2016

JICA Annual Evaluation Report

JICA

Inclusive and Dynamic Development

Japan International Cooperation Agency

EV
JR
17-02

JICA 2016

JICA Annual Evaluation Report 2016 — INDEX

Part I Operations Evaluation System of JICA

Part II Ex-post Evaluation Results

Part III Thematic and Other Evaluations

Preface

Today, more people's lives and dignity across the world have been threatened by complicated, interrelated problems like armed conflicts, violent extremism, poverty, inequality, epidemics, and natural disasters. As the world becomes increasingly unpredictable, the United Nations Summit in 2015 adopted the Sustainable Development Goals (SDGs) to prompt the international community to take a step forward toward realizing inclusive development. JICA, as the agency implementing Japan's Official Development Assistance (ODA) and the catalyst connecting Japan with developing countries, stands ready to achieve this goal by collaborating with various partners to enhance cooperation.

This Annual Evaluation Report compiles the results of evaluations conducted on JICA projects in 2016. The report includes an outline of JICA's evaluation process and results of ex-post evaluations conducted by external organizations. This year, JICA's team emphasized its efforts on "learning and improvement" to deepen our analysis and understanding of how project outcomes are determined, while also bringing together outside perspectives from professionals working at both Japanese and overseas universities, as well as non-governmental organizations (NGOs). Some of those examples are highlighted within this report.

JICA strongly believes that properly conducted project evaluations can effectively enhance both the quality and strategic focus of our cooperation efforts. With that in mind, JICA is committed to evaluating its projects under two main objectives: (1) Improve and strengthen projects and cooperation strategies by compiling our lessons learned. (2) Ensure organizational accountability and transparency by publicizing evaluation results.

Of course, not all projects achieve high scores on every evaluated metric. This is particularly the case for areas where JICA provides project support in very challenging environments. Given the difficulties and ambitious goals of these projects, some may require JICA to expand upon its already innovative solutions to promote further economic and social progress in these countries. Still, we are determined to continue challenging ourselves to make the best use out of the lessons learned and the accountability imposed by the evaluation results to maximize our cooperation efforts.

It is our great hope that this report helps deepen your understanding of JICA's activities, and we thank you for your continued support and trust in JICA.

March 2017
Shinichi Kitaoka, President
Japan International Cooperation Agency (JICA)

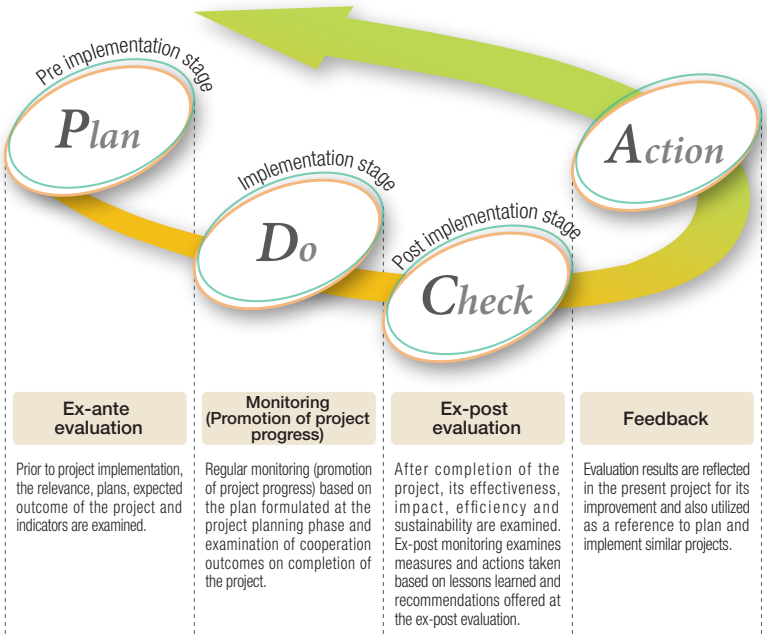
JICA's Operations Evaluation System

To improve its projects and ensure accountability to stakeholders, JICA implements operations evaluations and comprehensive and cross-sectoral thematic evaluations for Technical Cooperation, ODA Loans and Grant Aid projects.

1 Evaluation throughout the project's PDCA cycle

The PDCA cycle is a management tool that promotes continuous improvement of project activities and JICA's operations. It has four steps: Plan, Do, Check and Action.

For all projects, JICA's operations evaluation is conducted based on the PDCA cycle, regardless of the scheme of cooperation. Considering characteristics of the scheme of cooperation, such as the assistance period and timeframe to obtain expected results, JICA monitors and evaluates at each project stage (planning, implementation, post-implementation and feedback) within a consistent framework. By evaluating and monitoring projects at each stage of the PDCA cycle, it aims to improve the project development results. Details of the types of evaluation are introduced in p.4-5.



2 Coherent methodologies and criteria among three schemes of cooperation

JICA adopts an evaluation system using methodologies and criteria applicable to all schemes of assistance. JICA aims to conduct the evaluation and utilize the findings based on a consistent philosophy and a standard evaluation framework, while taking the differences in characteristics among each assistance scheme (Technical Cooperation, ODA Loans, and Grant Aid) into consideration.

Specifically, the evaluation framework reflects: (1) Monitoring and evaluation based on the PDCA cycle; (2) Evaluation applying Five DAC Criteria for Evaluating Development Assistance laid out by the OECD-DAC (Organisation for Economic Co-operation and Development/Development Assistance Committee) and internationally accepted as an ODA evaluation methodology; and (3) Publication of evaluation results in a uniform style by utilizing a rating system developed by JICA. The rating system and results are introduced in p.9-11.

Evaluation Perspectives Using the Five DAC Criteria for Evaluating Development Assistance

Relevance	Examines the extent to which the cooperation activity is suited to the priorities and policies of the target group, recipient and donor: Does the goal of the projects meet the needs of beneficiaries? Are the activities and outputs of the program consistent with the overall goal and the attainment of its objectives?
Effectiveness	Measures the extent to which the program or project attains its objectives.
Impact	Examines positive and negative changes as a result of the project. This includes direct and indirect effects and expected and unexpected effects.
Efficiency	Measures the outputs in relation to the inputs to determine whether the project uses the least costly resources possible to achieve the desired results.
Sustainability	Examines whether the benefits of the project are likely to continue after the completion of the project.

The JICA operations evaluation system has the following five features:

1. Evaluation throughout the project's PDCA cycle
2. Coherent methodologies and criteria among three schemes of cooperation
3. Comprehensive and cross-sectoral evaluation through a thematic evaluation
4. Ensuring objectivity and transparency
5. Emphasizing the utilization of evaluation results

3 Comprehensive and cross-sectoral evaluation through thematic evaluations

JICA conducts thematic evaluations to assess a group of projects comprehensively and cross-sectorally or analyze a specific development issue or assistance scheme. The thematic evaluation is conducted by selecting projects based on a specified theme and analyzing them from perspectives that are different from individual operations evaluations, to derive common recommendations and lessons learned from those projects.

Thematic evaluations in FY 2016 systematized practical and universal lessons learned from the projects implemented in the energy sector by analyzing a number of project evaluation results horizontally and adding inputs from JICA staff and external experts through meetings.

4 Ensuring objectivity and transparency

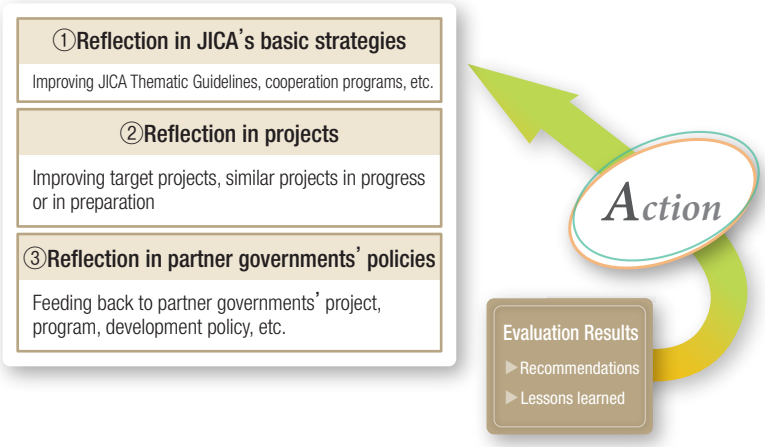
JICA has incorporated external evaluations according to its project size of the ex-post evaluations to ensure objectivity and transparaney of project implementation results. Moreover, JICA tries to make efforts to increase transparency in its operations evaluations by providing the findings of the ex-post evaluation results on JICA's official website.

To improve the quality of evaluations, JICA has established mechanisms allowing the viewpoints of external parties to be reflected in the operations evaluation system. In this context, JICA receives advice on evaluation policy, as well as the evaluation system and methodology from the Advisory Committee on Evaluation consisting of third-party experts. Please refer to p.6 regarding the committee.

5 Emphasizing the utilization of evaluation results

JICA's operations evaluations focus on utilizing the results for improving the quality of "Action" of the PDCA cycle, which is also utilized to feed back recommendations to improve the project and lessons learned for ongoing and future similar projects. JICA intends to strengthen the feedback function further to reflect the evaluation results in JICA's cooperation strategies.

At the same time, JICA makes efforts to reflect the evaluation results in its development policies, sector programs and the respective projects of recipient governments by feeding back the evaluation findings and by other means.



– Results of the operations evaluation are available on JICA's website –

Related link: ▶ https://www.jica.go.jp/english/our_work/evaluation/index.html

Pre Implementation Stage (Ex-ante Evaluation)

To determine needs for projects as well as to set targets for project outcomes, JICA conducts ex-ante evaluations.

◇ What is ex-ante evaluation?

JICA conducts ex-ante evaluations prior to project implementation to confirm needs and priorities of projects, examine project outlines and anticipated outcomes, and establish indicators to measure the outcomes from the perspective of Five DAC Criteria. During the ex-ante evaluation, JICA also confirms the implementations of appropriate safeguards after reviewing environmental and social considerations, as well as the reflection of lessons learned from past projects.

◇ Utilization of results of ex-ante evaluations

The results of the ex-ante evaluation are reflected in subsequent decision-making on project designs and approaches. Once projects commence, monitoring and evaluations are conducted based on the evaluation plans and indicators set at the time of the ex-ante evaluation.

Number of Ex-ante Evaluation Performed in FY2015*1

Technical Cooperation	122 projects
ODA Loans	67 projects
Grant Aid	70 projects

Evaluation at Pre Implementation Stage by Scheme

Scheme	Technical Cooperation	ODA Loans	Grant Aid
Timing	Prior to project implementation		
Preparation of Ex-Ante Evaluation report*2	All projects with contributions of 200 million yen or more		Projects with contributions of 200 million yen or more implemented by JICA*3
Principals of evaluation	Operational Departments of JICA, etc. (Internal Evaluation)		
Items evaluated and evaluation method	Confirming needs and expected outcomes and verifying the plan of projects, in light of Five DAC Criteria		

*1: Published as the ex-ante evaluations performed in FY2015 (as of February 2017).

*2: In principle, ex-ante evaluation report is prepared for all projects with contributions of 200 million yen or more and not prepared for those with less than 200 million yen.

*3: Evaluation of projects collaborated with international organizations is conducted by such international organizations.

Post Implementation Stage (Ex-post Evaluation)

JICA conducts ex-post evaluations to evaluate completed projects comprehensively and examine whether the project's effectiveness, impact and sustainability will continue to manifest after project completion.

◇ What is ex-post stage evaluation?

JICA performs ex-post evaluation after completion of projects with contributions of 200 million yen or more, the results of which are immediately presented to the public in an understandable form.

While projects of which contributions are from 200 million to one billion yen are subject to internal ex-post evaluation by JICA overseas offices, those with one billion yen*4 or more are evaluated by third-party evaluators (external ex-post evaluation) to ensure more objective evaluation. For external evaluation, a rating system*5 has been adopted to present the results in an easily understandable manner.

◇ Utilization of results of ex-post evaluations

The recommendations and lessons learned gathered from these ex-post evaluations will be applied to improving the project, as well as planning and implementing similar projects in future.

Number of Ex-post Evaluation Performed in FY2015*6

Technical Cooperation	(External Evaluation) 25 projects (Internal Evaluation) 24 projects
ODA Loans	(External Evaluation) 35 projects (Internal Evaluation) None
Grant Aid	(External Evaluation) 30 projects (Internal Evaluation) 17 projects

Evaluation at Post Implementation Stage by Scheme*7

Scheme	Technical Cooperation	ODA Loans	Grant Aid
Timing	In principle, until 3 years after project implementation		
Targets	All projects with contributions of 200 million yen or more		Projects with contributions of 200 million yen or more implemented by JICA
Principals of evaluation*8	Third party (External Evaluation), JICA Overseas Office, etc. (Internal evaluation)		
Items evaluated and evaluation method	Based on the Five DAC Criteria		

*4: For projects with contributions of less than 1 billion yen but those that are likely to gain valuable lessons, ex-post evaluations are conducted.

*5: Please refer to p.10 for the rating system.

*6: Evaluations of which results were confirmed in FY 2016 (as of February 2017). Such results were published as "Evaluation Results in FY 2015" on JICA's website.

*7: Matters to be noted
- For projects which are continuously implemented and related to ODA Loans, relevant projects are integrally evaluated in principle.
- For projects of which outcome-based evaluations are not rational in terms of their implication and cost effectiveness, such projects are evaluated through output-based monitoring. This applies to Grant Aid for Human Resource Development Scholarship, for example.
- For projects which provide financial assistance or collaborate with international organizations under the scheme of ODA Loans and Grant Aid, JICA's ex-post evaluation is not conducted, in principle, from the perspective of development partnerships.

*8: For projects with contributions of 1 billion yen or more and those that are considered to be likely to gain valuable lessons, external evaluations are conducted. Internal evaluations are conducted by JICA's overseas offices for projects of which contributions are from 200 million yen to 1 billion yen.

Thematic Evaluation

JICA conducts comprehensive evaluations and analysis of JICA's cooperation with specific themes or development goals, the results of which are utilized for future cooperation planning and implementation to make them more effective.

JICA conducts thematic evaluations which set specific themes, such as region, sector and assistance methodology, and evaluate projects that are relevant to the themes by using evaluation criteria established for each theme. These includes comprehensive analysis, which extracts tendencies and problems which are common to particular issues or compares and categorizes projects to extract common features and good practices. Furthermore, JICA also endeavors to develop a new evaluation methodology.

Thematic evaluation in FY 2016 systematized practical and universal lessons learned from projects within the energy sector by analyzing its project evaluation results. For its details, please refer to p.50.

Impact Evaluation

To further enhance project effectiveness and quality, JICA has been promoting evidence-based practice and emphasizing the application of impact evaluation*9 as its major tool.

To further enhance project effectiveness and quality, JICA and many other donor agencies have recently been promoting evidence-based practice and emphasizing the application of impact evaluation as its major tool.

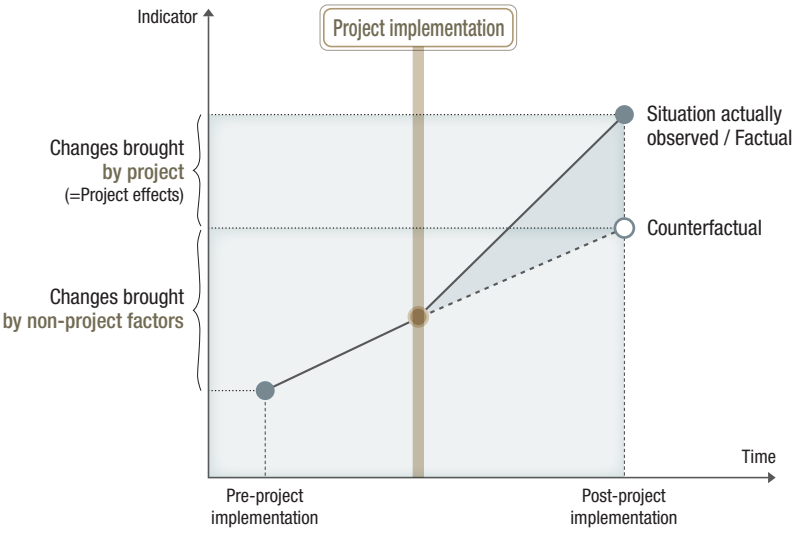
By using statistical method, impact evaluation assesses the changes caused in target societies by specific measures, projects, or development models to improve and solve development issues. To grasp project effects precisely, it requires comparison between situations which are actually observed (Factual) and counterfactual situations which would have appeared in the absence of the project. By analyzing these two situations with statistical method, precise comparison is possible.

On the other hand, impact evaluation requires additional costs and high expertise for its analysis. Thus, JICA examines the priority based on evaluation purposes and needs and conducts impact evaluation on selected projects. In addition to evaluation results obtained by using methods which are traditionally used to measure effects including one which compares before and after projects, reliable evidence obtained from impact evaluation is expected to be utilized for project management and policy-making in partner countries.

In FY 2016, impact evaluations were conducted, including the Technical Cooperation projects "the Skills Training and Job Obtainment Support for Social Participation of Ex-Combatants and Other People with Disabilities in Rwanda" and "Project for Enhancing Access and Capacity of EQUITV program in Papua New Guinea" . Moreover, JICA conducted a capacity enhancement training course, "Impact Evaluation: Toward Evidence-Based Practice (EBP)" , for those who involved in international cooperation projects to develop human resources who promote the implementation of impact evaluation, as described in p.8.

*9. The definition of the term "impact" in impact evaluations differs from "impact" used in the Five OECD-DAC Evaluation Criteria. The latter is defined as "positive and negative, primary and secondary long-term effects produced by a development intervention, directly or indirectly, intended or unintended" (overall concept of "outcomes") while the former refers to effects produced by a project more directly including the "outcomes" described in the Criteria.

Conceptual Diagram of the Impact Evaluation: Comparison of situation actually observed and counterfactual situation



Advisory Committee on Evaluation

JICA established the Advisory Committee on Evaluation to enhance evaluation quality, strengthen feedback of evaluation results and ensure accountability.

The Committee, chaired by Motoki Takahashi, Professor at the Graduate School of Asian and African Area Studies, Kyoto University, includes experts in international cooperation and evaluation from international organizations, academia, NGOs, media and private sector groups.

In two meetings held in FY2016, various activities related to JICA's operations evaluation, JICA's responses to advice and recommendations provided in the past meetings were discussed. Major activities which JICA had in response to the main points discussed in the meetings in FY 2016 were outlined as below.

