveness of the content of the training.

5) Incorporation of the Mechanism for Sustainability

If "incorporation of the mechanism for sustainability" is considered at the planning stage and the mechanism is incorporated into the project design, it has a positive impact on the occurrence of impact and sustainability after the termination of the project as a promoting factor. On the other hand, if consideration for "incorporation of the mechanism for sustainability" is not given fully at the planning stage, activities to secure sustainability will not be appropriately conducted at the implementation stage, thus impeding maintenance and expansion of project outcomes as a result.

In the Philippines Upgrading Project for Plastic Molding Tool Technology, a partnership with the Molding Tool Industry Association, which uses molding tool technology, was incorporated at the planning stage. As a result, activities were promoted at the implementation stage, such as maintenance of technology levels through training. This is regarded as a promoting factor for increasing the subsequent impact.

In the Agricultural and Rural Development Project in Vientiane Province (Phase 2) in Laos, the framework to transfer the developed results to other areas was not appropriately incorporated into the project design, and activities to extend the achievements were not sufficiently conducted at the implementation stage; therefore, the project outcomes were limited to the model village.

Figure 2-10 Promoting Factors at Implementation Stage

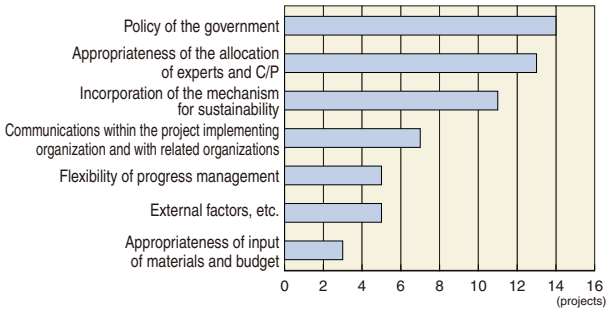
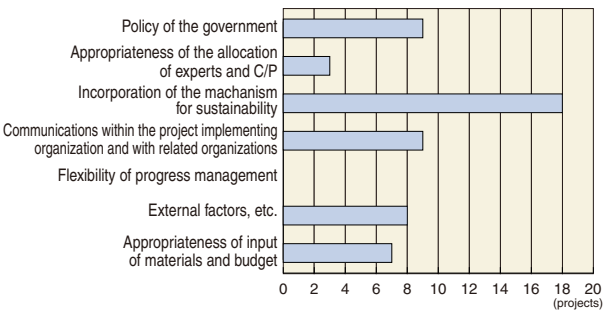


Figure 2-11 Impeding Factors at Implementation Stage



6) Setting Overall Goal

Among the target projects of this study, three projects described "setting the project purposes and the overall goals" as an impeding factor; for instance, overall goals deviated from the project purpose. These three projects did not achieve expected results in terms of both impact and sustainability, thus receiving low scores. Therefore, it is suggested that setting project purposes and overall goals appropriately at the planning stage is an essential element for securing impact and sustainability.

Furthermore, it was difficult under this study to evaluate some projects to what extent the project purpose and overall goal were achieved.

3-2 Promoting and Impeding Factors at the Implementation Stage Derived from Ex-post Evaluation Results

(1) General Tendency

Items described as promoting and impeding factors at the implementation stage in the ex-post evaluation reports were derived in line with the categories summarized in Table 2-9. The results are shown in Figure 2-10 and Figure 2-11. It is necessary to note that the tendency is a rough indication since the total number is small.

As promoting factors at the implementation stage, "policy of the government" (14 projects), "appropriateness of the allocation of experts and counterparts" (13 projects), and "incorporation of the mechanism for sustainability" (11 projects) were described by many. As impeding factors, "incorporation of the mechanism for sustainability" (18 projects) was described by many, followed by "policy of the government" and "communications within the

project implementing organization and with related organization" (9 projects), "external factors, etc" (8 projects), and "appropriateness of input of materials and budget" (7 projects).