Chairperson	
Motoki Takahashi	Professor, Graduate School of Asian and African Area Studies, Kyoto University
Acting Chairperson	
Akifumi Kuchiki	Professor, College of Bioresource Sciences, Nihon University
Members	
Tetsuo Kondo	Director, United Nations Development Programme (UNDP) Representation Office in Tokyo
Yasuyuki Sawada	Professor, Faculty of Economics, Graduate School of Economics, The University of Tokyo
Hisashi Takanashi	Executive Managing Director, Engineering and Consulting Firms Association, Japan (ECFA)
Toyokazu Nakata	Chairperson, Muranomirai (NPO)
Masaishi Nosaka	Senior Deputy Chief Officer, Yomiuri Research Institute, The Yomiuri Shimbun
Yoshiko Homma	Lawyer (Yoshiko Homma Law Office) / Professor, The Graduate School of Law, Soka University
Kiyotaka Morita	Senior Manager, International Cooperation Bureau, Keidanren (Japanese Business Federation)
Kiyoshi Yamaya	Professor, Doshisha University Graduate School of Policy and Management

(as of January 2017)

Suggestions and Recommendations from the Committee.	Actions Taken by JICA
Further consideration on public relations	
The Annual Evaluation Reports are too technical and complicated for the general public to understand. Further consideration should be given to simplifying them, for example, by using compelling illustrations.	Apart from the Annual Evaluation Reports, JICA published an online brochure so that people who are unfamiliar with operations evaluation and development cooperation can understand how and what JICA does in its operations evaluations. ▸https://www.jica.go.jp/english/our_work/evaluation/index.html
Strengthening the strategic focus of ex-post evaluation	
JICA should develop an evaluation strategy and select projects to be evaluated. Some projects need to be evaluated in detail, while others need not. It is important to explain logically and rationally how to select subjects for evaluation.	JICA has been trying to reduce workload to deal with the increasing number of ex-post evaluations (internal evaluations). At the same time, JICA has been selectively conducting deeper analyses which focus on learning. In FY2016, the reports of internal ex-post evaluations were simplified and the relevant procedures were changed to be more efficient.
It is essential to further strengthen the learning from evaluations.	In FY2016, JICA established an Advisory Panel on Enhancement of Ex-post Evaluation comprising external experts, to further strengthen the learning from evaluations. The Panel has been examining the way to deepen the analysis of the process of generating project outcomes (Refer to p. 48).
It is critical to promote collaboration with various parties in ex-post external evaluations.	JICA involved experts from domestic and overseas universities and NGOs in three of the ex-post evaluations started in FY2015 to take more specialized and diverse perspectives into account. These projects were evaluated not only from the perspective of the conventional Five DAC Criteria but also from the viewpoints of the approaches and effects of the projects and environmental and social considerations (Refer to p. 18 for the evaluation results). Some of the external evaluations launched in FY2016 also include additional analyses by academics and experienced practitioners.

In addition, the suggestions and recommendations of the Advisory Committee were reflected in various efforts to improve the JICA's operations evaluation. Please refer to "Efforts to Improve Operations Evaluation" (p. 7) for more details.

Related links: The past suggestions and recommendations from the Committee are available on the JICA website.
▸https://www.jica.go.jp/english/our_work/evaluation/advisory/index.html

Efforts to Improve Operations Evaluation

Operations evaluation focuses on assessing project effects to improve future projects and make development assistance more effective.

This chapter describes the efforts made by JICA in FY2016 to improve its operations evaluation for these purposes.

Effort ① Enhancing the quality of evaluation

1. Establishing an Advisory Panel on Enhancement of Ex-post Evaluation for JICA

JICA established an Advisory Panel on Enhancement of Ex-post Evaluation (refer to p. 48) comprising external experts for the following two purposes: (1) to help identify and analyze project effects in greater depth as well as the process leading up to them; and (2) to develop new methodologies and improve systems to maintain and enhance the quality of internal ex-post evaluations.

2. Involving experts in External Evaluation

In FY2016, JICA tried ex-post evaluations in cooperation with experts (academics and experienced practitioners from domestic and overseas universities and NGOs), in addition to the project evaluations conducted by external evaluators based on the Five OECD DAC Criteria, to take more specialized and diverse perspectives into account. These experts provided comments on the projects based on their past experiences and knowledge, details of which are described in p. 18. In the next fiscal year, JICA plans to increase the number of such evaluation.

3. Enhancing communication in English in External Evaluation

For external evaluation, reference documents and guidelines on external evaluations are used to design the evaluation framework and conduct analysis. In FY2016, JICA translated some of these reference documents and selectively conducted evaluations with the entire procedure in English. These efforts are expected to facilitate the participation of local staff from JICA overseas offices who are responsible for project management in the evaluation process, and ultimately lead to deepening their understanding on the ex-post evaluation system, strengthen lessons learned through ex-post evaluations and enhance collaboration between the Japanese and local staff in the evaluation process.

4. Efforts to improve operations evaluation

JICA has been examining how to improve the operations evaluation while ensuring that all projects are, in principle, evaluated based on Five DAC Criteria. For example, in FY2016, JICA launched evaluations of projects implemented under the Science and Technology Research Partnership for Sustainable Development (SATREPS) scheme*1, integrated evaluations of Grant Aid and Technical Cooperation projects to assess their synergistic effect and integrated evaluations of ODA Loans and related technical assistance projects.

*1: Science and Technology Research Partnership for Sustainable Development (SATREPS) is a type of technical cooperation, involving international collaborative research between Japanese research institutions and partner countries. Its aims are to obtain new knowledge and to utilize research outcomes for the benefit of the society with a view to resolving global issues such as environment and energy, disaster prevention, and infectious diseases. In conjunction with this, it also aspires to improve the development of human resources and research capabilities in partner countries by conducting joint research.

Effort ② Sharing and utilizing evaluation results

1. Sectoral analysis in the energy sector

In FY2016, JICA conducted a sectoral analysis of past projects in the energy sector and derived practical and generalized lessons from the lessons learned of individual projects. Details are given in p. 50.

2. A new brochure on JICA's operations evaluation

In FY2016, JICA published a new online brochure for the general public. This brochure was designed to make it easy to understand JICA's operations evaluation.

The brochure is available on the following website:

▸https://www.jica.go.jp/activities/evaluation/index.html (Japanese only)

3. Strengthening networks with other development partners and disseminating information

Following the global trend of pursuing outcome-driven development, both multilateral and bilateral donors have been conducting a growing number of operations evaluations. JICA exchanges information with the evaluation units of these development partners. In FY2016, JICA attended international evaluation forums, such as the DAC Network on Development Evaluation (EVALNET). JICA also organized a seminar, inviting evaluation experts from the International Initiative for Impact Evaluation (3ie)*2 and the World Bank.

To share evaluation results widely, JICA delivered presentations on its evaluation results at the national conference of the Japan Evaluation Society and the spring conference of the Japan Society for International Development in FY2016. JICA also actively disseminated information at international meetings, such as the Asia-Pacific Evaluation Association (APEA) forum held in Vietnam in November 2016 . Details are provided in the column in p. 8.

*2: The International Initiative for Impact Evaluation (3ie) is an international NGO established in 2008 to promote evidence-based development policies and programs. It has funded more than 200 projects in more than 50 countries (as of December 2016) to facilitate impact evaluations, systematic reviews and evidence-based studies.

Effort ③ Human resource development

1. Training programs and seminars for JICA staff

JICA continues to organize training programs to strengthen the evaluation capacity of its staff, such as "How to Set Clear Objectives and Appropriate Indicators," "Learning from Ex-post Evaluations," and "A Guide to Impact Evaluation." JICA also dispatched Evaluation Department staff to overseas offices, as required, to train and guide the staff there on internal evaluations. Moreover, five new staff were engaged in internal ex-post evaluations during their overseas offices training program in FY2016 for the second consecutive year. They worked with overseas office staff to collect and analyze data for internal evaluations.

JICA also held a series of feedback seminars to encourage its staff to use the evaluation results and lessons learned through the ex-post evaluations completed in FY2015.

2. Training programs and seminars for external evaluators

JICA organized the impact evaluation training in FY2016, for development consultants and other practitioners engaged in JICA projects. JICA also held seminars for consultants and experts to share information on the recent activities of the Evaluation Department and the annual evaluation plan. In addition, it held seminars to explain the reference for external evaluation and beneficiary surveys to external evaluators engaging in external evaluations.

Column

JICA Shared Information on Its Evaluation Activities at the ODA Evaluation Workshop Held by the Ministry of Foreign Affairs

The 14th ODA Evaluation Workshop was organized in Hanoi, Vietnam, on November 23, 2016, by the Japanese Ministry of Foreign Affairs in cooperation with JICA. The workshop was held as part of the First Asia-Pacific Evaluation Association (APEA)* Evaluation Conference 2016 and attended by 33 people from ministries and agencies in 18 countries in the Asia-Pacific region.

During the first session on Evaluation for Joint Learning and Mutual Accountability, participants discussed the importance of Evaluation Capacity Development (ECD) in support for the 2030 Agenda for Sustainable Development Goals (SDGs) as well as the increasing need for ECD to improve government-led evaluations.

At the second session on Evaluation System and Evaluation Capacity Development, participants debated the necessity of ECD to ensure that the Monitoring and Evaluation (M&E) system would function adequately to achieve the SDGs. The Vietnamese Ministry of Planning and Investment made a presentation to outline Vietnam's M&E system and its problems, while the JICA Vietnam Office delivered a presentation to illustrate JICA's ex-post evaluation system; emphasizing the importance of learning lessons from the evaluations. Moreover, the JICA Evaluation Department also described the contribution JICA had made to ECD through technical cooperation and training programs in Japan.

Presentation at the Workshop

During the third session on Impact Evaluation for Evidence-based Policy Making, "the Project for Enhancing Regional Integrated SME Mechanism" implemented by JICA in Thailand was used as a case study to discuss Impact Evaluation for policy making. First, the JICA Thailand Office presented the outline of the Project. Next, Dr. Aya Suzuki, Associate Professor of the University of Tokyo, who was engaged in evaluating the impact of the project, presented details of the evaluation results. Finally, the Thai Ministry of Industry presented details of how the evaluation results could be used for policy making. Participants commented that although the impact evaluation was conducted utilizing existing data, it effectively showed how the evaluation results could be used for policy making.

During the workshop, participants acknowledged the increasing awareness of evaluation and the need for ECD in their respective countries and showed great interest in JICA's activities.

* APEA was established in 2012, comprising 17 evaluation societies (as of December 2016) in the Asia-Pacific Region, including the Japan Evaluation Society.

Overview of the Ex-post Evaluation System

To ensure transparency and objectivity of project evaluations, JICA conducts external evaluations by external experts and internal evaluations primarily by JICA's overseas offices. An overview of the ex-post evaluation results conducted in FY2015 and their analysis are presented here.

Ex-post evaluation system

JICA conducts evaluations by using a uniform evaluation methodology in all three schemes; ODA Loan, Grant Aid and Technical Cooperation. In FY2015, the results of ex-post evaluations conducted were 90 external evaluations and 68 internal evaluations. In principle, projects costing one billion yen or more are subject to external evaluations by third-party evaluators based on the results of field surveys to assure objectivity and transparency of the evaluation. Meanwhile, for those projects costing 200 million yen or more and under one billion yen are subject to internal evaluation which are conducted by overseas office staff. (Refer to p. 12 for details of the internal evaluation)

Rating system

In the ex-post evaluation system, each project is assessed for its relevance, effectiveness/impact, efficiency and sustainability in accordance with international standards (i.e. the Five OECD-DAC Evaluation Criteria). In the external evaluation process, projects are rated according to the following rating flowchart on a four-level scale; A (highly satisfactory); B (satisfactory); C (partially satisfactory); and D (unsatisfactory).

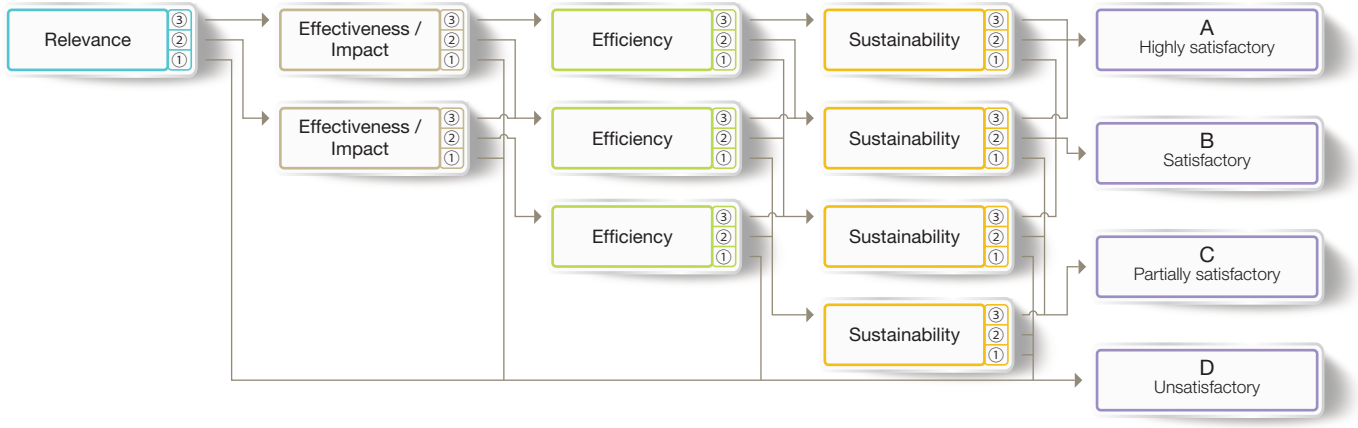
Although the rating is useful as means of indicating the effectiveness of the projects, it does not take into account the difficulty of the projects or the degree of JICA's contribution towards their achievement. Thus, it does not reflect all aspects of implementation for development projects.

Overview of rating criteria and general perspectives

* The criteria and perspectives differ by assistance scheme and project.

Rating criteria and general perspectives		Judgement Criteria		
		③ (High)	② (Fair)	① (Low)
Relevance	Validity of aid (relevance with development policy of recipient country, Japan's ODA policy, and JICA's aid strategy)	Fully relevant	Partially relevant	Serious problems with consistency
	Relevance with development needs (needs of beneficiary, project area, and community)			
Effectiveness / Impact	Achievement of expected project outcomes in target year (including utilization of facilities and equipment)	Objectives largely achieved, and outcomes generated (80% or more of plan)	Some objectives are achieved, but some outcomes are not generated (between 50% and 80% of plan)	Objectives achieved are limited and outcomes are not generated (less than 50% of plan)
	Status of indirect positive and negative outcomes	Indirect outcomes generated as expected / no negative impacts	Indirect outcomes generated have some problem / some negative impacts	Indirect outcomes generated have problem / grave negative impacts
Efficiency	Comparison of planned and actual project inputs, project period and project cost, etc.	Efficient (100% or less than the plan)	Partially inefficient (between 100% and 150% of plan)	Inefficient (exceeding 150% of plan)
Sustainability	Institutional sustainability (e.g., structure / skills / HR of organization)	Sustainability is ensured	Some problems exist, but there are prospects of improvement	Insufficient
	Financial sustainability (availability of operation and maintenance budget)			

Rating flowchart



External Evaluation Results for FY2015

Overall rating

The external evaluation results conducted in FY2015 are as listed on p.11. Evaluations were conducted for 90 projects: 25 Technical Cooperation projects; 35 ODA Loan projects; and 30 Grant Aid projects, most of which were carried out in Southeast Asia, Africa and South Asia, and in sectors such as water resources / disaster management, transportation and natural resource / energy. The overall ratings of the 90 rated projects are: A for 35 projects (39%); B for 47 projects (52%); C for 5 projects (6%); and D for 3 projects (3%). A and B comprise 91% of the total projects and such projects have established higher results than those of the past few years. From the long-term perspective, however, these results are within the normal range of fluctuation.*

Rating results per criteria (③: High, ②: Fair, ①: Low)

Relevance: 87 projects were rated "③" (97%) and 3 projects were "②" (3%), which means that most were aligned with Japan's development policy and the partner country's policies and development needs. Projects with evaluation result "fair" included problems related to appropriateness of project plans and approaches concerning the following points: "Change in needs", "Insufficient surveys before implementation", "Operation and management system not established as initially planned" or "Absence of key components / cooperation".

Effectiveness/Impact: 72 projects were rated "③" (80%), 15 projects "②" (17%), and 3 projects "①" (3%), and effectiveness / impact set at the project planning stage were achieved in most projects. Projects rated low (①) for this item failed to achieve expected outcomes through project implementation, and the overall rating was D. This is attributed to facts such as "facilities developed by the project were not sufficiently utilized" or "project outcome was not accomplished because the path to achieving the project purpose was unclear", which was influenced by issues related to the approach during project planning or implementation as mentioned in Relevance.

Efficiency: 18 projects were rated as "③" (20%), 57 projects "②" (63%), and 15 projects "①" (17%). 11 out of 15 projects rated as inefficient (①) were ODA Loan projects. The main factors behind the low rating were delays in the approval process of the recipient government and procurement procedures due to changes in project components, which resulted in the project period being extended over 150% of the initial plan for 13 projects. The project cost also increased over 150% from the initial plan in 8 projects due to inflation in recipient countries or alterations in project components.

Sustainability: 42 projects were rated as "③" (47%), 46 projects were "②" (51%), and 2 projects were "①" (2%). Two projects rated as "①" comprise of Grant Aid and Technical Cooperation. Reasons were confirmed as follows: "there were problems in institutional, technical and financial aspects to sustain the development effects" or "systems on supervision, maintenance, budget management and compensation for facility operation were not established."

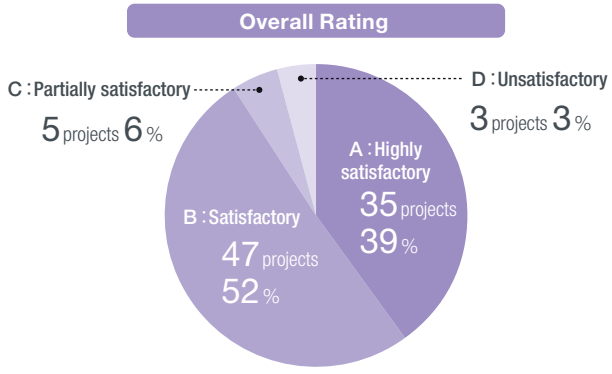
JICA utilizes issues identified through ex-post evaluation as lessons learned for better performance of projects. The ex-post evaluation results will be fed back to operational departments, and recommendations indicated in the evaluation are utilized to improve the projects. (Refer to p.46 for "Measures for Projects Cited as Having Issues").

In addition, lessons learned from the ex-post evaluation will be also utilized to improve formulation of similar projects in the future and monitoring of ongoing projects. At the project planning stage, in particular, countermeasures identified in similar projects are examined in advance to improve the project implementation. Furthermore, JICA strives to reflect lessons learned from the ex-post evaluation for institutional improvement. (Refer to p.47 "Institutional and operational improvements in Grant Aid to ensure the completion of actions assigned to the recipient country's government")

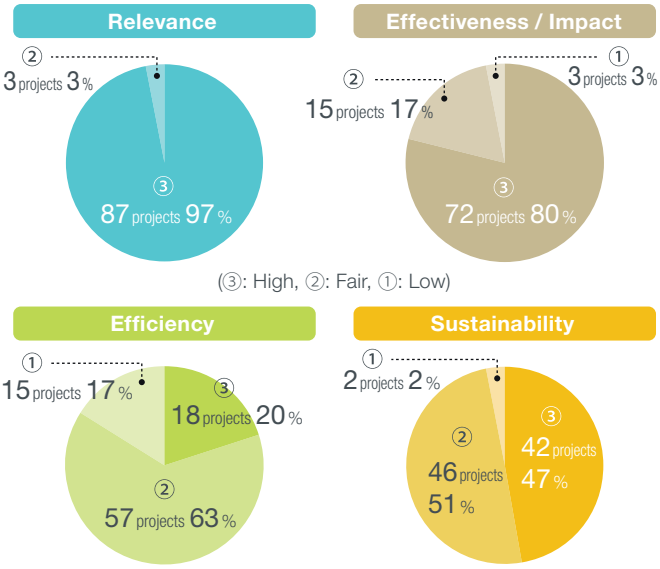
To encourage further utilization of lessons learned, JICA also organizes and extracts universal and highly practical lessons by thematic themes into a database (refer to p.50 "Cross-sectoral Analyses of Lessons Learned: Extraction of practical lessons for the energy sector") and derives useful lessons through in-depth analyses conducted by internal experts familiar with such issues or assistance schemes (Refer to p.15 "Useful Lessons for Development of New Seaport").

<Overall Rating for FY2015 External Evaluation and Distribution in Four-level Criteria>

* Project evaluations initiated from FY 2015 and results confirmed in FY 2016 (as of February 2017). These are published as "Evaluation Results in FY 2015" on JICA's website.



* The average proportion of overall ratings A and B for projects completed between FY2003 and FY2015 was 80%, ranging from 68% (FY 2014) to 91% (FY2015). The fluctuation of around 10% in the average ratio is attributable to the characteristics of projects (country, sector, scheme, etc.), which vary according to the fiscal year.



List of Ratings for External Evaluations[*1·2]

The following ratings were given by evaluators in external evaluation in FY 2015.

Country	No.	Scheme[*3]	Project name	Page	Relevance	Effectiveness[*4]	Efficiency	Sustainability	Overall rating
Afghanistan	1	T	Inter-Communal Rural Development Project		③	③	②	③	A
	2	G	The Project for Construction of Basic Education Facilities in Afghanistan		③	③	②	②	B
Armenia	3	L	Yerevan Combined Cycle Co-Generation Power Plant Project		③	②	③	③	A
India	4	L	Yamuna Action Plan Project (II)		③	③	①	③	B
	5	L	Bangalore Water Supply and Sewerage Project	26	③	③	①	③	B
	6	L	Bisalpur Jaipur Water Supply Project (Transfer System)		③	③	①	③	B
	7	L	Delhi Mass Rapid Transport System Project Phase 2 (I) - (V)		③	③	②	③	A
Indonesia	8	G	The Project for the Improvement of Bridges in Nias Island		③	③	②	②	B
	9	L	Lahendong Geothermal Power Plant Project		③	②	③	③	A
	10	L	Tarahan Coal Fired Steam Power Plant Project		③	③	②	③	A
	11	L	Tanjung Priok Gas Fired Power Plant Extension Project	28	③	③	②	③	A
	12	L	South Sumatra–West Java Gas Pipeline Project		③	③	①	③	B
	13	L	Development of Faculty of Medicine and Health Sciences of Syarif Hidayatullah State Islamic University		③	②	②	③	B
	14	L	ICT Utilization for Education Quality Enhancement in Yogyakarta Province		③	③	②	②	B
Uzbekistan	15	T	Uzbekistan-Japan Center for Human Development (Phase 2)		③	③	②	③	A
Kazakhstan	16	T	Kazakhstan-Japan Center for Human Development (Phase 2)		③	②	③	②	B
Cambodia	17	G	Project for Improvement of Equipment for Demining Activities (Phase VI)		③	③	③	②	A
	18	T	Cambodia-Japan Cooperation Center Cambodia-Japan Cooperation Center (Phase 2)		③	③	②	②	B
Kyrgyz	19	T	Kyrgyz Republic-Japan Center for Human Development Kyrgyz Republic-Japan Center for Human Development Project Phase 2		③	③	③	②	A
Sri Lanka	20	L	Environmentally Friendly Solution Fund Project (II)	30	③	②	②	②	C
	21	L	Pro-Poor Economic Advancement and Community Enhancement Project		③	③	②	②	B
	22	L	Tourism Resources Improvement Project		③	③	②	②	B
	23	G	Project for the Improvement of Central Functions of Jaffna Teaching Hospital		③	③	②	③	A
	24	T	Project on Health Promotion and Preventive Care Measures of Chronic-NCDs		③	②	②	③	B
	25	L	Southern Highway Construction Project (I) (II)		③	③	①	③	B
	26	L	Rural Road Development Project (Eastern Province)		③	③	③	②	A
Thailand	27	L	Seventh Bangkok Water Supply Improvement Project (I) (II)		③	③	②	③	A
Tajikistan	28	G	The Project for Rehabilitation of Kurgan Tyube-Dusti Road (Phases I & II)		③	③	①	③	B
China[*5]	29	L	Hubei Urban Flood Control Project		③	③	②	③	A
	30	L	Inland Higher Education Project (Regional Vitalization, Market Economy Reform Support, and Environmental Conservation) (Guangxi Autonomous Region, Jiangxi Province, Hubei Province and Shanxi Province)		③	③	②	③	A
	31	L	Inner Mongolia Afforestation and Vegetation Cover Project		③	③	②	③	A
	32	L	Huhhot Environmental Improvement Project		③	③	②	③	A
	33	L	Xinjiang Yining City Environmental Renovation Project		③	③	②	②	B
	34	L	Harbin City Water Environment Improvement Project		③	③	②	③	A
Nepal	35	G	The Project for Construction of Sindhuli Road (Section 2 (Phase3/3) and Section 3)		③	③	②	②	B
Pakistan	36	L	Load Dispatch System Upgrade Project		③	③	②	②	B
	37	G	Urgent Rehabilitation Project for Sewerage and Drainage System in Lahore		③	③	③	③	A
	38	G	Project for Improvement of Water Supply System in Faisalabad Project for Expansion of Water Supply System in Faisalabad		③	②	②	③	B
Philippines	39	L	Metro Iligan Regional Infrastructure Development Project		③	②	②	③	B
	40	L	Post Ondoy and Pepeng Short-term Infrastructure Rehabilitation Project		③	③	①	③	B
	41	T	The Project on Philippine Coast Guard Human Resource Development (Phase I) The Philippine Coast Guard Education and Human Resource Management System Development Project (Phase II)	32	③	③	③	②	A
Bhutan	42	G	The Project for Reconstruction of Bridges (Phase 3)		③	③	②	②	B
Viet Nam	43	L	Vietnam Television Center Project		③	③	②	③	A
	44	T	The Project for Enhancing of Vietnamese Academy of Science and Technology in Water Environmental Protection (Phase 2) The Project for Strengthening Capacity of Water Environmental Management in Vietnam		③	②	②	③	B
	45	T	The Project for Environmental Protection in Halong Bay		③	②	②	③	B
	46	L	Third National Highway No. 1 Bridge Rehabilitation Project (I) (II)		③	③	①	③	B
	47	T	Viet Nam-Japan Human Resources Cooperation Center (Phase 2)	34	③	③	②	②	B

Country	No.	Scheme[*3]	Project name	Page	Relevance	Effectiveness[*4]	Efficiency	Sustainability	Overall rating
Maldives	48	G	The Project for Clean Energy Promotion in Male		③	③	②	③	A
Mongolia	49	G	The Project for Improvement of Primary Education Facilities (Phase IV) in Mongolia	36	③	③	②	③	A
	50	G	The Project for Construction of Railway Fly-over in Ulaanbaatar City		③	③	③	②	A
	51	T	Strengthening the Capacity for Solid Waste Management in Ulaanbaatar City		③	③	②	②	B
	52	T	The Japan-Mongolia Center for Human Resources Development Cooperation/ Mongolia-Japan Human Resources Development Cooperation Center Project Phase 2		③	③	②	③	A
Myanmar	53	T	Integrated Mangrove Rehabilitation and Management Project through Community Participation in the Ayeyawady Delta		③	②	③	②	B
Laos	54	G	The Project for Expansion of Vientiane International Airport		③	③	③	②	A
	55	T	Lao-Japan Human Resource Cooperation Center (Phase 2)		③	③	②	②	B
Asia-Pacific	56	T	Asia-Pacific Development Center on Disability Project (Phases 1 and Phase 2)		③	③	②	③	A
ASEAN	57	T	ASEAN University Network/Southeast Asia Engineering Education Development Network (Phase I & Phase II)		③	③	③	①	B
El Salvador	58	L	La Union Port Development Project		②	①	①	②	D
Republic of Guatemala	59	G	Project for the Promotion of Productive Activities with the Use of Clean Energy in the Northern Villages of the Republic of Guatemala	38	③	③	②	②	B
Nicaragua	60	T	Project on Diffusion of the Sustainable Agricultural Technology for Small Farmers		③	③	②	③	A
Peru	61	T	Project for Institutional Reinforcement of Water Supply and Sanitation in the North Area of Peru		③	③	②	②	B
	62	G	Project for Construction of the New Headquarters of the National Institute of Rehabilitation "Dr. Adriana Rebaza Flores"		③	③	②	②	B
	63	L	Provincial Cities Water Supply and Sewerage Improvement and Expansion Project (Iquitos, Cusco and Sicuani)		③	③	①	②	C
	64	L	Lima Marginal Areas Sanitation Improvement Project Lima Marginal Areas Sanitation Improvement Project (II)		③	②	①	③	C
Latin America	65	G	Project for Construction of the New International Bridge of Macará		③	③	①	③	B
Ukraine	66	T	The Ukraine-Japan Center Project		③	②	②	②	C
Egypt	67	L	Borg El Arab International Airport Modernization Project	40	③	③	②	③	A
Palestinian Authority	68	T	Project for Improving Maternal and Child Health and Reproductive Health in Palestine (Phase 2)		③	②	③	②	B
AfDB	69	L	Private Sector Assistance Loan under the Joint Initiative Titled EPSA for Africa (I)(II)(III)		③	③	③	②	A
Uganda	70	G	The Project for the Rehabilitation of Hospitals and Supply of Medical Equipment in the Central Region in Uganda		③	③	②	②	B
Ethiopia	71	T	The Ethiopia Water Technology Center Project (The Project for Groundwater Development and Water Supply Training Phase II)		③	③	②	②	B
	72	G	The Project for Rural Water Supply in Tigray Region		③	③	①	③	B
	73	G	The Project for Rural Water Supply in Oromia Region		③	③	②	②	B
Gabon	74	G	Project for the Construction of Support Centre for Small Fisheries in Libreville		②	①	②	①	D
Kenya	75	G	The Project for Improvement of the Water Supply System in Embu and the Surrounding Area		③	③	②	②	B
Senegal	76	T	The Project on the Capacity Improvement of the Organizations and the Formation of the Leaders of Fishermen in the Domain of the Small FIshieries		③	③	②	②	B
	77	G	Project for the Reinforcement of the Vocational and Technical Training Center (CFPT) Senegal-Japan		③	③	③	②	A
Swaziland	78	G	The Project for the Improvement of Secondary Education		③	③	③	②	A
Tanzania	79	G	The Project for Reinforcement of Power Distribution in Zanzibar Island		③	③	③	②	A
	80	G	The Project for Rehabilitation of Substation and Transmission Line in Kilimanjaro Region		③	③	②	②	B
Namibia	81	L	Rundu-Elundu Road Upgrading Project		③	③	②	②	B
Nigeria	82	G	The Project for Improvement of Medium Wave Radio Broadcasting Network Phase (I) & (II)		③	③	②	③	A
Niger	83	G	Project for Construction of Classrooms for Primary Schools in the Regions of Maradi and Zinder		③	③	②	②	B
Burkina Faso	84	T	Participatory and Sustainable Forest Management in the Province of Comoe		③	③	②	②	B
	85	G	Project for Rural Water Supply in the Regions of Central Plateau and South Central	42	③	③	②	②	B
Burundi	86	G	The Project for Rehabilitation of Roads and Infrastructures for Bujumbura City		③	③	③	②	A
Republic of Mali	87	G	Project for the Construction of Elementary Schools (Phase III)		③	③	②	③	A
South Africa	88	T	Capacity Building of Medical Equipment Maintenance and Management in Southern Africa	44	②	①	①	②	D
Africa	89	T	The Project of the African Institute for Capacity Development Phase II and Phase III		③	②	②	②	C
Turkey	90	L	Istanbul Water Supply Project/Istanbul Water Supply Project (Phase II)		③	③	①	③	B

*1 ③ : High, ② : Fair, ① : Low / A: Highly satisfactory, B: Satisfactory, C: Partially satisfactory, D: Unsatisfactory (Refer to p.9)
*2 External evaluations are for projects costing 1 billion yen or more and/or other projects deemed to provide valuable insight.
*3 T: Technical Cooperation, L: ODA Loan, G: Grant Aid
*4 Effectiveness includes evaluation of Impact.
*5 Extending of ODA loans to China ended with the six Loan Agreements in December 2007.

Internal Evaluation Results for FY 2015

The overall evaluation of 68 projects indicates that two thirds of the projects delivered the expected or higher result at the time of ex-post evaluation.

Evaluation by criteria

◇Relevance:

There is no specific problem observed from all the projects and they were consistent with the policies of the partner countries in meeting their needs. However, project planning in some projects was not necessarily appropriate.

◇Effectiveness / Impact:

A little less than half of all projects achieved the expected outcomes, while the remaining over 50% faced some challenges in achieving results compared to their plans.

Some grant aid projects are observed that their planned effects were hindered because problems with maintenance and management resulted in the underutilization of equipment and facilities. For some technical cooperation projects, it is noted that (1) the overall goal was not achieved sufficiently at the time of ex-post evaluation and (2) both the project purpose and overall goal were not achieved as planned, although the projects produced certain effects. There were also some cases observed in both grant aid and technical cooperation projects that project effects could not be fully verified at the time of ex-post evaluation due to the unavailability of data and information on indicators defined at the project planning stage.

◇Efficiency:

A little less than 40% of the projects were completed within the planned period and cost, while the remaining projects exceeded the period and/or cost upon completion. In case of grant aid projects, delays in facility construction, equipment procurement and customs clearance caused the extension of the project period. As for technical cooperation projects, the project cost exceeded the planned cost as more inputs were needed than initially planned to achieve the project purposes and outputs while the project period was extended due to change in the plan or to achieve the project purposes.

◇Sustainability:

A little over 80% of the projects were identified as having some challenges, of which around 90% were identified as having insufficient financial sustainability, such as difficulty in securing the necessary budget by implementing agencies, while institutional sustainability, most typically in the form of shortage of staff was identified as the second most frequent problem in terms of sustainability. Other challenges were also observed in technical aspects, such as the retention of the technologies transferred and omission of routine inspections and repairs.

Future Direction: Further Focus on Evaluation-based Learning from evaluation and Concentrate on Selected Evaluation Criteria

As for the internal evaluation drawing practical lessons and recommendations (learnings) from evaluation results takes center stage to feed into JICA's project operations, as long as the accountability to the people of Japan and recipient countries is fulfilled. Accordingly, JICA has adopted new approaches on a trial basis to deepen learning from the evaluation under the technical guidance of the Advisory Panel on Enhancement of Ex-post Evaluation (see p.48). Moreover, JICA started conducting more practical training for its staff to better draw lessons from the project evaluations.

Continuous efforts are required to ever improve the efficiency of internal evaluations based on the principle of selection and concentration. With this in mind, JICA is now reviewing its workflow at the internal evaluation to streamline it as much as possible according to the characteristics of project, for example, by introducing a document-based evaluation approach and selectively focusing on the perspectives of effectiveness, impact and sustainability among the DAC Five Evaluation Criteria.

Enhancement of Internal Evaluation Training for Overseas Office Staff

The Evaluation Department organizes an introductory training of ex-post evaluation for overseas offices' Japanese and local staff engaged in internal evaluations. In this year, the training was held 11 times via video-conference or in-person meetings. The video-conference training provided an overview of the internal evaluation system and then outlined the key points to consider in field studies and report writing by using examples.

Moreover, practice-based training using case studies was held at four overseas offices, ie, El Salvador, Ethiopia, Thailand and Indonesia and attended by 58 staff members from 31 overseas offices. The participants were actively engaged in group work activities and discussions. This year, a new session was added to get the participants to exchange information and opinions to promote peer learning. This session allowed the participants to share their difficulties, good practices and lessons learned from evaluations beyond office boundaries, thereby promoting their understanding of internal evaluation. Furthermore, they had discussions with Evaluation Department staff who participated via video-conference facilities on how to improve procedures to facilitate internal evaluations.

Good Practice ① Enhancement of Urban Development Management in the Mamminasata Metropolitan Area in Indonesia (Technical Cooperation Project)

This project aimed to establish an urban development management system for the Mamminasata Metropolitan Area in South Sulawesi Province. In this, the largest metropolitan area in eastern Indonesia, the project developed urban development management procedures and tools, including manuals and databases, developed training programs and curriculums and strengthened the coordination capacity of the implementing agency.

The ex-post evaluation took considerable time to complete. The evaluator had difficulties in collecting and analyzing data; not only because the project had involved many relevant organizations but also because the project objectives of "*developing the system* of urban development management in the Mamminasata Metropolitan Area" and thereby "*realizing the balance* between conservation function and cultivation function" were too abstract to be measured.

The achievement of some indicators, such as the number of urban development plans to be formulated, could not be assessed since the baseline and target values had not been defined. Accordingly, the indicators were modified to account for achievements as objectively as possible. For example, some indicators were adjusted to allow assessment through comparison with national averages. Moreover, the evaluator of JICA Indonesia Office visited the project site for the validation of the data and information before finalizing the evaluation report, which led to the quality of the ex-post evaluation.

Good Practice ② Project for Strengthening Community-based Management Capacity of Bidoup-Nui Ba National Park in Vietnam (Technical Cooperation Project)

This project was implemented in Lam Dong Province in Central Vietnam to enhance the capacity of Bidoup-Nui Ba National Park Management Board (BNBNPMB) to manage natural resources in the national park by developing a co-management model in target villages. The project supported the establishment of an implementation structure for community-based ecotourism (CBET), ecologically friendly livelihood options (EFLO) (e.g. production of organic coffee) and village funds as incentives for the local residents to promote participatory nature conservation. The project also aimed to develop basic principles and rules governing the use of natural resources by the target villages and BNBNPMB and ensure compliance with the same.

The results of the ex-post evaluation showed that the co-management of natural resources had sustained to a certain extent and the awareness of BNBNPMB staff and target villagers about nature conservation was raised. The evaluation also confirmed that the community-based model to co-manage natural resources was being institutionalized through the successive project named Sustainable Natural Resource Management Project (2015-2020).

The results also revealed that villagers had not optimally exploited the coffee processing technique and equipment introduced through the project. This indicates that, when a project provides equipment and techniques to improve the livelihood of its beneficiaries, JICA and the implementing agency, at the project planning stage, should check for the presence of any hindrances and expand the project scope to include comprehensive solutions that can eliminate their root causes of these hindrances, if any. In the target villages of this project, it turned out coffee producers procured fertilizers and pesticides from the middle man, and they repaid with cheap raw coffee beans. Although the project was intended to boost the incomes of coffee farmers by introducing a processing technique to allow them to sell processed coffee at higher prices, most farmers did not go as far as processing their products. This was because, as mentioned above, they set most of their raw beans aside for transactions with the middle man. Since only a limited amount of coffee was processed for markets, the processing cost remained high and their market selling power was kept low. If this problem had been identified at the project planning stage, the project would have extended its support to establish a cooperative for the EFLO group, which could have enhanced their negotiating ability and promoted efforts to introduce and use the processing technique.

Internal Evaluation Practice as Part of Overseas Training for New Staff

JICA provides overseas training for its first-year staff at its overseas offices every year. During this year's overseas training, five new staff members were engaged in internal evaluations, including the one mentioned in Good Practice ②. This training of evaluation was started in FY2015 to allow new staff to learn about JICA's evaluation system and methodologies through practical experience which actually offers a great opportunity for new staff to build evaluation awareness and capacity at an early stage of their careers. This year's participants also acquired practical knowledge and skills on evaluation and gained valuable experience of witnessing the last phase in the project implementation cycle.

An Example of Practice-based Training and Support for Individual Project Evaluations at the JICA Indonesia Office

The JICA Indonesia Office conducts many internal evaluations every year as its operation size is one of the biggest among JICA overseas offices.

The Office covers a wide range of development issues and sectors and assigns a large number of Japanese and local staff to internal evaluations in the process. Accordingly, the Evaluation Department delivered practice-based training exclusively for Indonesia Office staff to enhance their evaluation capacity effectively.

As each of them who participated in the training with their own internal evaluations in mind, they were actively engaged in discussions and the training was practical enough to meet the needs of the Office.