(2) Relationship between Rating Scores and Promoting and Impeding Factors

Figure 2-12 shows the differences between the average score on impact (2.9 points, Figure 2-3) of all 39 projects and the average scores on impact in relation to promoting and impeding factors at the implementation stage. The numbers in the bracket next to yellow and blue dots show the corresponding number of projects. In the same way, Figure 2-13 shows the differences* between the average score on sustainability (2.9 points, Figure 2-4) of all 39 projects and the average scores on sustainability in relation to promoting and impeding factors at the implementation stage. Here, it is assumed that the larger the difference between the score of each factor and the overall average score is, the larger the influence of the factor on impact or sustainability, as the case of analysis of planning stage. Nonetheless, it must be noted that the difference may be uncertain if the corresponding projects are few in number.

Figure 2-12 and Figure 2-13 indicate that the policy support from the government as well as appropriate communications within the project implementing organization and with related organizations have a great influence on impact and sustainability, acting as both promoting and impeding factors. It is suggested that these two items are preconditions for appropriate implementation of projects, and at the same time they are important elements for bringing about success at the implementation stage. The consistency of the policy of the government is a prerequisite for success of the project and corresponds to the analysis results of the relationship between rating scores and promoting and impeding factors at the planning stage. The item "appropriateness of the allocation of experts and C/P" is very important in terms of both impact and sustainability as a promoting factor.

No notable differences in scores are found in "incorporation of the mechanism for sustainability" except for the case where a weak negative effect emerges if it is not considered at the implementation stage. Thus, we examined the degree of variation of the scores of corresponding projects, and found that, as in the case of the planning stage, this item was cited as a factor by many projects, from those with high scores to those with low scores. It is therefore assumed that while the item "incorporation of the mechanism for sustainability" had a great influence on the emergence of impact or sustainability at the implementation stage in some projects, it did not have a decisive influence in others.

Meanwhile, this study does not consider how much of an influence each factor has on the occurrence of outcomes; in other words, the weight of the scores is not taken into account. Thus, the degree of influence may change if this point is considered.

(3) Major Promoting and Impeding Factors

Using the result of the previous section (2), we now analyze and summarize the characteristics of categorized items deemed important among the factors that may influence the emergence of impact and sustainability at the implementation stage, while referring to specific projects.

1) Policy of the Government

"Policy of the government" contributes to the occurrence and expansion of project outcomes if it provides support to improve the status of the implementing organization, allocates budget, and develops related laws. However, it will be an impeding factor if the position of the implementing organization is weak, the policy is changed, or organizations and systems are reformed.

The Development of Benthonic Resources Aquaculture Project in Chile is an example of a case where the improved status of the implementing organization contributed to the occurrence and maintenance of project outcome. In this project, central

Figure 2-12 Difference between the Scores on Impact and the Overall Average Score by Promoting and Impeding Factors at the Implementation Stage

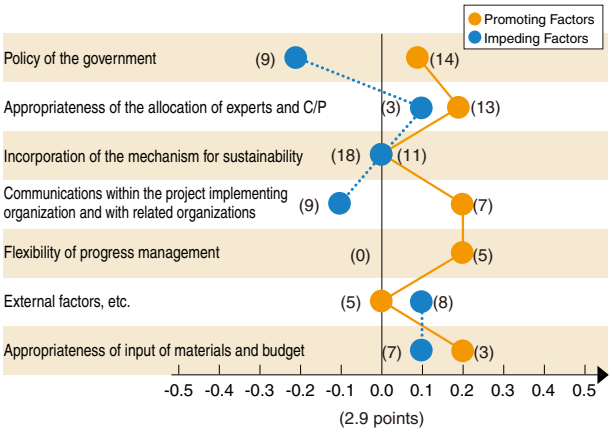
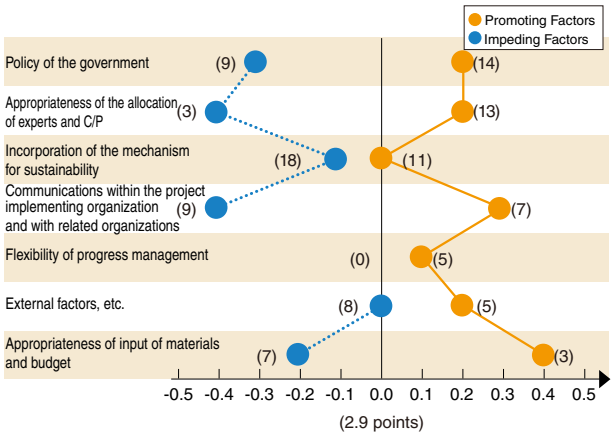