Following the training, the participants had the opportunity to consult on their evaluations and face-to-face consultation allowed them to discuss the matter in more detail than over the phone or video-conference. The participants highly appreciated it, mentioning "this facilitated my understanding of internal evaluations" and "I could discuss the evaluation results in a concrete manual."

Though answering questions from the internal evaluators, this face-to-face consultation also facilitated the implementation of individual internal evaluations that had stalled due to difficulties such as too many or overly remote evaluation sites to visit.

A participant presents the discussion result of her group

Column

Message from JICA Zambia Office: To Use Ex-post Evaluations Strategically

As part of the FY2015 internal evaluation, we conducted internal evaluations of three projects in three sectors: agriculture, water supply and private sector development. Our local staff, Mr. Patrick Chibbamulilo, Ms. Mary Mukomba and Mr. Nyambe Nambayo, were assigned to evaluate them in their respective sectors. When asked for opinions on the internal evaluations they had undertaken, they mentioned three stand-out points. First, they had difficulties in collecting accurate information; partly because not all questionnaires had been returned and also because contradictory answers were received to some questions, such as the financial status and the number of direct foreign investments in private sector development, which thus had to be verified against government annual reports and other official sources. Secondly, they could use the networks they had developed through their daily work to exchange frank opinions with their counterparts on the projects. Thirdly, the evaluation results proved the assumption that in the case of an agricultural project designed to introduce new crops, the presence of markets would be an important factor that could influence the decision of farmers to plant crops. This finding provided a useful insight into the root causes of failure to introduce new crops in some areas. All the local staff interviewed seemed to be satisfied with the evaluations, which taught them many things.

From left: Mr. Nyambe, Ms. Mary, and Mr. Patrick

We realized that the key to a high-quality evaluation is the implementing agency's efforts to continue collecting and archiving data to assess the achievement of indicators set for the project to detect and analyze changes occurring after the end of the project. JICA should seek the commitment of the implementing agency to this effort before the project termination. More importantly, evaluation results should be used not only as valuable lessons to improve future projects but also as strategic communication tools to provide implementing agencies with the opportunities and knowledge to improve their situations. We would like to develop measures to promote such strategic use of evaluation results. Our local staff are expected to actively exploit the experiences and lessons learned from internal evaluations in their daily work and discussions with their counterparts as they will cooperate with implementing agencies for development projects for a long time to come.

Analysis and Learnings from Ex-post Evaluation Results

Practical Lessons for Development of New Seaports

JICA is placing effort in refining its lessons learned on sector specific issues to be more practical by utilizing the results of ex-post evaluations for in-depth analysis. In FY2016, JICA focused on the seaport sector with cooperation by an in-house expert having extensive technical knowledge and experience of the sector. For concrete and practical countermeasures against frequent sector issues, the expert summarized key points to be considered in formulating a port project.

1. Background of New Port Projects

Projects for new port development often have the following factors in their background:

① **Problems with the port existing near populated cities or industrial centers in metropolitan areas**

(a) Existing port is located within a large metropolitan area facing serious social problems. Problems can be traffic congestion in its urban centers including areas surrounding the port due to the concentration of transportation and warehousing, and conflicts between freight/passenger transportation and residential activities

(b) Existing port is located inside an estuary and is unable to accommodate larger ships

② **Expectation to contribute as a logistical infrastructure to support a new industrial zone in view of promoting regional economic development**

As shown in the following table, major new port development projects supported by JICA included both the above two factors.

Major new port development projects supported by JICA

Country	Project	Start of operation (year)	Background		
			①		②
			(a)	(b)	
Thailand	Laem Chabang Port Project	1991	○	○	○
Philippines	Batangas Port Development Project (II)	2007	○		○
	Subic Bay Port Development Project*	2008 / 2012	○		○
	Mindanao Container Terminal Project	2004	○		
Viet Nam	Cai Mep – Thi Vai International Port Construction Project	2014	○	○	○
El Salvador	La Union Port Development Project	2010			○

*In Subic Bay Port Development Project, operation of New Container Terminal 1 and 2 commenced in 2008 and 2012, respectively.

Container terminal constructed by Subic Bay Port Development Project

2. Points to Consider When Planning a New Port Development Project

① Forecasting Demand

When the hinterland of a new port overlaps with that of another existing port, a conventional method to forecast demand is based on the comparison of land transportation costs for the two ports and identification of an economically reasonable share ratio between these two. The challenge however is, how to consider the financial risks taken by cargo owners, transportation companies and other port users engaged in economic activities in the large cities, and factor in the difficulty for them to change their existing business process, including transportation routes if and when they use the new port (hereinafter referred to as "new business risks"). This difficulty is considered to be one of the reasons why the cargo volume of some new port projects supported by JICA did not reach the expected demand.

Batangas and Subic Bay Ports were developed to substitute or complement the Port of Manila. They are located about 90 km south and 80 km northwest, respectively, from the existing Manila Port situated in the capital metropolitan area of the Philippines. Nevertheless, the handling volume of container cargo of these new ports remained low at 32.5 and 26.6% of the targeted volumes respectively for 2015, which was respectively their ninth and forth year of operation. Though this was partly due to the expansion of Manila Port, the container cargo volume of the new ports should have been estimated more carefully based on the needs of the port users.

The container cargo volume of Laem Chabang Port in Thailand achieved more than double the estimated volume in 1998; in its eighth year of operation. Although this was partly attributable to the soaring Thai economy in the early 1990s, more importantly, their clients considered Laem Chabang Port more useful than the old Bangkok Port because the new port was deeper and better suited to accommodate larger vessels than the existing port located inside an estuary.

Another point to be noted is a change in the industrial structure which may also affect the cargo volume handled at ports. Actually, it was one of the reasons why Subic Bay and Batangas Ports failed to reach their container volume targets. In the vicinity of Subic Bay Port, it was assumed at the project planning stage that the manufacturing sector would develop further, but in fact, the service sector grew more rapidly. Conversely, the Calabarzon region, behind Batangas Port, saw an increase in the number of IT companies, whose products (mostly comprising of semiconductors and electronic components) are better suited for shipping by air than by containers.

Lessons Learned on Estimation of Shares between New and Existing Ports

Demand forecast should take into account the estimation of shares for cargo at the new and existing ports after comparing transportation costs and also surveying the needs of port users such as cargo owners and maritime carriers. Moreover, the parties involved in the project should have a common understanding that *the demand forecast is the projection when all the preconditions for the manifestation of latent demand are satisfied (hereinafter referred to as "demand manifestation conditions")*. This understanding is particularly crucial in the following cases, where demand for the new port has risks of remaining low:

(a) The new port is located far from large cities that are in the hinterland of the existing port
(b) The existing port is highly competitive (e.g. the existing port can accommodate large vessels; and provide high-quality services, such as streamlined inward and outward clearing procedures, efficient cargo-handling operations and competitive charges)
(c) The existing port or its neighboring port is expanded

Key to the manifestation of latent demand is convincing potential users that the new port is more useful (potential users include not only cargo owners and shipping companies but also container forwarders who use the transportation means of other shipping companies to ship cargo on behalf of its owners. Many forwarders also influence the selection of shipping routes). Such can be assured if the new port is more economical and convenient than the existing port, and in general, the following conditions are important factors for this: development of a port with sufficient size and specification, access roads and other facilities; customs and trade related government offices set-up within the premises of the new port; and opening of business offices by transportation/logistics companies in the surroundings. Moreover, the specific requirements for the port should be identified through market surveys, including interviews with potential port users and analysis of the ground conditions that surround the project, as much as possible.

Next, each of the conditions should be examined and determined whether they could be fulfilled in the future. If there are risks, the demand forecast should be modified downward accordingly. It is not easy to estimate the degree of discounting demand (quantification of the downside risk); but it is important to show things quantitatively as well as to share information collected through the above-mentioned market survey, in order to *ensure all parties to understand the importance of taking policy measures to promote the use of the new port*, as mentioned in ② below. In other words, to encourage the organizations concerned to take necessary actions, they should be informed of the precarious demand manifestation conditions, and be provided with an estimation of the downside risk as accurately as possible (noting limitations, if any), along with the demand forecast at the project planning stage.

Lessons Learned on the Changing Industrial Structure

Before forecasting demand for a new port, the relationships between economic indicators, such as the Gross Regional Domestic Product (GRDP) of the hinterland of the port and freight volumes should also be examined. Quantitative assessment of the future trends such as changes in major industrial structure in the region which may affect demand for the port is also desirable.

② Policies for Promoting the Use of New Ports

Many problems caused by concentrated cargo transportation in large cities, such as the serious traffic congestion seen in the Manila metropolitan area, cannot be solved when solely left up to the free economic activities of private companies. Private entities would accept new business risks related to the use of new ports, such as Batangas and Subic Bay Ports, theoretically in cases below:

(a) Business merits of using the new port in terms of profitability are clear.
(b) Through discussions with the government administration, the social significance of using the new port as a measure to solve urban concentration is understood, and they will act (on their own accord) to fulfill their social responsibilities.
(c) Government introduces regulations, such as traffic restriction in large cities, and the shift becomes compulsory.

In addition to the issue related to demand forecast mentioned in 2. ①, a lack of effort on the part of government in the recipient country to plan and enforce policies and actions leading to the above-mentioned (a) and (b) (as well as (c) if necessary) is considered as another reason for the gap between forecast and actual demand after opening the new port.

La Union Port was developed to revitalize and boost the efficiency of logistics in El Salvador as well as to contribute to the economic development of the eastern region of the country. Yet, the port was not used sufficiently to provoke the expected impacts. When a newly developed port is expected to provide logistical services for a newly established industrial zone to promote regional development, the actual use of the port is significantly influenced by the progress of the new industrial zone in the hinterland. One of the reasons why the cargo volume of La Union Port fell far behind the planned level was because actions to enhance competitiveness of the industrial land and the infrastructure development in the hinterland were not adequately formulated or implemented.

Container terminal constructed by Batangas Port Development Project

Lessons Learned on Policy Issues in Promoting the Use of New Ports

It is essential for high-level leaders of the recipient country and cities to announce the social significance of new port development and to commit themselves to take actions to solve the social problems behind the port construction project. It is also critical for the government authorities to execute policies to which they committed and secure steady implementation of related projects and measures that encourage private companies to use the new port. It is important that all parties from Japan and recipient country retain a shared understanding about the demand manifestation conditions and quantified downside risk identified as in 2. ①; and agree on the direction of risk reducing policies at the stages of project planning and appraisal.

Demand manifestation conditions are based on the market surveys conducted on assumption that the charges for the new port and implementation of related projects (e.g. developing access roads and other necessary facilities and establishing trade stations) are realized as planned during the project formulation. Therefore, it is vital to maintain good communication with private entities during project implementation, for example, by providing them with updates on the new port design and related government projects to constantly monitor their interests on the new port (and to adjust policies if required).

When a newly developed port is expected to contribute in logistical services for the newly developed industrial areas with the aim for regional development, the government agencies responsible for enhancing competitiveness of the industrial land must simultaneously take action. These include development of an industrial park equipped with electricity, water, communications, industrial water and solid waste management facilities. They should also take measures to attract private businesses, including adoption of preferential treatment for investment. Moreover, because private companies examining the feasibility of the location and business activities (including transportation) need to face numerous organizations involved, such as industrial promotion agencies, port authorities and local governments, it is essential to provide a one-stop service by setting up a coordinating body to oversee the entire process and facilitate close collaboration among the organizations concerned.

③ Operation and Maintenance

JICA had provided assistance to the La Union Port Development Project since the signing of loan agreement, including technical assistance assuming that the port would be operated under concession. After prolonged preparation, the concession tender was finally published in 2015. However, no company showed interest. Thus the port has been temporarily operated by the public management body.

In the case of concession-based operation, the revenue of the private operator generally comprises port charges, which vary depending on demand. The expenditure comprises initial costs, maintenance costs and concession and other fees paid to the facility owner. Whether or not private companies are motivated to undertake operation and maintenance depends on the profitability of the business. If due to its own financial constraints, the public management body that owns the port sets conditions that incur excessive costs to the private operator, no company would undertake the operation and maintenance. This may lead to delays for the new port to produce the intended outcomes.

Moreover, the berth and access channels of La Union Port have silted up far faster than anticipated at the planning stage, which indicates that the access channels needs to be redredged, and maintained through constant dredging. The port, however, has never been dredged since its opening in 2010, given the excessive cost. This directly hinders the use of the port and is causing a significant negative impact on the effectiveness of the project.

Lessons Learned on the Participation of Private Companies in Operation and Maintenance

If a new port is to be operated and maintained by a private company, it is essential to examine whether the business will be sufficiently profitable to encourage private companies to participate. With this in mind, it is critical to fully understand the interests of private operators by conducting a market survey and providing them with as much information as possible on future possibilities, such as demand forecasts, specifications of port facilities to be developed by the public body and estimated maintenance costs. It is crucial for those implementing the project to enhance communication with private companies, for example, by providing them with updated information on the progress of the port and related projects, to constantly monitor their interests in using the new port (and to adjust actions if required).

Lessons Learned on Sedimentation of Access Channels

Accurately predicting sedimentation of access channels at a new port is extremely difficult. Therefore, the risk of fluctuating costs for maintenance dredging should be deliberated when considering methods to ensure project sustainability. In general, if the initial dredging needs to remove large amounts of sediment, the same will be needed for maintenance dredging, and is likely to result in a huge gap between the estimation and actual dredging volumes. The construction schedule should include small-scale test dredging before full-scale dredging, if possible, by strategically using Engineering Service (E/S) loans or dividing the project into several phases so that the specifications of full-scale dredging operations can later be adjusted based on test dredging results to maximize cost-effectiveness.

Collaboration with Experts for External Evaluations

From 2015 to 2016, to take more specialized and diverse perspectives into account, JICA conducted three trial evaluations in cooperation with experts (academics and experienced practitioners from domestic and overseas universities and NGOs) in addition to the evaluations conducted by external evaluators based on the Five OECD-DAC Evaluation Criteria. These experts were selected by external evaluators according to the characteristics of the projects, and they analyzed the project based on their past experiences and professional knowledge. Their views on the evaluations conducted for Cambodia and Sri Lanka are outlined below.

Project 1 <Cambodia>: Project for Improvement of Equipment for Demining Activities (Phase VI) [Grant Aid]

This project provided equipment to the Cambodian Mine Action Centre (CMAC) to strengthen their clearance activities in view of the suffrage from severe contamination of landmines and unexploded ordnance (UXO). Upon completion of the project, a larger area than the original target had been demined. A local expert attributed this achievement not only to the appropriateness of making support through CMAC but also to the indirect effects of the project, such as improved working environment for the deminers.

Expert	Mr. Ratha Seng, Researcher (University of Battambang, Research and Development Center)
Field of Profession	Community development / poverty issues
Theme	Contribution of CMAC in the context of peace-building
Observation	Reinforcement of equipment requires a large-scale investment, but it is difficult to say that the Cambodian government holds sufficient funds for landmines/UXO clearance. Thus, the project, which provided equipment, responded to needs on promoting activities for landmines/UXO clearance in Cambodia. CMAC is an organization which cleared the largest area of landmines/UXO. Especially, providing equipment to CMAC would help accelerate landmines/UXO clearance activities in the whole of Cambodia. The lands where landmines/UXO were buried and abandoned were covered with trees and plants. Thus, CMAC staff had to clear them first by using mowing machines before starting detection work. Their removal work requires many hours, and it was a heavy burden on staff due to long-hours of labour in the sun. However, the introduction of bush cutters improved safety and efficiency of the clearance activities and also contributed to improvement of the labour environment.

This expert also pointed out that in the long term, given the changes made to the lives of rural residents after demining, this kind of project should not only focus on clearance of landmines and UXO, but also provide multifaceted support to benefit the affected communities. In other words, because the contaminated areas had long been unused, it was essential to provide also medium- and long-term support such as agricultural and infrastructural development.

Since the selection of demining sites may have conflict of interests, the process was carefully designed in accordance with guidelines prepared by the Cambodian Mine Action Authority (CMAA), to ensure transparency. The process involved administrative officers at all levels, as well as demining organizations and local residents. In this context, a Japanese expert valued the efforts of CMAC in selecting the sites, while also pointing out future challenges.

Expert	Dr. Naruhiko Takesada, Professor (Hosei University, Faculty of Sustainability Studies)
Field of Profession	Issues of resettlement and social consideration in ODA projects
Theme	Appropriateness of the site selection process
Observation	CMAC understands from their experiences that clearance activities generate usable land, in other word "resources". The selection process of sites for demining activities was developed and operated by reflecting the will of the residents. CMAC secured transparency of the process by establishing MAPU and PMAC16 and also by having participations of demining operators and development partners in the process. Also, a monitoring system after landmines/UXO clearance was established. Meanwhile, the prioritization of selecting clearance sites still seems to have issues. Specifically, the following points were pointed out during the interview survey of the ex-post evaluation: (1) priority setting between large-scale land-owner and poor families; (2) prioritization of national projects that was not in the original plan; (3) land is not used as expected after the demining activities. As for CMAC's issues related to their priority (and effective use of limited resources), it is expected that CMAC's confusion regarding priority setting will be solved by sharing criteria of priority with international aid agencies.

A diminer

A bush cutting machine

Project 2 <Sri Lanka>: Rural Road Development Project (Eastern Province) [ODA Loan]

This project to support the improvement of community roads in the Eastern Province was launched in March 2010, immediately after the end of the civil war in Sri Lanka that continued from the 1980s till 2009. Social infrastructures were decimated and industries were underdeveloped due to the long-lasting civil war, causing economic disparity compared to other regions. Populated by three different ethnic groups, the Sinhala, Tamil and Muslim devotees, this area was home to the most diverse ethnicities and cultures. Accordingly, the reconstruction and development process had to heed special consideration on relations between such ethnic groups, where there had been tension just until recently. Considering the special background, the timing of the assistance, the appropriateness of the project approach that took into account both the rehabilitation needs and the balance between ethnic groups, and the impact of road improvement was evaluated by a Japanese expert as follows.

Before and after the road rehabilitation (photo provided by the implementing agency)

Expert	Ms. Reiko Inoue, Representative Director (PARCIC)
Field of Profession	Assistance in reconstruction & peace building efforts in Sri Lanka
Theme	Significance of Rural Road Development in the Context of Reconstruction and Peacebuilding in Eastern Province
Observation	This project was implemented from February 2011 to December 2013, at the very time when Eastern Province was experiencing a lot of confusion following the end of the civil war as well as when reconstruction efforts were underway. The rehabilitation of rural roads (total around 380km) in all three districts in Eastern Province during this period was quite timely and responsive to the needs. The significance of project could also be confirmed by the rapid increase in traffic in each subproject. Construction of rural roads improved access of small-scale producers to the market and increased the inflow of materials and goods to the communities. Such changes might have contributed to reconstruction and peacebuilding by resolving and reducing the disconnection among and isolation of communities caused by the prolonged civil war. It is fortunate that the ethnic group makeup of the villages covered by the subprojects under this project was more or less in line with the ratio of ethnic groups in the country, and therefore, the location of the subprojects did not result in exacerbating instability factors such as dissatisfaction among Tamils with the Sinhalese-led government in Eastern Province at the conclusion of the civil war.

As a result of the project, the traffic rose on the improved community roads, which helped save both money and time to travel. Moreover, the external evaluator confirmed that the project had improved access to schools, hospitals and markets. An expert who had been engaged in NGO activities in the region for years also concurred this based on personal experience, although citing the continuous need to develop more roads.

Expert	Mr. Sairajan, District Coordinator – Batticaloa and Trincomalee, (Sevalanka Foundation)
Field of Profession	Civil society assistance activities in Eastern Province
Theme	Impact of Eastern Rural Road Development on Villages
Observation	After the end of the war, the road development/renovation projects implemented by the Government and other NGOs have brought a great impact. As the district coordinator of a national level NGO, I have my own experience in accessing to the interior villages in the province for the aid and development projects. It was the same situation to the other development corporations, NGOs and the Government agencies. After the rehabilitation of the national roads, provincial roads and the identified major rural roads, the situation has much improved in terms of the ease of transportation, improvements in the education and local economic activities. However, according to my experience only 10% of the rural roads have been rehabilitated. There are many other rural roads networks to be improved in the near future as the economic development in Eastern Province is booming up. I thank the Government of Sri Lanka and Japan Internal Cooperation Agency for initiating and completing the major rural road networks in the mostly conflict affected villages in the province.

Project 3 <Sri Lanka>: Southern Highway Construction Project (I) (II) [ODA Loan]

This highway project in Sri Lanka developed a high-standard expressway to facilitate traffic between Greater Colombo and southern Sri Lanka. This was a large-scale road construction, which resulted in involuntary resettlement of 600 households from the project area. The land acquisition and involuntary resettlement process was conducted in accordance with the Resettlement Implementation Plan (RIP) developed in 2002, with extensive assistance provided to the affected people. The project developed resettlement sites near their original dwellings (within approx. 2 km). While 229 households moved to the resettlement sites, the remaining 371 households settled in places of their own choice. A survey of the relocated people as a part of the ex-post evaluation indicated that their incomes, livelihoods and economic conditions were improved and restored to some extent after the resettlement. Meanwhile, a local expert who interviewed the relocated people found problems emerging in certain resettlement sites, such as poor access to drinking water, a lack of basic infrastructure and strained relationships between the original residents and newcomers. Some lessons were pointed out.

Expert	Dr. Ramanie Jayatiaka, current visiting lecturer (former associate professor) (Colombo University, Sociology Department)
Field of Profession	Sociologist specializing in rural sociology and gender study
Theme	Income restoration status of resettled households
Observation	• As far as possible resettlement sites should be close to the settlers' original place of living. • Resettlement sites should be carefully selected where all amenities, especially those for basic needs can be provided. A proper assessment of the resettlement sites covering all areas needed for habitation should be undertaken and approved by all parties prior to implementing the resettlement programme. • A better exit strategy for the post-project period needs to be worked out by the RDA prior to the completion of the resettlement programme so that settlers can integrate into the new settlement well. It is necessary to remove the label 'RDA settlers', so that they are not seen as such by different service providers, host communities and the settlers themselves, thus avoiding social exclusion and helping integration into society. • A better mechanism with the participation of different stakeholders including settlers, RDA, and local governments should be established from the planning phase of any resettlement programme until the monitoring phase. The monitoring should continue for at least five years after completion of the programme in order to deal with the remaining issues that could not be settled during the project implementation period, and funds should be allocated for this purpose.

Analysis by experts shed light on aspects that were different from conventional evaluations and provided valuable insights on project effects and the appropriateness of project approaches. The full texts of the observation made by the experts are attached to the respective ex-post evaluation reports and can be accessed via the Search Engine for Ex-Post Evaluation Reports.

Related links ▸https://www2.jica.go.jp/ja/evaluation/index.php

Detailed Analysis of ASEAN University Network / Southeast Asia Engineering Education Development Network (AUN/SEED-Net)*1

The ASEAN University Network / Southeast Asia Engineering Education Development Network (AUN/SEED-Net) Project Phase I (2003-2008) and Phase II (2008-2013) (hereinafter, collectively referred to as "this project") aimed to form a network of higher engineering education institutions from the ten Member States*2 of the Association of Southeast Asian Nations (hereinafter referred to as the "ASEAN") to enhance the education and research capacities of engineering universities in the region. This project was characterized by its overseas scholarship programs to enhance the education and research capacities of the Member Institutions (MIs) and its collaborative research program to promote development of industries and communities in the region. The ex-post evaluation assessed the effects of this project not only by the Five DAC Criteria but also through a detailed analysis of university-industry collaboration (joint research) by comparing overseas scholarship programs between the AUN/SEED-Net and other similar university collaboration networks. The results are outlined below. This project has now entered its third phase (2013-2018).

A Detailed Analysis of University-Industry Collaboration in This Project

This project set up a program for collaborative research with industry (CRI) to promote university-industry collaboration led by MI researchers. The ex-post evaluation found that progress had been made in institutional development for university-industry collaboration, although it varied depending on the country. The Governments of Thailand, Malaysia and Indonesia had developed policies and concrete actions to promote university-industry collaboration and some MIs had set up a department to oversee university-industry collaboration. Meanwhile, the expectations of industry for academia were primarily focused on producing talented graduates, but also increasingly on providing technical assistance as a growing number of private companies, particularly foreign firms, were seeking collaborative research and development as well as technical consultation to localize their products, develop products for ASEAN markets and enhance productivity. For example, Indonesia and Vietnam saw active university-industry collaborations, some of which resulted in the successful commercialization of products.

These results indicate that university-industry collaboration could be further enhanced by identifying industry needs while generating visible successes such as product development in cooperation with the private sector, particularly with Japanese businesses that would be easier to access by MIs.

[Example of Commercialization: Bone Grafts for Implantation]

Indonesia — Gadjah Mada University, in partnership with a domestic implant company, succeeded in developing bone grafts for implantation. In 2015, 30,000 cases of GAMACHA (the name of the developed product) were sold over three months. The product has been placed in a government e-catalogue as well as on YouTube.

GAMACHA's launching ceremony

A Comparative Analysis of Overseas Scholarship Programs Between the AUN/SEED-Net and Other Similar University Collaboration Networks

A comparative analysis of overseas scholarship programs was conducted, focusing on the perspectives of beneficiaries, to make suggestions to further facilitate the effective use of the AUN/SEED-Net scholarship program. The comparison group included students supported by the Erasmus Mundus*3, a higher-education support program of the European Union aiming to enhance the quality of education and research in its Member States by providing overseas scholarship. The results of interviews with graduates revealed the following two advantages of the AUN/SEED-Net scholarship program: (1) AUN/SEED-Net collaborative research funds are accessible even after graduation; and (2) collaborative research and other activities are expected to maintain and strengthen organizational and personal relationships and networks between the Host Institutions (students) and Japanese Supporting Universities (instructors). The results of these interviews also suggested four actions to be taken: (1) raising awareness of the program among students; (2) announcing selection results of applications at an earlier stage; (3) expanding collaborative degree programs; and (4) providing quality education and research environments at host universities (promoting acquisition of the AUN accreditation by these universities).

*1: AUN/SEED-Net: ASEAN University Network / Southeast Asia Engineering Education Development Network

*2: This project features the participation of 26 universities (Member Institutions) from Thailand, Malaysia, Indonesia, the Philippines, Laos, Cambodia, Myanmar, Vietnam, Singapore and Brunei. This project also involves 14 universities from Japan as Supporting Universities (as of Phase III).

*3: The Erasmus Mundus is a cooperation program undertaken by the European Union (EU) in the higher-education field. It mainly comprises assistance for students seeking degrees at universities in the EU Member States, scholarships (for Masters and PhD students) and support for the capacity building of participating universities. This program differs from the AUN/SEED-Net program in covering not only engineering but also all other fields.

What Works for Highly Rated Projects in Conflict-affected Countries/Areas

JICA undertakes projects in conflict-affected countries and areas*1 to contribute to peacebuilding. JICA had five of these projects evaluated by external evaluators between 2015 and 2016. As a result, they received an overall rating of A (highly satisfactory) or B (satisfactory). Some of the details are described below*2.

Sri Lanka:
The Project for the Improvement of Central Functions of Jaffna Teaching Hospital (Grant Aid)

This project updated facilities and equipment at a hospital that had overaged during the conflict. Although JICA launched preliminary studies in 2005, it decided to postpone the project in light of the worsening security situation caused by the civil war. In 2009, immediately after the conflict ended, JICA restarted the project to support post-conflict reconstruction at the right time. The project received a rating of "high" for effectiveness/impact and sustainability as well as an overall rating of "highly satisfactory." This was because of the selection of project scope with focus on the health sector which is a public system benefiting a wide range of local people; and the self-help efforts of the Sri Lankan Ministry of Health*3 to increase the number of medical consultants and procure additional medical equipment for the target hospital.

Palestine:
Improving Maternal and Child Health/Reproductive Health in Palestine (Phase 2) (Technical Cooperation)

This project was implemented to improve maternal and child health services in the territory of the Palestinian National Authority by promoting the Mother and Child Health Handbook (MCHHB) through technical training to obstetricians, gynecologists, nurses and midwives. The project involved the United Nations Relief and Works Agency for Palestine Refugees (UNRWA) and the United Nations Children's Fund (UNICEF) in addition the Palestinian Ministry of Health (MOH). The MCHHBs printed by the UNICEF were distributed 100% at primary health care centers and clinics operated by the MOH, UNRWA and NGOs. The project also made certain contribution to sharing information on pregnant women among medical facilities and improving the continuity of perinatal care. Accordingly, the project received an overall rating of "satisfactory." While the project purpose and overall goal were assessed as "partially achieved" due to the limited distribution of the MCHHB at private clinics, the project is expected to generate a larger impact by making further approach to private clinics.

Afghanistan:
Inter-Communal Rural Development Project (Technical Cooperation)

This project aimed to establish and disseminate a new community development model by clustering multiple Community Development Councils (CDCs) formed under the National Solidarity Program (NSP) of the Government of Afghanistan. The Cluster Community Development Councils (CCDCs) worked as a unit to implement sub-projects to improve livelihoods and develop infrastructure that would otherwise be difficult to manage for a single CDC, such as irrigation dams and micro hydro power plants. The ex-post evaluation found that many of the project facilities had been used continuously. The project used the monitoring mechanism established by the United Nations Human Settlements Programme (UN-HABITAT) to supplement the vulnerable regime of Afghanistan. The project also utilized the Japan Social Development Fund (JSDF), funded by the Government of Japan and administered by the World Bank, to disseminate the CCDC model to other provinces. This CCDC approach was appreciated by the Government of Afghanistan and adopted in the NSP II and III. Therefore, the project received a rating of "high" for effectiveness/impact and an overall rating of "highly satisfactory".

Afghanistan:
The Project for Construction of Basic Education Facilities (Grant Aid)

This project constructed school facilities to improve access to basic education and help enhance the learning environment. The ex-post evaluator visited 23 schools to examine the latest situation. According to the evaluation results, the project was rated as "high" in terms of effectiveness/impact because the facilities were still in use by many pupils and students, even almost a decade after their completion. The project received a rating of "fair" for sustainability due to financial difficulties, such as the lack of maintenance costs. In conclusion, the project gained an overall rating of "satisfactory."

A school for girls constructed in Parwan Province in the Project for Construction of Basic Education Facilities in Afghanistan (Grant Aid)

The above evaluations indicate that these projects in conflict-affected countries/areas were rated favorably because they had been designed and implemented properly to complement the vulnerable administrative systems as mentioned below.

What Works for Highly Rated Projects in Conflict-affected Countries/Areas

Supplementing vulnerable regimes in areas with poor public security
- Collaboration with other donors to establish a monitoring system
- Use of funds from other donors to sustain a financial foundation

Selection of target sectors
- Support for sectors providing high public interests such as basic infrastructure that benefits a wide range of people (e.g. public health and primary education)
- Tangible support (infrastructure development)

The Evaluation Department will further analyze the lessons learned from projects in conflict-affected countries/areas through other ex-post evaluations.

*1: JICA defines the term "conflict-affected country/area" as follows: (A) a country/area where conflict or armed violence is taking place when no peace/ceasefire agreement has been reached; (B) a country that is receiving support for nation-rebuilding led by a new government after the end of conflict or on conclusion of a peace/ceasefire agreement; (C) a country that is moving into a development stage, yet facing challenges caused by conflict or an unstable situation requiring the consolidation of peace (e.g. fragile countries); (D) an area affected by a local conflict or armed violence; and (E) an area that is moving into a development stage yet facing challenges caused by conflict or a situation requiring the consolidation of peace. In FY2016, evaluations were completed for two projects in Sri Lanka, one in Palestine and two in Afghanistan respectively.

*2: For the ODA Loan, Rural Road Development Project (Eastern Province) in Sri Lanka (ODA Loan), refer to the analyses by specialists (p.18-19).

*3: Official name is Ministry of Health, Nutrition and Indigenous Medicine

Joint Case Study with the World Bank and the Asian Development Bank in the Water and Sanitation Sector for Sri Lanka

JICA has supported the water and sanitation sector in Sri Lanka over decades. In FY2016, JICA, the World Bank (WB) and the Asian Development Bank (ADB), as major donors in the sector, started reviewing the contributions made by these development partners to draw lessons learned.

Identifying the water and sanitation sector as a priority area for assistance to Sri Lanka, JICA has completed or launched more than 15 Technical Cooperation, ODA Loan, or Grant Aid projects over the past 10 years. The Government of Sri Lanka is actively working on water and sanitation issues together with WB, ADB and JICA, as it would also be addressing the achievement of SDG 6: ensure access to water and sanitation for all. This study is intended to examine the achievements and remaining challenges in the sector and is expected to provide valuable insights to both the Government of Sri Lanka and the three development partners. Moreover, it is expected that generated lessons learned will be reflected in future development plans and be used to enhance donor coordination in the sector.

As of December 2016, the study team completed a literature review on the portfolio of the assistance made by WB, ADB and JICA in the water and sanitation sector in Sri Lanka. An examination of the support from these donors from 2006 to 2015 and achievement based on an analysis of key performance indicators (KPIs) were conducted. While this study uses the analytical methodology of the Independent Evaluation Group of the World Bank Group, it is a good opportunity for the three donors to learn about each other's evaluation methods. In addition, WB, ADB and JICA conducted a joint field study in August 2016. In light of past assistance, JICA focused its survey on the metropolitan urban water supply in Colombo and Kandy, WB on rural water supply and ADB on provincial urban water supply and together this enabled a comprehensive survey covering the entire sector. The field study also included interviews with key stakeholders in the sector, focus group discussions with project beneficiaries and an on-the-spot survey of the assisted projects to confirm their achievements. It also looked into the differences in the assistance approaches and operating systems of the three donors besides assessing the effectiveness and impact of their assistance. On the last day of the joint field study, JICA hosted a workshop in Colombo, which was attended by nearly 40 key personnels mainly from the Sri Lankan government agencies in the water and sanitation sector. The participants reviewed the achievements over the last decade together and discussed future challenges in the sector. The workshop was a great opportunity to build a common understanding among government agencies and donors. The results of the joint case study will be published as a report in 2017.

Workshop held in Colombo

Joint field study in JICA's rural water supply project site

Relationships Strengthened through Evaluation: Joint Evaluation Workshop for APCD and Relevant Governments

The Asia-Pacific Development Center on Disability (APCD), established in Thailand and JICA held a workshop in Bangkok, Thailand, from May 13-14, 2016 to share the results of the ex-post evaluation of the Technical Cooperation Project for Asia-Pacific Development Center on Disability (Phases I and II; 2002-2007 and 2007-2012, respectively). The APCD was established and institutionally strengthened through the project to function as a regional hub to facilitate collaboration among organizations involved in empowering disabled persons in the Asia-Pacific region. The legal status of the APCD remained to be decided at the beginning, but later in 2009, the APCD was designated as an incorporated foundation by the Government of Thailand.

The workshop was held to share the results of the ex-post evaluation of this 10-year project with relevant organizations and governments in the region and exchange opinions on the matter.

The workshop reviewed the project achievements, including how the APCD helped facilitate collaboration among governments and other organizations for disabled persons and promote a barrier-free society in the region. Moreover, the functions and services of the APCD were demonstrated to attendees from various countries*1 by providing examples of its current activities, such as a bakery founded by the APCD in 2015 to create job opportunities for disabled persons.

Participants of the workshop

Participants made comments, such as "It has strengthened my understanding about the APCD," and "The workshop provided an extremely useful opportunity to build a network for sharing information and gaining technical support from the APCD."

Now that about three years have elapsed since completion of the project, the APCD has continued to function effectively, but is also exploring new relationships with relevant governments and organizations in some countries as their contact persons were replaced. In this regard, the workshop was a good opportunity to strengthen relations among member countries in the region as well as between them and the APCD and enhancing activities for the empowerment of disabled persons. The workshop also raised expectations for strengthening the function of the APCD. It was a good example of how an ex-post evaluation can help enhance the sustainability of project effects.

*1: This workshop comprised three panels, each for different groups of countries: (1) teleconferences for Indonesia, Malaysia, the Philippines, APCD and JICA; (2) teleconferences for Bangladesh, Mongol, Pakistan, APCD and JICA; (3) face-to-face conferences in Thailand for Cambodia, Laos, Myanmar, Thailand, Vietnam, APCD and JICA.

Summary of the results of Ex-post Evaluations of Japan Centers for Human Resources Development

Japan Centers for Human Resources Development (hereinafter collectively referred as "Japan Centers") have been established one after another in countries in transition to a market economy*1 since 2000 to serve as a hub to facilitate industrial human resources development in the host countries and promote mutual understanding between these countries and Japan. Japan Centers have also their uniqueness of so-called "assistance with a human (Japanese) face", aiming at boosting the perception on Japan's contribution through its ODA program among recipient countries. This fiscal year, ex-post evaluation was conducted for a total of eight Japan Centers, the results of which are summarized below.

◇ Relevance: All eight projects were in line with the development policies and needs of their recipient countries. These projects also matched the assistance policies of Japan towards the recipient countries. Therefore, the relevance was rated "high" for all projects.

◇ Efficiency: All projects were completed within a respective planned time frame, while many of the projects observed their total cost exceed the estimations mostly because their business training courses were expanded to meet the growing needs for industrial human resources development that required extra inputs such as sending experts additionally. As a results of the above, efficiency was rated as "high" for some projects and "fair" for the others.

◇ Effectiveness/Impact: All the projects focused on the three pillars: business training, Japanese language training and promotion of mutual understanding. These programs attracted many trainees and participants during the respective project periods and highly satisfied the attendees. Accordingly, the project purposes of developing the Japan Centers to serve as a hub for industrial human resources development and promotion of mutual understanding between Japan and the partner country was largely achieved in each project.

The Japan Centers in six countries (Cambodia, Vietnam, Laos, Mongolia, Uzbekistan and Kyrgyz) were still receiving support for their business training courses from JICA through successive projects. At the time of the ex-post evaluations, these centers were still organizing the above-mentioned three pillar programs, attracting many trainees and participants. According to the beneficiary surveys conducted during the ex-post evaluations, graduates of the business training courses had used the techniques and know-hows learned such as Japanese management, 5S*2 and Kaizen*3, to boost the efficiency and productivity of their operations and helped expand the scale and scope of their businesses. Meanwhile, the Japanese language courses were continuously attracting students having an interest in Japan. Moreover, Study-in-Japan Fairs and other Japanese cultural programs, such as origami and kimono classes, were held to promote mutual understanding. The above results underlined the effectiveness of the continuous efforts made by Japan Centers to organize these programs with a Japanese touch to meet the needs and levels of participants. Furthermore, these six projects generated positive impacts; for example, the graduates of business training courses had built up alumni networks in many countries. In light of the above, these six projects were rated as "high" in terms of effectiveness/impact.

On the other hand, JICA's technical cooperation projects for Japan Centers were completed in the Ukraine in 2011 and in Kazakhstan in 2012. Although these Japanese Centers still remain to serve as a hub for Japanese language training and mutual understanding, the Ukraine-Japan Center discontinued its business course and the Kazakhstan-Japan Center scaled it down. The business course run by the Kazakhstan-Japan Center has a good reputation among the participants as its contents was carefully reviewed and modified, for example, by narrowing its focus to themes where Japan has a competitive edge, such as 5S and Kaizen. However, the effects of this course, though spreading in some areas, remained limited by and large. Accordingly, the effectiveness and impact of these two projects were rated as "fair."