Figure 2-13 Difference between the Scores on Sustainability and the Overall Average Score by Promoting and Impeding Factors at the Planning Stage



* As in the case of the calculation of the planning stage, average scores by factors and the overall average score were calculated to the hundredth place and the final differences are rounded to the tenth place.

and local governments provided support through the support programs and the implementation of publicly commissioned works. The Upgrading Project for Plastic Molding Tool Technology and Bohol Integrated Agriculture Promotion Project in the Philippines are examples of budget allocation to the implementing organization from the government. The Project for Model Development of Comprehensive HIV/AIDS Prevention and Care in Thailand is an example of a case where budget was allocated to the provincial government, the implementing organization, under decentralization. There are many cases in relation to the development of related laws, such as the Project for the National Vocational Rehabilitation Center for Disabled People in Indonesia, in which a law concerning the promotion of employment for the disabled was developed, and the Project on Electrical and Electronics Appliances Testing in the Philippines, in which safety standards regulations were enacted in conjunction with the period of project implementation.

On the other hand, some policies of governments are described as impeding factors: for instance, politically low priority (the Research Project on Soybean Production in Paraguay), unclear political status of the implementing organization and project activities (Forest Research Project (Phase 2) in Papua New Guinea, and Coastal Resources and Environment Conservation Project in Mauritius), and change in policies (Maternal and Child Health Services Project in Tanzania).

2) Appropriateness of the Allocation of Experts and C/P

Factors that promote or impede the occurrence of project outcomes include the selection and assignment of appropriate experts, the timing of dispatch, distinction between full-time and part-time counterparts, the possibility of personnel change, and so on.

Examples of cases where project outcomes were increased through appropriate selection and dispatch of experts are the Research Center for Communication and Information Technology (ReCCIT), King Mongkut's Institute of Technology, Ladkrabang (KMITL) in Thailand, and the Railway Training Center Project in Thailand.

An example of a case where appropriate selection of counterparts led to success is the Urban Transport Human Resources Development Project in Brazil. In Coastal Resources and Environment Conservation Project in Mauritius, little personnel change and effective technology transfer are described as promoting factors.

There are some cases where the appropriate fields and organizations for training in Japan were the causes of project outcomes. It is pointed out that in the Project for the Strengthening of Agricultural Technology Development and Transfer in El Salvador, the same organization in Japan supported the implementation and management of the project, which led to an establishment of an excellent implementation system. In the Project for Strengthening Health Care in the Southern Region in Jamaica, counterpart training was conducted in the field where the needs met the experience of Japan, which contributed to the occurrence of outcomes.

On the other hand, experts who specialized in curriculum development for the nation-wide training and inter-subject training were not dispatched to the Technical and Vocational Education and Training Improvement Project at Technical High Schools in Jamaica, which impeded the occurrence of outcomes.

3) Communications within the Project Implementing Organization and with Related Organizations

The communication and collaboration within the project implementing organization, and with related organizations, end beneficiaries, and users, affects the occurrence, maintenance, and expansion of project outcomes.

In the National Center for Environmental Research and Training (Phase 2) in Mexico, management meetings attended by concerned personnel of both Japan and Mexico were held once a month on average to discuss and decide detailed activity plans, which resulted in smooth operation of the project. In the Project for the Improvement of the Mahajanga University Hospital Center in Madagascar, activities were successfully conducted with related external organizations to improve the referral system (reference of patients to higher-level medical institution), contributing to the emergence of impact and sustainability, such as an increase in the number of patients through the establishment of general reception desks at hospitals and PR activities through TV.

However, there are many cases of lack of communication with beneficiaries, or the users of services. In the Agricultural and Rural Development Project in Vientiane Province (Phase 2) in Laos, no substantial outcomes were observed through the provision of guidance on the production due to lack of communication with the target farmers.