◇ Sustainability: The Japan Centers supported through successive projects were run by each designated implementation agencies in the host countries. Although revenues from tuitions and other sources increased, they could not cover all the operation costs. With regard to technical sustainability, a number of local trainers had been trained. Meanwhile, Japanese experts dispatched to lecture on gemba (on-the-spot) Kaizen and other topics based on their own hands-on business experience were also highly appreciated, which indicated that such Japanese lecturers should be continuously dispatched to retain the appeal of the business courses as well as keep them flexible enough to meet changing industry needs. The sustainability of these projects was rated as "high" or "fair," depending on the policy of each Japan Center in terms of autonomy and the progress towards the respective target level of autonomy.

On the other hand, the sustainability of the projects in Kazakhstan and Ukraine were rated as "fair" for the following reasons. Firstly it's becouse their business course was either scaled down or discontinued, though they retained their operating structures for Japanese language training and mutual understanding activities. Secondly, there is uncertainty about their financial sustainability as their revenues mighy not cover their full operating costs. For further reference, the result of one of the ex-post evaluations for the Japan Center projects is summarized on p. 34-35.

*1: As of March 2017, 10 Japan Centers have been established and operational in nine countries: Cambodia, Vietnam (Hanoi and Ho Chi Minh), Myanmar and Laos in Southeast Asia; Mongolia, Uzbekistan, Kyrgyz and Kazakhstan in East and Central Asia; and the Ukraine.
*2: "5S" refers to an approach to improve efficiency and streamline processes through seiri (sort), seiton (set in order), seiso (shine), seiketsu (standardize) and shitsuke (sustain).
*3: "Kaizen" refers to activities taken in a manufacturing environment to improve operations. For purposes such as enhancing productivity and ensuring safety, field workers develop improvement measures and solve problems by themselves.

Project	Cooperation period	Relevance	Effectiveness	Efficiency	Sustainability	Overall rating
Cambodia-Japan Cooperation Center Cambodia-Japan Cooperation Center (Phase 2)	April 2004 to March 2009 April 2009 to March 2014	③	③	②	②	B
Viet Nam-Japan Human Resources Cooperation Center (Phase 2)	September 2005 to August 2010	③	③	②	②	B
Lao-Japan Human Resource Cooperation Center (Phase 2)	September 2005 to August 2010	③	③	②	②	B
The Japan-Mongolia Center for Human Resources Development Cooperation Mongolia-Japan Human Resources Development Cooperation Center Project Phase 2	January 2002 to January 2007 January 2007 to January 2012	③	③	②	③	A
Uzbekistan-Japan Center for Human Development (Phase 2)	December 2005 to November 2010	③	③	②	③	A
Kyrgyz Republic-Japan Center for Human Development Kyrgyz Republic-Japan Center for Human Development Project	April 2003 to March 2008 April 2008 to March 2013	③	③	③	②	A
Kazakhstan-Japan Center for Human Development (Phase 2)	October 2005 to September 2010	③	②	③	②	B
The Ukraine-Japan Center Project	May 2006 to May 2011	③	②	②	②	C

*4: ③: High, ②: Fair, ①: Low / A: Highly satisfactory, B: Satisfactory, C: Partially satisfactory, D: Unsatisfactory
*5: Effectiveness includes evaluation of impact. Overall goal, project purpose and their indicators vary according to Center and project phase.

Applications of Lessons Learned

JICA aims to constantly draw lessons learned from ex-post evaluations or preceding projects to improve upon other future projects. When appraising a new project, JICA refers to lessons learned from similar past projects in order to take precautionary measures. Moreover, if there are key points to be considered during project implementation, they are communicated to the project management officer in JICA. To confirm the actual applications of the lessons drawn, analysis was conducted for six projects that had been taken up for external evaluation.

The analysis was made by the same consultants who had conducted the external evaluations. Through literature reviews and interviews with stakeholders*1, they confirmed that all six projects applied the lessons learned from past projects appropriately. The results of this analysis are summarized in three aspects.

*1: Because considerable time had elapsed since project completion, the research faced certain limitations, such as unavailability of many documents and contact persons due to transfer or retirement. Therefore, the analysis was conducted under limited information.

List of ODA loan projects analyzed
The parenthesis shows the abbreviated project name used in the main text

①Indonesia	South Sumatra–West Java Gas Pipeline Project (Gas Pipeline)
②Indonesia	Tanjung Priok Gas Fired Power Plant Extension Project (Gas-fired Power Plant)
③Indonesia	Lahendong Geothermal Power Plant Project (Geothermal Power Plant)
④Viet Nam	Third National Highway No. 1 Bridge Rehabilitation Project (I) (II) (Bridge)
⑤India	Delhi Mass Rapid Transport System Project Phase 2 (I) - (V) (Delhi Metro)
⑥Sri Lanka	Southern Highway Construction Project (I) (II) (Southern Highway)

Lessons on Fulfilling the Preconditions and Monitoring the Schedule

For the Gas Pipeline Project (①) in Indonesia, JICA took into account the lessons learned from past projects regarding schedule monitoring for involuntary resettlement / land acquisition, approvals and coordination with the gas field development project responsible under another agency. Agreement was made with the executing agency on prerequisite actions and their deadlines at the time of appraisal. Although it actually took longer to negotiate with the residents to be relocated, the close communication established by this between the executing agency and JICA allowed them to take alternative means and other proper measures to commensurate with the circumstances at the site. Moreover, monitoring of the prior agreement for the gas field development facilitated the gas purchase agreement to be concluded and effectuated before the selection process for the contractor started.

Lahendong Geothermal Power Plant

On the contrary, the Gas-fired Power Plant Project (②) in Indonesia lagged far behind schedule because the fuel supply agreement had not been finalized. In light of lessons from the past that a fuel supply agreement should be a prerequisite for a gas-fired power plant project, JICA confirmed at the time of appraisal that the executing agency had reached basic agreements with two gas companies. Nevertheless, the contract negotiations were eventually broken off, forcing the executing agency to change its gas procurement plan. Meanwhile, for the Geothermal Power Plant Project (③), the success of which would depend on the stable supply of steam, took precautious measures, such as test drilling and verification of the same by a consultant engaged in the project. Yet, the steam from the major steam production well was later found to have quality problems. As they restricted the power plant output, countermeasures were required when the operation commenced. The external evaluator considered that these problems could not have been predicted at the project formulation stage. These two projects exemplify that unexpected problems occur during the implementation despite preventive measures*2.

The Bridge Project (④) in Vietnam was divided into two phases, for which separate loan agreements were concluded. Phase 1 was significantly delayed. Based on the lesson learned on interim supervision from the first phase, the executing agency and JICA agreed before Phase 2 that they would revise the reporting format and establish a regular reporting system to prevent delays and accelerate construction works. This was analyzed to have contributed to establishing a system on sharing the project progress across the project related people, and subsequently helped prevent delays in construction works.

*2: Based on these experiences, further improvements were made by the executing agency: (1) strengthening the institutional capacity of the gas department by introducing monitoring and risk analysis of the gas supply, developing risk control strategies and holding monthly coordination meetings with fuel suppliers; and (2) requiring fuel suppliers to conduct a detailed survey to verify not only their steam production capacity but also their steam quality.

Lessons for Maximizing Project Effects

During the Delhi Metro Project (⑤) in India, the executing agency and bus transport corporation agreed that bus lines between metro stations and residential areas would serve as feeder lines to promote the use of the metro. To this day, the executing agency has been trying to coordinate with the bus and other transport corporations through the Unified Traffic and Transportation Infrastructure (Planning and Engineering) Center (UTTIPEC), but coordination is difficult because number of organizations is involved. Given the lack of progress in negotiations, the executing agency began operating their own feeder bus service in 2007, a short while after project construction started*3. The bus lines increased from 17 to 33 between 2010 and 2015 and Delhi Metro and buses are linked in selected areas.

Line 5 of Delhi Metro

*3: This ex-post evaluation assessed the Phase II project. The Phase I section had already started operation in 2007.

Lessons for Enhancing Sustainability

As for the Delhi Metro Project (⑤) in India, importance of financial independence for proper operation and maintenance was noted as a lesson, and necessary measures were to be taken during project monitoring. To put itself on a firm financial footing, Delhi Metro Rail Corporation (DMRC) would need to increase its fare box and other revenues (income from rail and non-rail businesses). For the rail business in particular, DMRC would need to cater more passengers by methods mentioned above and revise their fares. Subsequently, DMRC commenced feeder bus services, revised their fares in 2009 and expanded its non-rail businesses such as advertising, real estate and consulting services while JICA monitored their progress. Nevertheless, another fare hike is needed due to recent inflations and the increased burden on maintenance cost from the expansion of rail lines. Accordingly, the DMRC continues to seek approval from the Fare Fixation Committee on fare hike.

The Southern Highway Project (⑥) in Sri Lanka was the first national highway in the country, and structuring of a new operation and maintenance (O&M) system before the opening of the highway was stressed as a lesson to be heeded during supervision of the project. Assistance was designed to support capacity building, prepare for O&M plans and facilitate the establishment of the Expressway Authority. In collaboration with its co-financing partner (Asia Development Bank), JICA supported institutional setup and capacity development through the ODA Loan Project, related technical assistance, as well as training programs in Japan. Although the Expressway Authority has not been established due to delay in legal procedures, the Expressway Operation Maintenance and Management Division was newly setup within the executing agency. Thanks to the capacity development support, the Division seems to be able to operate and maintain the highway properly after its opening.

Southern Highway

Column

JICA Standard Indicator Reference and Typical Lessons Learned

JICA has compiled standard indicators for major development issues as references to facilitate an objective and quantitative analysis of project effects at the planning and ex-ante evaluation stages. JICA has also collected typical lessons learned by evaluating past projects from various perspectives to incorporate them into project plans and use them to improve and enhance the project quality.

As of December 2016, "JICA Standard Indicator Reference" has covered 21 sectors/issues for Technical Cooperation, 20 sectors/issues for ODA Loan and 12 sectors/issues for Grant Aid. This Reference is being translated into English for national staff in JICA overseas offices, executing agencies in partner countries and other international development partners.

Going forward, JICA will update the Standard Indicator Reference and Typical Lessons Learned for Technical Cooperation projects and revise the Standard Indicator References for ODA Loan and Grant Aid projects by integrating them and making them easier to use.

Related links: Standard Indicator Reference
https://www.jica.go.jp/english/our_work/evaluation/indicators/index.html

External Evaluation: Highlights

Out of the 90 projects evaluated in FY2015, 10 external evaluations are selected based on geography, assistance scheme, and sector.

India (ODA Loan)

Bangalore Water Supply and Sewerage Project

Contributed to tackling the challenges of Bangalore city amid rapid industrial expansion and population increase

External Evaluator: Hisae Takahashi, Ernst & Young Sustainability Co., Ltd.

Overall	
B	
Effectiveness and Impact	3
Relevance	3
Efficiency	1
Sustainability	3

Project Description

Loan amount / Disbursed amount:
28,452 million yen / 23,047 million yen

Loan agreement: January 1996

Terms and conditions:
Interest rate: 2.1%
Repayment period: 30 years (Grace period :10 years)

Final disbursement date: January 2005

Executing agency: Bangalore Water Supply and Sewerage Board (BWSSB)

Project Objectives

Overall Goal:
Improve the quality of life and industrial growth in Bangalore City

Project Purpose:
Increase the volume of water supply and waste-water treated in Bangalore city

Output:
Develop water supply facilities (intake structure, raw water gravity main, water treatment plant, clear water reservoirs, water transmission and distribution facilities, etc.) and sewerage facilities (sewerage treatment plant, pumping station, trunk sewer, etc.) in Bangalore City

Water Transmission Line to Bangalore City

Sewerage Treatment Plant (Nagasandra)

Water Treatment Facility (T.K. Halli)

Wastewater at Nagasandra Sewerage Treatment Plant
(Left: Before treatment, Right: After treatment)

Effects of Project Implementation (Effectiveness, Impact)

This project was conducted to boost the water supply and wastewater treated in Bangalore city by constructing water supply and sewerage systems. Bangalore city, recently known as the "Silicon Valley of Asia", has been experiencing soaring growth, centering on the key industry of software, but the water supply and sewerage capacity of Bangalore city have not kept pace with the economic growth and population increase. This has resulted in water supply restrictions and an increase in wastewater, which were anticipated to exacerbate the living environment. Expanding the intake structure from Cauvery River, the main water source of the city, and expanding and newly constructing water treatment plant and sewerage treatment plants (STPs) in the city increased volumes of water supply and treated wastewater significantly. The quality of the treated water at STPs has met requirements set by the State Pollution Control Board. Living and hygiene conditions have also improved, while IT and automobile companies have established new businesses in areas where the water supply and sewerage systems were developed, meaning this project also helped to improve conditions for the industrial foundation of the city. Accordingly, the effectiveness and impact of the project have been evaluated as high.

Relevance

The development policy in India has consistently targeted an increased volume of water supply and an improved hygiene environment by developing water supply and sewerage systems, both at the time of appraisal and the ex-post evaluation. The development needs of the rapidly expanding Bangalore city to secure the required volume of water supply and appropriate sewerage capacity are high and also relevant to Japan's assistance policy. Therefore, the relevance of the project is high.

Data for Water Supply in Bangalore City

Indicator	Baseline	Target	Actual				
	1995	2001	2005	2011	2012	2013	2014
	Baseline Year	Completion Year	Completion Year	Completion Year			
				6 Years After Completion	7 Years After Completion	8 Years After Completion	9 Years After Completion
Volume of Water Supply (MLD)	680	950	890	930	950	1,230*1	1,430
Facility Utilization (%)	100	N.A.	100	100	100	100	100

Source: Prepared based on documents provided by JICA and executing agency
*1: The water supply increased in 2013 as Phase 2 was implemented.

Data for Treated Wastewater, Effluent Quality of Bangalore City

Indicator	Baseline	Target	Actual				
	1995	2001	2005	2011	2012	2013	2014
	Baseline Year	Completion Year	Completion Year	Completion Year			
				7 Years After Completion	8 Years After Completion	9 Years After Completion	10 Years After Completion
Volume of Treated Wastewater (MLD)	150	796*2	180	319	479	525	600
BOD Concentration*3 Outflow (mg/ℓ)	60*4	20	11.8	11.7	11.7	12.1	11.5
SS Concentration*3 Outflow (mg/ℓ)	150*4	30	13.4	14.1	14.1	15.1	14.1

Source: Documents provided by JICA and executing agency
*2: In the documents prepared at the time of appraisal, the planned volume of wastewater treated was calculated as 80% of the water supply.
*3: Data is the average of STP constructed under this project.
*4: Data for BOD and SS concentrations as of the baseline were for K&C Valley STP alone.

Efficiency

This project was the first large public project for the executing agency. There was delay in the bidding process. It also required certain time for land acquisition and approvals from the related authorities to construct and expand the facilities, meaning the project period significantly exceeded the plan. The project cost also exceeded the plan because of the increased cost with the price escalation and land issues. Accordingly, the efficiency of the project is low.

Sustainability

An operation and maintenance (O&M) structure has been set up, where water supply and sewerage facilities are commissioned to private contractors and supervised and managed by the executing agency. They possess required technical capacity in terms of the O&M of water supply and sewerage facilities and no major financial problems have been observed. Accordingly, the sustainability of the project effect is high.

Conclusion, Lessons Learned and Recommendations

In light of the above, this project is evaluated as satisfactory.

The following lessons learned from the project were raised. If it is the first donor supported project or if the executing agency lacks experience in implementing a large public project, inclusion of a more careful and detailed monitoring plan for project activities would be an effective way to prevent delays. Also, when supporting a sewerage project, there is a need to set a project period which carefully considers construction approvals and land acquisition for STP, which requires longer time in many cases. Furthermore, applying contract methods which assign the contractors involved in construction has helped facilitate proper daily O&M activities and kept the facilities in good condition, even at the time of ex-post evaluation, one decade after project completion, by utilizing their sufficient technical experience.

The following recommendations were made. As the area of Bangalore city has continued to expand even after the project completion, there is a need to develop a sewer line to cover sewerage services for the population. Bangalore City planned to meet the demand of the city caused by the population growth by completing both this project (Phase 1) and its successor (Phase 2). Accordingly, it is important to strive for immediate completion of the succeeding project, some delays to which were apparent at the time of ex-post evaluation.

Key Point of Evaluation

"Japanese support towards Bangalore city, where industrial development and population have continued to grow"

Bangalore city needs to secure its water supply from Cauvery River, located a distance of 100km away as a stable water source. Accordingly, Bangalore city had implemented water supply projects over three stages in 1974, 1982 and 1994 respectively. This project was placed as stage 4 and contributed to the efforts of the city. In the neighboring district of the area where the water supply and sewerage system were developed under this project, it was confirmed that IT and automobile companies, including Japanese companies, had moved into the area. Thus by improving the water supply and the hygiene environment, this project also helped establish a base for industrial infrastructure for the region. As Bangalore city's industry and its population have continued to grow, the demand forecast showed it would be difficult to meet all the demand required, even after completion of this project. Therefore, a Japanese ODA loan project has been extended for the implementation of the succeeding project to meet the remaining demands. Under such circumstance, though the amount of water supply at the time of ex-post evaluation did not fully satisfy the demand of the city, further effects and impacts would be expected by completing the successor project.

Indonesia (ODA Loan)

Tanjung Priok Gas Fired Power Plant Extension Project

Contributing to securing power supply and demand balance in Special Capital Region of Jakarta and improving stability of power supply in the entire Java-Bali area

External Evaluator: Masumi Shimamura, Mitsubishi UFJ Research and Consulting Co., Ltd.

Overall	
A	
Effectiveness and Impact	3
Relevance	3
Efficiency	2
Sustainability	3

Project Description

Loan amount／Disbursed amount
58,679 million yen / 56,647 million yen

Loan agreement: March 2004

Terms and conditions:
Interest Rate 1.3%, Repayment Period 30 years (Grace Period: 10 years)

Final disbursement date: March 2014

Executing agency: State Electricity Company (PT. PLN)

Project Objectives

Overall Goal:
To contribute to the improvement of stability of power supply

Project Purpose:
To increase power supply in the Java-Bali area

Output:
Construction of new gas-fired combined cycle generating facilities (720MW class: 250MW class gas turbine generator×2units, 220MW class steam turbine generator×1unit) at the Tanjung Priok Gas Fired Power Plant located in the suburbs of the Special Capital Region of Jakarta

Tanjung Priok Gas Fired Power Plant

Heat Recovery Steam Generator

Central Management Room

Effects of Project Implementation (Effectiveness, Impact)

The project aimed to increase power supply and to improve stability of power supply in the Java-Bali area by constructing new gas-fired combined cycle generating facilities at the Tanjung Priok Gas Fired Power Plant in the suburbs of the Special Capital Region of Jakarta.

The target figures for maximum output, availability factor and gross thermal efficiency set at the time of appraisal (in 2003) have been all achieved, and those for plant load factor and net electric energy production have been achieved more than 90% and little less than 90%, respectively. The net capacity of the power plant has a share of more than 12% of the net capacity in Special Capital Region of Jakarta and the electricity generated is supplied to industrial area in the east and to Tanjung Priok Seaport in the north, significantly contributing to securing power supply and demand balance in the Capital Region. Furthermore, considering that the power plant is located in the Capital Region, the largest power demand center, it can be said that it plays an extremely important role to reduce power loss and to maintain quality of power supply in the Java-Bali area. As part of its CSR (Corporate Social Responsibility) activities, Tanjung Priok Power Plant has been contributing to the reinforcement of unity among local residents through providing support to social activities undertaken by the local residents (such as health education in elementary schools).