4) Incorporation of the Mechanism for Sustainability

Many projects described this item as promoting and impeding factors at the implementation stage. This item also had a great influence on project outcomes in some cases. Therefore, it is fair to say that "incorporation of the mechanism for sustainability" is an important viewpoint. Although further study is needed, as mentioned earlier with regards to its relationship with the evaluation results on impact and sustainability, we can summarize the results of analysis from three aspects, technology, organization, and finance, as described below.

a. Technical Aspect

Development and transfer of technologies that are actually put into practice contribute to the establishment of the framework for development and transfer of technologies (services and products) that are available for use and for utilization and management of provided materials and equipment after termination of the project. Examples are the Railway Training Center Project in Thailand, where appropriate software was developed that could be

utilized at the work site, and the Research Project at the Faculty of Veterinary Science, the National University of La Plata in Argentina, where technology was transferred to specifically solve problems that local farmers and the livestock industry faced, in addition to basic research. It is also important to establish a framework in which transferred technology is actually used to increase the development effects. An example is the Project for Strengthening Nursing Education in El Salvador, in which the activities of the national committee to build a partnership between clinical medicine and education were effectively carried out.

On the other hand, there are cases without consideration given to the technical aspect. Although the procurement of spare parts for provided equipment was difficult, no sufficient measures were taken to solve the difficulty (the Railway Training Center Project in Thailand). There was a lack of training on provided equipment, impeding the full usage (Afforestation Technology Development Project on Acid Sulphate Soil in the Mekong Delta in Viet Nam). The developed model was too complicated to be transferred to other provinces (Project for Model Development of Comprehensive HIV/AIDS Prevention and Care in Thailand).

b. Organizational Aspect

There are cases where sustainability is increased through organizational stability, solid manpower, and the improvement of incentives for concerned personnel. With respect to organization, as examples of establishing effective organization management system in addition to technology transfer, the system was built in such a way that the activities can continue even if the competent government officer is changed in the Maternal and Child Health Project in Mongolia. In the Project for the Improvement of the Maternal and Child Health In-Service Training System and Program in Ghana, the organizational and human resources development gave consideration to the project outcomes.

The system to improve motivation of the personnel, such as counterparts, is also observed. Stability of manpower was realized by employing counterpart researchers as full-time professors at the implementing organization (the Research Project at the Faculty of Veterinary Science, the National University of La Plata in Argentina). Training using a new technology improved the motivation of the counterparts (the Infectious Diseases Control Project in Turkey). Ownership was increased because a management committee to monitor and evaluate activities was established and made functional (the Project for Strengthening of Health Care in the Southern Region in Jamaica).

On the other hand, an organizational framework was recognized as an issue in the case where a framework to respond to changing industrial technology was not developed (Upgrading Project for Plastic Molding Tool Technology in the Philippines).

c. Financial Aspect

The number of projects that introduced a framework to secure budget and own revenues after the completion of the project is limited. As a successful case, a system was established that allowed the continuation of activities on its own revenues through the introduction of a revolving system* in the Maternal and Child Health Services Project in Tanzania.

On the other hand, there are many cases where management of equipment and continuation of activities run into difficulty due to lack of budget. The Technical and Vocational Education and Training Improvement Project at Technical High Schools in Jamaica failed to secure a budget to continue the training through a financial measure of related support organizations. No budget was allocated to carry out the release of farmed fish for Coastal Resources and Environment Conservation Project in Mauritius and no specific action was taken. The ex-post evaluation thus recommended that the Research Institute for Fisheries, the implementing organization, and the Ministry of Fisheries, the superior authority, secure necessary funds by involving the users of coastal resources.

5) External Factors, etc.

There are cases where the occurrence of project outcomes has been promoted by external factors that are beyond the control of the projects, such as natural phenomena, political situations, economic environment, and social conditions. For instance, in the Research Project on Soybean Production in Paraguay, an increase in the soybean price led to an increase in the incentive of farmers for soybean production.