In light of the above, effectiveness and impact of the project are high.

Relevance

The Government of Indonesia places a large emphasis on securing stability of power supply both at the time of project appraisal and ex-post evaluation. Facilitation of development of power sources in the Java-Bali area which supplies power to Jakarta Capital Region, the largest power demand center in Indonesia, is a pressing issue. Furthermore, this project was consistent with Japan's ODA policy. Thus, the project's relevance is high.

Efficiency

Project cost was lower than planned although the additional outputs such as installation of shoring protection and increase of inputs of consulting services took place. Project period was longer than planned because of delay of gas fuel supply (see p.24) and delay in detailed design period related to additional civil works. Thus, the project's efficiency is considered as fair.

Operation and Effect Indicators of the Power Plant

Indicator	Baseline*1	Target	Actual		
	2003	2011	2013	2014	2015
	Baseline Year	1 Year After Completion	Completion Year*2	1 Year After Completion	2 Years After Completion
Maximum output	———	720MW	757MW	721MW	718MW
Plant load factor	———	70% or more	57.65%	65.57%	64.48%
Availability factor	———	80% or more	88.95%	93.92%	95.95%
Gross thermal efficiency	———	48% or more	47.94%	49.67%	48.86%
Net Electric Energy Production	———	4,305GWh or more/year	2,986GWh	3,743 GWh	3,850 GWh

Source: Information provided by JICA, and results from questionnaire survey of the executing agency

*1: Baseline figures did not exist at the time of appraisal because the project is a construction of new power generating facilities

*2: The figures in 2014 shall be compared with target figure, and the figures in 2013 (the year of project completion: i.e., at the year of completion of warranty period) were provided as reference

Share of the Power Plant

Net Capacity (2015) ※3	Net Capacity of the Power Plant (2015)	Share
Entire Java-Bali System: 31,694MW	720MW	2.27%
Jakarta Capital Region: 5,996MW		12.01%

Source: Information provided by JICA, and results from questionnaire survey of the executing agency

*3: Net capacity is equivalent to gross capacity or installed capacity minus amount of power consumed within a power plant.

Sustainability

With respect to institutional aspects of operation and maintenance, responsibilities and decision making process are clear among the executing agency, Indonesia Power, which is a subsidiary generation company, and Tanjung Priok Power Plant. No particular problem has been identified regarding technical and financial aspects of operation and maintenance. In addition, maintenance activities have been conducted appropriately. Thus, the project's sustainability is high.

Conclusion, Lessons Learned and Recommendations

In light of the above, this project is evaluated to be highly satisfactory. The importance of risk analysis and taking measures accordingly to ensure fuel supply for thermal power plants is pointed out as lesson learned. The delay of gas supply was one of the main reasons for the project delay. It is critical that the executing agency extensively conducts cross-sectoral and comprehensive risk analysis on fuel supply, urges the central government based on the analysis as required, and encourages the government to take appropriate actions including cross-ministerial coordination.

Key Point of Evaluation

"Analysis of Integrated Impacts of Four ODA Loan Projects"

In addition to this project, three ODA loan projects implemented around the same time – "Muara Karang Gas Power Plant Project", "Muara Tawar Gas Fired Power Plant Extension Project" and "South Sumatra-West Java Gas Pipeline Project" – were taken up to analyze their integrated impacts. The analysis revealed that gas-fired combined cycle power plants developed by these projects have set a precedent for introducing generation facilities of the same type of Japan's high quality infrastructure technology*4 in Indonesia. Also, gas pipelines developed by ODA loan have encouraged conversion of energy source from oil to gas, through facilitation of domestically produced gas in Indonesia.

Specifically, the executing agency is planning to construct 800MW class gas-fired combined cycle power plant in an adjacent site to this project, and a joint venture consisting of Japanese and local companies has been awarded to undertake the construction work. Following Muara Karang Gas Power Plant and this project, Japanese gas turbine combined cycle technology, the world's highest technology, will be introduced in Indonesia.

In addition, natural gas transmitted through the gas pipelines developed by ODA loan accounts for about 43% of gas supply from Sumatra Island to West Java area. Furthermore, the analysis on the state of fuel utilization for the entire generating facilities of Muara Tawar, Muara Karang and Tanjung Priok Power Plants, including three power plant units constructed by the ODA loans, has shown following results – energy production utilizing gas has increased by about 1.5 times, from 13,763GWh (2009) to 20,893GWh (2015), whereas High Speed Diesel has decreased from 5,886GWh (2009) to 169GWh (2015). This fact shows that conversion of energy source from oil to gas has been facilitated.

*4: Refer to the website of Ministry of Foreign Affairs of Japan.
http://www.mofa.go.jp/mofaj/gaiko/oda/files/000083884.pdf

Democratic Socialist Republic of Sri Lanka (ODA Loan)

Environmentally Friendly Solution Fund Project (II)

Supporting the encouragement of private companies' environmental capital investments

External Evaluator: Yumi Ito, Japan Economic Research Institute Inc.

Overall	
C	
Effectiveness and Impact	2
Relevance	3
Efficiency	2
Sustainability	2

Project Description

Loan amount／Disbursed amount:
5,236 million yen / 5,172 million yen

Loan agreement: December 2004

Terms and conditions:
Interest Rate 0.75%, Repayment Period 40 years (Grace period 10 years)

Final disbursement date: December 2011

Excecuting agency: Ministry of Industry and Commerce

Project Objectives

Overall Goal:
To contribute to the reduction of environmental burdens created by the companies eligible for this project

Project Purpose:
To encourage environmental capital investment by the private companies

Output:
Provision of medium/long-term loans necessary for companies to make environmental capital investment and to hire supporting consultants, and provision of training for the officers of the participating credit institutions (hereinafter referred to as 'PCIs')

① Waste water treatment facility installed at a rice mill utilizing the sub-loan from this project

② Waste water treatment facility installed at a rice mill utilizing the sub-loan from this project

③ Waste water treatment facility installed at a hotel utilizing the sub-loan from this project

Effects of Project Impelementation (Effectiveness, Impact)

This project was implemented with an aim to encourage private companies to make environmental capital investments by providing medium/long-term funding through PCIs.

From the limited but attained data on the ratio of cumulative collection, ratio of principal payment in arrears and ratio of sub-projects in arrears of the sub-loans provided by this project, as well as the number of companies obtaining Environemtnal Protection License, it was inferred that the project effects had been mostly generated. However, as described below, it was very difficult to obtain data for operation and effect indicators, and the project effects in its entirety could not be quantitatively analyzed due to limitations of available data. In addition, a refund of a part of the ODA loan to JICA is planned, but sufficient information to analyze how this refund would influence the project effects could not be obtained. Therefore it was difficult to evaluate the achievement of the project effectiveness in its entirety excluding the refund portion. The evaluation study looked into the "securement of companies' access to the policy-based finance in the former conflict areas" as a qualitative effect indicator of this project. Although the effect had not been realized, it was not included in this evaluation because it was due to the conflict not ending until May 2009. As impacts of the project, the results of the beneficiary survey, which was conducted on the selected companies that received a sub-loan from this project, show that most of the respondents recognized that their sub-projects financed by this project had contributed to the reduction of environmental burdens created by their business activities.

In light of the above, the project effects in its entirety could not be evaluated due to limitations of available data, although a part of the effects realized through this project could be observed. Therefore, the effectiveness and impact of the project were regarded as fair.

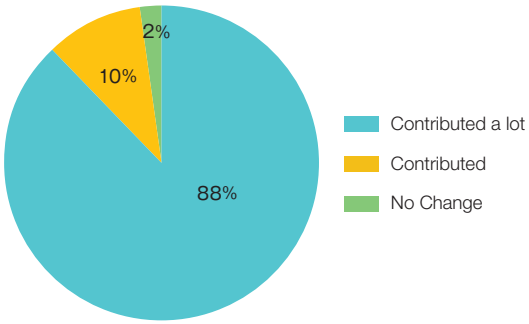
Relevance

This project was consistent with Sri Lanka's development policy both at the time of project appraisal and ex-post evaluation and was also consistent with Japan's ODA policy at the time of project appraisal. It is also considered consistent with the development needs of Sri Lanka. While industrial pollution became a serious issue, it was expected that the environmental investment by private companies would be promoted. Meanwhile a concessional financing scheme was needed because investment in environmental measures did not necessarily bring about an increase in a company's revenue directly. Therefore, the relevance of the project is high.

Efficiency

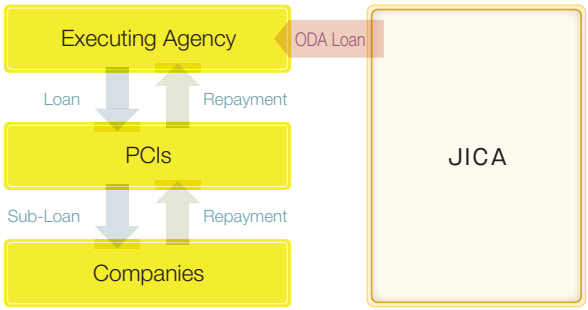
In this project, provision of medium/long-term funding necessary for companies to make environmental capital investments and provision of

Contribution to the reduction of environmental burdens created by the activities of companies



Source: Beneficiary survey
Interview survey was conducted on a total of 102 companies that received a loan through this project, and were selected non-randomly considering: location, financing PCIs, industry and loan amount.

Funding scheme of the project



Source: Prepared based on the information provided by JICA

funding for companies to hire consultants or conduct training were implemented. However, the funding for the PCIs to conduct employee training and so forth, planned at the time of appraisal, was not utilized. Although the project cost was within the plan, the project period exceeded the plan. Therefore, the efficiency of the project is fair.

Sustainability

Regarding the operation and maintenance of the revolving fund*1 of this project, the operation of the revolving fund has not yet started at the time of ex-post evaluation and there are some concerns over a part of the organisational and technical aspects, although no major issues in particular were observed in the financial aspect. Therefore, sustainability of project effects is fair.

Conclusion, Lessons Learned and Recommendations

In light of the above, this project is evaluated to be partially satisfactory.

In Sri Lanka, due to the reorganization of government ministries in 2010, the members of the project management unit were newly assigned and it seemed that the transfer of the project documents were not conducted sufficiently; and therefore, there were constraints in obtaining information. Furthermore, the information related to the operation and effect indicators was limited as more than ten years had passed since the commencement of the project and an archive period for information at some PCIs had already expired at the time of ex-post evaluation. As lessons learned, it would be useful for effective and efficient project monitoring and ex-post evaluation to require those indicators to be regularly reported in the progress report, or to ensure adequate storage of the database after project completion. In addition, the refund of about 20 % of the total disbursement to JICA is to be conducted based on the results of the audits conducted by the Auditor General's Department of the Government of Sri Lanka that pointed out the lack of documents, the lack of proper approvals and so forth. In order to avoid such a situation in the future, it is worth considering the introduction of a mechanism to check, among the stakeholders during project implementation, whether the project procedures are performed appropriately, including documentation management. In cases which the executing agency is transferred to another ministry due to reorganization of government ministries during the project implementation period, the status of the transfer and project implementation by the new executing agency can be monitored at a regular meeting of a project supervising committee. It is considered that this would also contribute to enabling appropriate measures to be taken at an early stage.

As a recommendation to the executing agency, it is desired to commence the operation of the revolving fund as soon as possible in order to sustain the effects of this project.

*1 A fund to provide loans to companies for the same purpose as the one for this project, by collecting the repayments from the PCIs in an account at the Central Bank as the finance source.

Key Point of Evaluation

"Examples of utilization of the sub-loans of this project"

In order to observe the project effects, site visits to some project beneficiaries were conducted during the field survey of this evaluation study. Below are two examples from those visites.

1. Waste water treatment facility installed at a rice mill (Picture ②)

According to an interview with a branch of a certain PCI in Polonnaruwa in the North Central Province of Sri Lanka, most of the sub-loans of this project provided by this branch were utilized for installation of waste water treatment facilities at rice mills. A site visit was made to a small rice mill, a borrower of this branch, where the waste water could be treated by the facility installed, utilizing the sub-loan of this project.

2. Waste water treatment facility installed at a hotel (Picture ③)

A hotel visited at the field survey utilized the sub-loan of this project to install a facility for its waste water treatment. It was reported that an annual monitoring was conducted by the authority, and the waste water was treated by this facility and this hotel had been able to renew its Environmental Protection License annually. The treated water is used for watering the garden in the hotel.

Philippines (Technical Cooperation)

The Project on Philippine Coast Guard Human Resource Development (Phase I)/ The Philippine Coast Guard Education and Human Resource Management System Development Project (Phase II)

Comprehensive assistance through technical cooperation, grant aid assistance, and ODA loan assistance

External Evaluator: Koichiro Ishimori, Value Frontier Co., Ltd

Overall	
A	
Effectiveness and Impact	3
Relevance	3
Efficiency	3
Sustainability	2

Project Description

Total cost: (I) 801 million yen, (II) 314 million yen

Period of cooperation: (I) July 2002 to June 2007, (II) January 2008 to December 2012

Partner country's implementing organizations: Philippine Coast Guard (PCG)

The number of experts dispatched:
(I) long term：9 persons, short term：37 persons
(II) long term：6 persons, short term：9 persons

The number of technical training participants: In Japan：(I) 32 persons, (II) 45 persons

Main equipment provided:
(I) Construction of a pool for training, echo sounders, navigation system, oil analysers, drug test kits
(II) Database of human resource management system, equipment for ship operation training, equipment for law enforcement, and others

Project Objectives

Overall Goall:
(I) PCG improves capacities to perform its functions
(II) PCG improves capacities as a law enforcement organization

Project Purpose:
(I) PCG develops its personnel's knowledge and skills required to perform its functions
(II) PCG develops an education and human resource management system

Output:
(I)
Output 1：PCG strengthens its education and training management system
Output 2：PCG develops training courses and holds seminars in their four priority activities with participants from other concerned governmental and private organizations
Output 3：PCG strengthens its basic training courses including OJT/unit training
(II)
Output 1：PCG establishes a concurrent instructor system
Output 2：PCG develops training programs on Maritime Law Enforcement (MARLEN)
Output 3：PCG develops and strengthens training programs on ship operations

Search and rescue training

Chemical treatment of the spilled oil

PCG personnel searching survivors in the ship wreck of Thomas Aquinas

Effects of Project Implementation (Effectiveness, Impact)

Phase I of this project established education and training system including development of education and training courses; and the Phase II project expanded this, both at the Coast Guard Education and Training Command (CGETC) of the Philippine Coast Guard (PCG), and thereby aimed to develop personnel with knowledge and skills required to perform the functions of PCG. As a result of the Phase I and II projects, CGETC was enabled to provide appropriate education and training for PCG officers and non-officers in the four target areas; i.e. search and rescue (SAR), aids to navigation (ATON), marine pollution/oil spill combating (MARPOL /OSC), and maritime law enforcement (MARLEN). PCG officers and non-officers who have received the education and training are able to carry out search and rescue activities of crews and passengers on sunken vessels, respond to oil spill accidents by oil tankers, and apprehend illegal maritime trafficking of drugs and firearms. PCG also contributes to the energy security of Japan in a way that it plays a role in securing the safety of navigation in the South China Sea which is in the sealane connecting Japan and oil-producing countries in the Middle East.

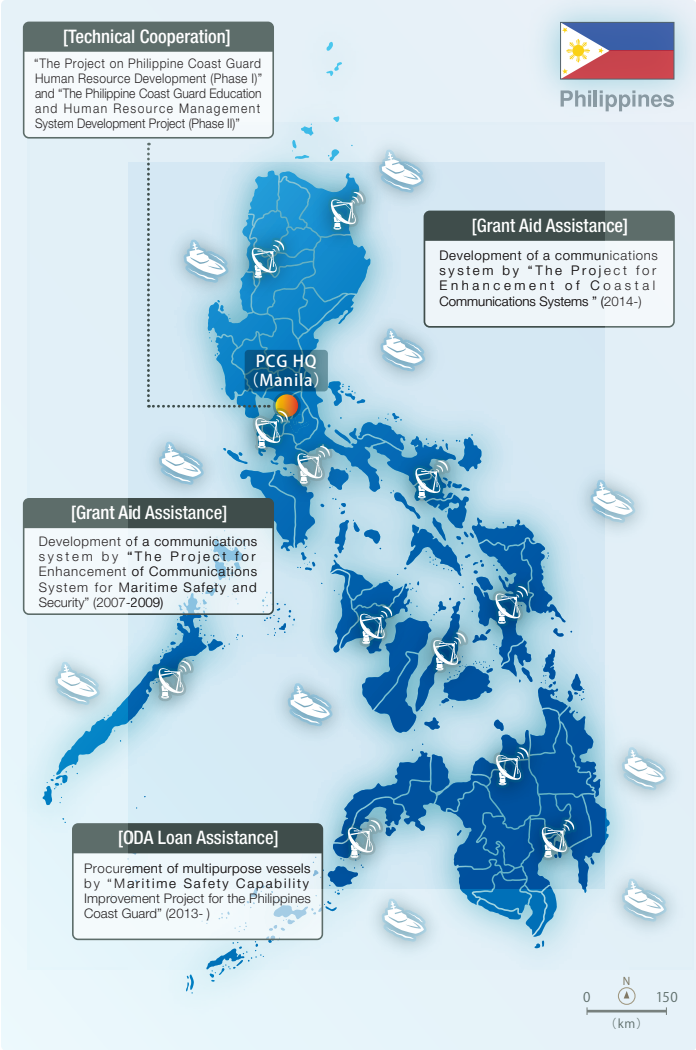
Relevance

The Phase I and II projects correspond to the Mid-Term Philippine Development Plan and the PCG 15 Year Development Plan that are the development policies of the Philippines, and also the development needs of securing maritime safety and security in the sea near the Philippines. They also correspond to the development policies of Japan. Therefore, their relevance is high.

Efficiency

Activities of the Phase I project increased because Output 3 was newly added to the project during the midterm evaluation. As a result, the number of experts dispatched from Japan and trainees received in Japan as well as the project cost increased, though the project period remained as planned. The increased activities were indispensable to promote achievement of the project purpose and the addition of inputs corresponding to outputs. Because the Phase II project had a wide variety of practical training, the number of potential trainees and actual trainees received in Japan increased. Nevertheless, the project cost was within the plan and the

Glance of Technical Cooperation, Grant Aid Assistance, and ODA Loan Assistance



project period was same as the plan. Therefore, their efficiency is high.

Sustainability

Many of the instructors at CGETC that trains coast guard personnel are rotated within half a year to a year. The database for selecting instructors that the project developed is not operational due to technical problems. Consequently, it is difficult for PCG to stably provide quality education and training. Some minor problems have been observed in terms of the organizational and technical aspects of PCG, and therefore sustainability of the project effects is fair.

Conclusion, Lessons Learned and Recommendations

In light of all the above, the project is evaluated to be highly satisfactory. However, there is some room for future improvement in order to enhance sustainability of the project effects. For instance, the PCG Ordinance dated May 28, 2012 states that instructors at CGETC must engage in their instruction work for more than three years, but many of them are reassigned within half a year to a year. Besides, the database for selecting instructors that the project developed is not in use. It is desired that PCG should secure appropriate serving period for instructors (i.e. more than three years) and repair the database in order to stably provide quality education and training in the future.

It is also desired that JICA should monitor PCG's implementation progress of the aforementioned issues and promote them on a need basis.