On the other hand, there are many cases where external factors hindered the maintenance and development of project outcomes. An example of natural phenomenon acting as an impeding factor is the Bohol Integrated Agriculture Promotion Project in the Philippines. The delay in the related irrigation development project and a drought prevented the occurrence of project outcomes. In the Project for Strengthening Agricultural Technology Development and Transfer in El Salvador, an earthquake that hit the region during project implementation caused physical damage to the farms in the model site. With regard to economic and market conditions, in the Research Project on Soybean Production in Paraguay, dissemination of genetically modified crops influenced the relevance of the content of the project. The Development of Benthonic Resources Aquaculture Project in Chile, in which the delay in acquisition of fishing rights was an issue, is also thought to have been influenced by an external factor.

* System to secure funds to acquire equipment necessary for the activities of midwives

3-3 Promoting and Impeding Factors Derived from the Comparative Study between Terminal Evaluations and Ex-post Evaluations

Here we summarize promoting and impeding factors of terminal evaluations and ex-post evaluations that influence project outcomes based on the results found in the sections 2-1-(3) and 2-2-(4), where expectations on impact and sustainability at the time of terminal evaluations were compared with the ex-post evaluation results, as well as based on the analysis of the use of recommendations presented in terminal evaluations at the time of ex-post evaluations, as described in the sections 2-3.

(1) Promoting and Impeding Factors in Terminal Evaluations

Conducting the terminal evaluations on impact based on the appropriate indicators and terminal evaluations on sustainability, with due consideration given to concerns over future activities, is a promoting factor in implementing projects appropriately after the terminal evaluations.

If activities necessary for securing expected impact and sustainability are incorporated into recommendations of the terminal evaluations in a specific and realistic manner, recommendations become easier to use, which is a promoting factor for increasing impact and sustainability.

On the other hand, if a judgment basis for recommendations is not clearly provided in the terminal evaluations or if recommendations lack concreteness regarding the main actor, timing, and contents, recommendations themselves act as an impeding factor and the use of the recommendations becomes difficult, failing to achieve expected project outcomes.

(2) Promoting and Impeding Factors in Ex-post Evaluations

If ex-post evaluation follows how the impact and sustainability expected at the time of project termination have progressed and examines how application of recommendations in the terminal evaluation has influenced the project, project activities from terminal evaluation to ex-post evaluation can be easily understood. Since this also makes it easier to understand the issues involved in the subsequent activities, it is regarded as promoting project outcomes after the ex-post evaluations.

On the other hand, if sufficient information is not given in the ex-post evaluation reports as to how specific the activities were and how the outcomes were in the process of carrying out recommendations proposed in the terminal evaluations, project activities cannot be appropriately organized at the time of ex-post evaluations, which may impede the emergence of the subsequent impact and sustainability.

4 Lessons Learned from the Study on Evaluation Results

In this section, based on the study results thus far, we will compile lessons for consideration in realizing impact and sustainability at a high level and which can make the feedback of terminal evaluations and ex-post evaluations more useful.

4-1 Lessons to Increase Impact and Sustainability

Based on the study results in sections 3-1 and 3-2 (promoting and impeding factors at the planning and implementing stages derived from ex-post evaluation results), we draw out lessons from the perspective of which activities should be incorporated at the planning and implementing stages in order to maintain and expand project impact and sustainability. Corresponding items for promoting and impeding factors are provided in the bracket of each lesson.

1) It is important to incorporate necessary measures into project activities so that a project is supported by the government policies (**Policy of the government**).

If an analysis is made appropriately on the status of the implementing organization, financial support, and the development of related laws by the government at the planning stage, and these conditions are reflected on the selection of the implementing organization and project design, it can lead to an increase in project outcomes in the future.

Also, at the implementation stage, better and active communications with the government, development of related laws, and allocation of necessary budget for project activities greatly contribute to the occurrence and maintenance of cooperation outcomes. If the project activities and accomplishments are expanded beyond the implementing organization to the government and related external organizations, it is expected that the impact of the project itself will be increased, and the ownership and sustainability of the counterparts and implementing organization will be reinforced.

2) Accurately understand the needs of the beneficiaries and the implementation system of the partner country, and select the cooperation sector, technology, and counterpart organization that meets the needs and the system. Make appropriate inputs at an appropriate time that responds to the occurrence of project outcomes and the change in needs (**Consistency between the needs of the beneficiaries and the cooperation sector, Selection of cooperation method and technology, and Appropriateness of the allocation of experts and C/P**).

The study results of the relationship between the scores and promoting and impeding factors in 3-1-(2) and 3-2-(2) suggest that formulation and implementation of a plan that meets the needs of the beneficiaries and the technical level and organizational system of target organization is essential for the emergence of impact and enhancement of sustainability. Based on this idea, the following actions are desirable at the planning stage: accurate understanding of the needs of the beneficiaries through preliminary studies; selecting the cooperation sector and technology that meets the needs; selecting the appropriate counterpart organizations with full consideration given to the status and authority in the government, capacity of the counterpart, and setting the level of technology to be transferred.

Furthermore, at the implementation stage, it is important to check the change in needs and the occurrence of project outcomes through daily monitoring, and provide inputs accordingly (dispatch of experts and/or counterpart training) at an appropriate time in an appropriate way.

3) Give consideration to the selection of target area and organization. In particular, when the project is implemented in a pilot or model area, it is desirable to select the area suitable for the future development and expansion of the project outcomes (**Selection of target region and organization**).

Good outcomes were observed in many projects when the pilot or model area was appropriately selected and technology transfer was made intensively, because the relevance of the approach could be examined, and the incentives of those involved in the project increased.

At the planning stage of such a pilot/model-type project, selection of the target area and the implementing organization with consideration given to future transfer and development is an important point for maintenance and expansion of project outcomes after termination of the project.

4) Set specific overall goals and indicators to measure an achievement level that can be shared by those involved in a project (**Shared awareness with the partner country and organizations, and Setting overall goals**).

Project purpose and overall goal are what the Japanese side and the partner country aim to achieve in collaboration. If clear goals are set, shared awareness and smooth communications are made possible, thus leading to increased impact and sustainability. From the perspective of evaluability, it is desirable to set overall goals that can measure achivement of the project and that can identify the positive impact for beneficiaries.

At the planning stage, it is necessary to set overall goals while clearly identifying the position and the role of the project under the assumption that the project outcomes continue to exist after the termination of the project: specifically, what sort of beneficiaries in what region receives the project impact and what is needed to change the current situation.

5) Give consideration to strengthening communications within the implementing organization, as well as with related organizations and beneficiaries (**Communications within the implementing organization and with related organizations**).

At the implementation stage, if efforts are made to facilitate communications with project stakeholders, for example, holding periodical meetings with counterparts, and if collaborative activities with related organizations and beneficiaries are incorporated into the project, the implementation system of the project will be strengthened, thus leading to a smooth implementation of the project.

Active communications with beneficiaries and relevant external organizations, for example, disclosure to the public about the project activities and the achievements, will promote extension of project achievements, and thus be effective in increasing impact and sustainability.

6) When planning a project, it is necessary to discuss the incorporation of the mechanism for sustainability. It is also necessary to follow if the mechanism is functioning at the implementation stage (**Incorporation of the mechanism for sustainability**).

Securing sustainability of a project in the post-project period should be regarded as an important issue. It is therefore important to consider the development of the mechanism for sustainability at the planning stage and appropriately follow the process at the implementation stage.

With respect to the technical aspect, it is necessary to transfer and develop technology that meets local needs, as well as secure renewed technology through a framework in which transferred technology is actually utilized by establishing a committee that reinforces the coordination with the existing technology.

Organizational aspect refers to an integration of the following activities into the project: establishment of a monitoring and evaluation system by counterparts; improvement in not only the technology development sector, but also the human resources development and capacity development of management sector; and establishment of a framework to share transferred technology within the organization in preparation for job leaving and job transfer on the part of the counterparts. It is also necessary to incorporate the operations introduced by the project into regular operations.

In terms of financial aspects, it is desired that the project presents the necessary budget to maintain achievements of the project, such as technology, services, and operations, after termination of the project. It is also desirable to propose budgetary measures to secure financial resources, consider activities to secure its own revenues, and seek ways to reduce the cost.

7) Incorporate items that are beyond the control of the project, such as external factors, into the PDM if they are assumable at the planning stage. It is also important to monitor

the process during the implementation stage to discuss in advance appropriate measures to prevent negative influences (**External factors, etc.**)

External factors are divided into two parts: those that occur at any time and cannot be predicted, such as natural disasters, and those that can be predicted to some extent but cannot be controlled by the project, such as political, economic, and social conditions.

At the planning stage of the PDM, in preparation for the occurrence of unexpected external factors, it is important to give the project a function that allows for discussions among the stakeholders about how, or whether, to modify the PDM and about activities to respond to such changes, as well as discussions about such a response by asking external organizations or experts for their advice, if necessary.

At the implementation stage, if it is included in the PDM as a major external factor, it should be closely monitored. If it could have a negative influence on the project, take necessary measures in advance to minimize any negative effects of the external factor.

4-2 Lessons to Increase Effectiveness of Evaluations

In this section, in order to increase project outcomes by making use of the continuity of evaluations from terminal evaluations to ex-post evaluations, we will outline the points to improve terminal and ex-post evaluations more effectively based on the results presented in 3-3

(1) Lessons for Ex-post Evaluations

When conducting ex-post evaluations, it is necessary to pay attention to their relationship with terminal evaluations, such as comparison of the emergence of impact and sustainability that have been expected at the time of terminal evaluations and the confirmation of the use of recommendations, in addition to the evaluations on current impact and sustainability.

Currently, many ex-post evaluation reports assess the degree of achievement of project purposes or overall goals without considering the results of the terminal evaluations. However, by assessing how the degree of achievement of project purposes and overall goals has changed about three years after the termination of the project, whether impact has emerged as expected, or what the factors are in comparison with the terminal evaluations, we are able to summarize the activities from the time of the termination of the project to the ex-post evaluation, which makes it easier to draw out promoting and impeding factors.

Analyzing whether the recommendations in terminal evaluations have appropriately been fed back to the implementing organization or the government after termination of a project is crucial for evaluating impact and sustainability of the project. Therefore, it is desirable to compare them with terminal evaluation results and follow-up results of recommendations and lessons in ex-post evaluation. In specific terms, we recommend the above-mentioned analyses as evaluation items in the operation guidelines for the consultants, who perform the evaluation, in addition to the above-mentioned viewpoints in the evaluation questions. Another improvement is to add a section to describe the analysis results in the reports.

(2) Lessons for Terminal Evaluations

From the perspective of consistant evaluations from ex-ante to ex-post, it is recommended that JICA as well as organizations in partner countries increase their awareness of the importance of value judgment and recommendations of terminal evaluations. We also recommend drawing out specific and feasible recommendations.

Specific recommendations are often found in terminal evaluations when it is thought that continuation or follow-up of the project is regarded as being important. On the other hand, based on the ex-post evaluation results, some presented optimistic value judgments in terms of impact and sustainability, and some gave less specific and more general recommendations, when the project was expected to terminate. However, the projects that are coming to an end soon are the ones that need a reasoned subjective value judgment anticipating ex-post evaluation in three years time, in order to secure the occurrence of project outcomes and sustainability. In particular, recommendations for the government or the implementing organization of the partner country need to be specific and feasible.

To that end, when conducting terminal evaluations, both JICA and the counterpart organization need to share the awareness that terminal evaluation is in a consistent evaluation process from ex-ante to ex-post. It is also effective for them to fully discuss the items to be covered when extracting recommendations. Items to be discussed include the following: implementation system of future projects, an ideal monitoring and evaluation system, organizational reinforcement of the implementing organization and human resources development, securing of budget, partnership with the government, future partnership with JICA and other donors, approaches to beneficiaries, and a management system for materials and equipment. It is easier to follow recommendations during the project implementation when recommendations clearly describe who will conduct what kind of activities and when in addition to the background of recommendations. It also improves the evaluability of ex-post evaluations.