Key Point of Evaluation

"Comprehensive support on capacity building and infrastructure"

The government of Japan has been providing PCG with numerous technical cooperation, grant aid assistance, and ODA loan assistance. For instance, "Group Training Courses" (2007-) have annually invited an average of five mid-career or executive officers to Japan and provided them with numerous trainings in the four areas of SAR, ATON, MARPOL/OSC, and MARLEN. Similarly, "Dispatching Experts on Coast Guard Administration" (2003-2006, 2006-2009, and 2009-2012) as well as "Enhancement of Practical Capability for Maritime Law Enforcement Project" (2013-2015) and "Enhancement of Practical Capability for Maritime Law Enforcement Project II" (2016-) have been provided for numerous policy advice and field trainings primarily in the areas of ATON and MARLEN. Therefore, they are considered to be supporting the functions of PCG in the four areas; i.e. SAR, ATON, MARPOL/OSC, and MARLEN.

For grant aid assistance, "The Project for Enhancement of Communications System for Maritime Safety and Security" (2007-2009) developed a communication system connecting PCG HQ and its 10 district offices. "The Project for Enhancement of Coastal Communications Systems" (2014-) has been developing communication systems connecting PCG HQ and its newly established 2 district offices in addition to the 10 district offices. With these projects, PCG is accurately sending and receiving confidential information in greater areas that is necessary for prompt and well-coordinated SAR activities.

The ODA loan assistance, "Maritime Safety Capability Improvement Project for the Philippines Coast Guard" (2013-) is a project that procures 10 multipurpose vessels to cover the shortage of vessels at PCG. With the project, PCG will be able to patrol in greater areas.

As illustrated above, the government of Japan has been providing PCG with comprehensive assistance on both capacity building and infrastructure. It is considered that such synergetic effects have been bringing about realizations of the overall goal of the project, improvement of PCG's capacities to perform its functions.

Socialist Republic of Viet Nam (Technical Cooperation)

Viet Nam – Japan Human Resources Cooperation Center (Phase 2)

Contributing to Vietnam's transition to a market economy as a hub of human resources development in business sector

External Evaluator: Kyoko Harada, Foundation for Advanced Studies on International Development

Overall	
B	
Effectiveness and Impact	3
Relevance	3
Efficiency	2
Sustainability	2

Project Description

Total cost: 1,254million yen

Period of cooperation: September 2005 - August 2010

Partner country's implementing organizations: Ministry of Education and Training
Foreign Trade University (FTU)

The number of experts dispatched: (long term) 18 (short term) 107

The number of technical training participants: Japan 99

Main equipment provided: Audio equipment for training and office machinery etc

Project Objectives

Overall Goal:
To enhance the competitiveness of business and human resources development in Viet Nam in the market economy and to promote for mutual understanding between the Social Republic of Viet Nam and Japan

Project Purpose:
1. The project will strengthen the implementation structure of the Vietnam - Japan Cooperation Center (VJCC) as an institution which provides various high-quality courses and seminars that contribute to enhancement of the competitiveness of business and human resources development in Vietnam and deepen the mutual understanding between the two countries
2. To promote VJCC as a hub that connects other Centers of this kind in the ASEAN member- countries

Output:
1. The management system of VJCC will be strengthened, and it will be managed effectively, efficiently and continuously
2. Business courses will continuously offer practical knowledge and skills pertinent to the market economy. The implementation of the courses will be nationalized gradually
3. Japanese language courses will continuously fulfil the needs of the general public, professionals in business and the public sectors and Japanese language teachers. The implementation of the courses will be nationalized gradually
4. VJCC will become a coordinating body for promoting human network between two countries
5. VJCC will promote regional cooperation in coordination with the Centers. In addition, VJCC will utilize know-how of the Centers for effective and efficient implementation of the activities of VJCC

Vietnam-Japan Human Resources Cooperation Center(VJCC) Ho Chi Minh City (HCMC)

The Keieijuku class at VJCC-HCMC

Production site in which the Kaizen methodology is applied

Effects of Project Implementation (Effectiveness, Impact)

Vietnam-Japan Human Resources Cooperation Centers (hereinafter "VJCC") were established in 2000*1 in Hanoi and Ho Chi Minh City (hereinafter "HCMC"), and provide three main programs, such as (1) business courses, (2) Japanese language courses, and (3) mutual understanding promotion activities. In Phase 2 of this project, the total number of participants for each of the business courses, the Japanese language courses and mutual understanding promotion activities was about 20,000, 10,000 and 100,000, respectively. The business courses, which provide practical methodologies about *"monozukuri"* (manufacturing in Japanese) in both centers, highly satisfied participants who seek a way to improve their production sites or to solve problems on their management. Japanese language courses and mutual understanding promotion activities in both centers also functioned well as a hub of exchanging both countries while the number of Japanese language learners increased and their interest in the Japanese culture in Vietnam grew. These courses and activities have been mainly managed by Vietnamese staff members; therefore, the Project purpose 1 was almost achieved.

As for the Project purpose 2, there were exchange activities recognized, like sharing knowledge and co-organizing seminars with other Japan Centers in ASEAN regions, although they were not planned activities. From this point of view, the Project purpose 2 was partially achieved.

Concerning the overall goal, the graduates of the business courses improved the efficiency and productivities of their work with knowledge they obtained from the courses, and the graduates successfully raise revenues and expand their business by the knowledge. The subsequent phases were implemented, and the accumulated number of participants for each of the business courses, the Japanese language courses and mutual understanding activities was about 44,000, 22,000 and 190,000, respectively. According to those results, the overall goal is almost achieved. As above, the effectiveness/impact of this project is fair.

Relevance

In early 2000s, at which point this project was commenced, the Government of Vietnam targeted industrialization of the country by 2020 in the "Ten-year Socio-Economic Development in Vietnam" (2001-2010). However, there were limited human resources in the business sector who could be company owners or managers on the sites, and it became an urgent issue. In addition, there were few Japanese language institutes in

Number of the participants of each course (Person)

	The total number of participants in Phase 2 (April 2005*2-August 2010)			Accumulated number of participants from Phase1 (September 2000-March 2016)		
	Hanoi	HCMC	Total	Hanoi	HCMC	Total
Business courses	11,711	9,218	20,929	24,009	19,909	43,918
(KEIEIJUKU)	(10)	(6)	(16)	(124)	(93)	(217)
Japanese language course	7,746	4,242	11,988	13,532	8,192	21,724
Exchange activities	73,277	28,109	101,386	133,881	55,718	189,599

Source: VJCC and documents from JICA

Good practices by companies that indicated positive changes among the first Keieijuku graduates (2009)

Company	Kind of business	Type	Number of employees (Persons)		Revenue(Billion VND)	
			2009	2016	2009	2016
A	Spare parts and components production for motorcycles	State	1,000	1,503	460	1,201
B	Precast concrete production	Private	150	350	50	371
C	Toiletry amenities and cosmetics production	Private	60	55	12	N/A
D	Food production and processing	Private	120	200	9	250
E	Optical disk manufacturing	Private	180	200	188	N/A

Source : VJCC, website from each company and interviews at the ex-post evaluation
1Vietnam Don=0.004582 Japanese Yen (As of October, 2016 JICA rate, Source :JICA Homepage)

Vietnam in contrast to the increasing number of Japanese language learners. On the other hand, there was the idea in Japan to establish the Japan Center as the base for training practical human resources, which promotes transitioning to a market economy and networking, and to be recognized as an "aid with a Japanese flag" in Asian and former Soviet Union countries on the way to a market economy. This project was the second phase of the technical cooperation projects in Vietnam and consistent with Japan's ODA policy. Therefore, the project's relevance is high.

Efficiency

VJCC increased the number of business courses and subjects to meet the demand of human resource development in the business sector. Consequently, it increased the number of Japanese experts. For this reason, the project cost is higher than planned (120% of the planned cost) while the period of cooperation was as planned. Thus, the project's efficiency is fair.

Sustainability

No major problems have been observed in the policy and institutional or organizational aspects of the project. In the technical aspect, training for local lecturers has not yet been accelerated in the VJCC since VJCC considers it important that the significant demand for Japanese lecturers is increased among participants who wish to gain knowledge of Japanese-style business from Japanese lecturers. From a financial perspective, though local operation costs are covered by the VJCC's revenue, the support of JICA is still necessary to arrange a certain number of Japanese experts for the time being. Due to the burden of that cost, the sustainability of the project's effects is fair.

Conclusion, Lessons Learned and Recommendations

In light of the above, this project is evaluated as satisfactory. Lessons learned from this project were: The VJCC business courses identified the latest issues and problems of participants' companies and individuals through active hearing or counseling, and modified the actual courses in order to fit the levels of the transitioning market economy. The flexible adjustments based on those needs brought high satisfactory and appreciation to the participants by the time of ex-post evaluation. Particularly in Keieijuku*3, which started in 2009, it matches Vietnam's demands for training executive human resources in the business sector, which were scarce and in high demand. Furthermore, most graduates of Keieijuku were either owners of SMEs or candidates of managers in their companies. Keieijuku-Club, which was started by the graduates, began to establish business networking and organized voluntary study meetings. VJCC also started supporting "follow-up seminars," which provides seminars and company study tours together with Keieijuku Club office in order to promote their activities. VJCC's continuing support for the graduates' network is very useful in terms of promoting business networking in recipient countries, and contributes to maintaining project effects and their enhancement.

*1: The fore phase of this project, "Vietnam-Japan Human Resources Cooperation Center" (2000-2005), and the subsequent phases of this project "Project for Capacity Development of Business Persons through the Vietnam-Japan Human Resources Cooperation Center" (2010-2016) and "Project for Institutional Capacity Development of the VJCC for a Landmark of Development and Networking for Managerial Human Resources" (2016-2021) were implemented. Additionally, facilities of the VJCC were constructed, using Japan's grant aid, in 2002 in Hanoi and Ho Chi Minh City on the site of FTU and FTU Ho Chi Minh City which are implementing agencies of the counterpart country.

*2: The above mentioned number of 2005 may show minor differences from the actual total number during this project (Phase 2) cooperation period (September 2005 to August 2010) since above data of 2005 includes the number in former phase period (from April to August 2005) .

*3: Keieijuku is the comprehensive business course which provides "management strategy," "marketing," "Japanese style *monozukuri*", and "business planning" over a ten-month period. Between 20 and 25 participants are able to enroll. At the beginning, Hanoi was a main venue of the lectures, but from 2014 onward, Keieijuku was opened up in both VJCC-Hanoi and VJCC-HCMC.

Key Point of Evaluation

"Evaluation considers the uniqueness of the Japan Center projects"

The Japan Center projects aim at disseminating the methodologies and know-how of Japanese-style business such as Japanese *monozukuri,* 5S*4 and Kaizen*5. Additionally, the Centers are expected to establish a function for promoting mutual understanding between Japan and the recipient countries, and demonstrate a presence of Japan with continuing support. These are particular features of the Japan Center project.

Considering those features, it was difficult, in a sense, to apply JICA ex post evaluation methodology across the project. In other words, normally JICA technical cooperation projects expect sustainable development of the project by the recipient countries after completion of the project; however, the Japan Center project required special consideration as there is a condition that Japan's support will be long-term. From this point of view, it was necessary to make comprehensive judgements on sustainability, especially in the technical and financial aspects.

*4: A methodology demonstrating sort (Seiri), set in order (Seiton), standardized (Seiketsu), shine (Seiso) and sustain (Shitsuke) with the intent to improve efficiency and eliminate waste.

*5: A series of activities for reviewing work at production sites. Workers at the site actively discuss measure for improvement and address the issues to improve productivities and secure safety. The concept can be applied not only to the manufacturing but also to the service industry.

Mongolia (Grant Aid)

The Project for Improvement of Primary Education facilities (Phase IV) in Mongolia

Improved educational environment of Ulaanbaatar where classrooms were overcrowded due to the population increase

External Evaluator: Ai Ishitobi, Tekizaitekisho LLC

Overall	
A	
Effectiveness and Impact	3
Relevance	3
Efficiency	2
Sustainability	3

Project Description

Grant limit/Actual Grant amount:
3,341 million yen / 2,942 million yen
(The total amount of detail design and main works)

Exchange of notes:
January 2009 (Detailed Design),
August 2009 (Main works)

Project Completion: March 2013

Implementing agency:
Education Department, Ulaanbaatar City Administration

Project Objectives

Overall Goal:
To contribute to the improved access to primary and secondary education and to the provision of quality education in Uaalnbaatar

Project Purpose:
To provide better educational environement by increasing the seating capacity and mitigating the overcrowding in the schools covered by the project

Output:
School facilities, furniture (e.g., desks and chairs) and educational equipment were provided at 12 primary and secondary schools

A new classroom

A new gymnagium (only at newly consturucted schools)

A school constructed by the project (No. 118 school)

Effects of Project Impelementation (Effectiveness, Impact)

By the project that constructed five new primary and secondary schools and expanded school facilities of seven existing primary and secondary schools in Ulaanbaatar, the number of classrooms at the twelve schools covered by the project (hereafter referred to as "the project schools") was increased from 156 at the planning stage to 311 when the project was completed. By this construction, the seating capacity of the project schools was expanded, and the number of students was increased from 13,206 at the planning stage to 19,672 at the time of the ex-post evaluation. At the existing project schools, 15,475 students went to them at the time of the ex-post evaluation. The number of students per classroom at these schools was reduced from 85 at the planning stage to 67 at the time of the ex-post evaluation, which shows mitigation of the overcrowding in these schools. Also at the newly constructed schools, 4,197 students went to them at the time of the ex-post evaluation, and the number of students per classroom was 52. The percentage of triple-shift classes was reduced from 6% at the planning stage to 4 % at the time of the ex-post evaluation.

Students and teachers were highly satisfied with the new educational environments. Over 90% of them responded that they were "very much satisfied" or "satisfied" with new classrooms, and that the spaciousness, brightness and warmness of the classrooms were "improved" or "very much improved" compared with older classrooms. Comments from students and teachers include that "now that I can study in a comfortable environment, I like to study and my academic performance has improved", and "the reduced number of students per classroom enabled us (teachers) to provide students with more detailed instruction". The positive feedback from students and teachers indicate that the project improved students' motivation to study and teachers' motivation to teach and that contributed to provision of effective class sessions and quality education.

In light of the above, this project has largely achieved its planned objectives. Therefore, the effectiveness and impacts of the project are high.

Relevance

The project was in line with the development policy of Mongolia, aiming to improve access to education and provide quality education, as well as Mongolia's urgent development needs for improving the educational environment in order to address the rapid increase in the number of students, due to the population influx to the capital city Ulaanbaatar from rural areas, and Japan's Country Assistance Policy for Mongolia established in November 2004, which designated the strengthening of basic education as a priority subject. Therefore, the relevance of the project is high.

Efficiency

Although the actual project cost came in under budget at 88% of the planned cost, the actual project period was 49.4 months, about 3 months longer than planned, since the planned project period was 46.5 months.

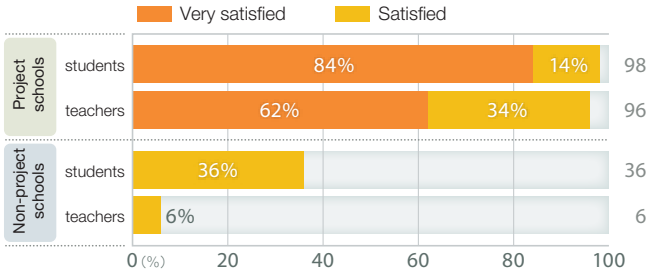
Table 1. Quantitative impacts of the project

	Baseline (2007)	Target (2013)	Actual (2013)	Actual (2015)
	Planning	Completion	Completion	Two years after completion
Number of students at the 12 project schools	13,206	21,770*1	15,577	19,672
Number of students per classroom (The existing project schools)	85	Reduced	56	67
Number of students per classroom (The new project schools)	———	70	34	52

Source: Summarized by the evaluator based on the results of the questionnaire survey, the Basic Design Report and the UBC Education Statistics.

*1: The target value was calculated as twice of the seating capacity (35 students per class) on the assumption that the project schools operate on double shifts.

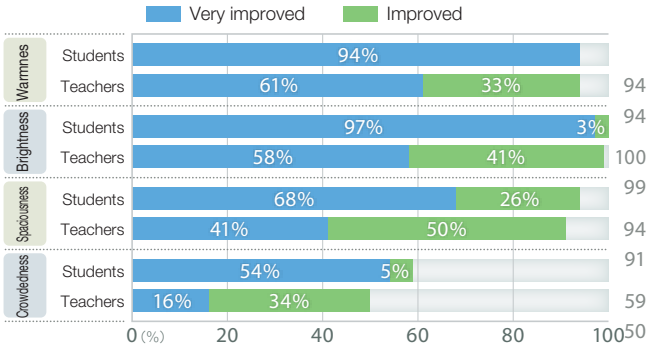
Table 2. Satisfaction level with classroom



Source: Summarized by the evaluator based on the results of the questionnaire survey

Note: At the project schools and the non-project schools, a questionnaire survey, an interview survey and focus group discussion were conducted in December 2015. Numbers of respondents were 76 teachers (19 male and 57 female teachers) and 79 students (33 male and 46 female students) at the project schools, and 24 teachers (5 male and 19 female teachers) and 27 studnets (15 male and 12 female students) at the non-project schools.

Table 3. New classrooms in comparison with old ones



Source: Summarized by the evaluator based on the results of the questionnaire survey

This is because the approval of the detailed project plan by the implementing agency at the detailed planning stage took longer than expected. Therefore the efficiency of the project is fair.

Sustainability

No major problems were observed in the institutional, technical and financial aspects of the operation and maintenance system of the project. School facilities including classrooms, toilets, desks and chairs of the project schools were well taken care of. In order to keep new facilities clean, students change their shoes to slippers or sandals inside the new facilities, which are cleaned by students or cleaners once to three times a day at all the project schools. Moreover, some schools cover desks and chairs with a thick vinyl sheet to protect them from damage. Therefore, the sustainability of the project effects is high.

Conclusion, Lessons Learned and Recommendations

In light of the above, this project is evaluated to be highly satisfactory.

With regard to a recommendation, during the field survey of the evaluation, the project schools expressed their requests to participate in JICA's technical cooperation programs in the field of education as a model school or receive JOCVs (e.g., Japanese language instructor). In addition, the ex-post evaluation report of the *Project for Improvement of Primary Education Facilities (Phase II) in Mongolia* conducted in 2010 introduced a case in which the effective deployment of a JOCV in charge of youth activities at a project school enhanced education at the school. Therefore, in this project as well, it is recommended that JICA maintain ties with the project schools through cooperation such as the deployment of JOCVs, which is expected to produce synergistic effects.

Regarding a lesson learned, since students at the expanded schools with facilities including classroom buildings under the project cannot fully utilize the existing facilities due to the increase in the number of students resulting from the project, many of them requested that their schools be provided with additional facilities and equipment (e.g., a gymnasium and a computer room) equivalent to those at the newly constructed schools under the project. In order to ensure equity among beneficiaries and to maximize the development effect of a project, it is recommended that similar projects in the future take into account the rate of operation at existing facilities and the expected increase in the number of students at existing schools, and reflect the results into a facility plan to ensure the provision of an appropriate educational environment.

Key Point of Evaluation

"Examination of the impacts of the project by comparison"

At the ex-post evaluation, an interview survey about educational environment*2 was conducted with five primary schools in Ulaanbaatar city not covered by the project (hereafter referred to as "non-project schools") in addition to the project schools, in order to assess the impacts of the project by comparison. The survey found that school facilities of the five non-project schools were deteriorated. Besides, the number of students per classroom was over 80 (at most 100) at three out of the five non-project schools, which indicate the classrooms were significantly overcrowded. Moreover, two non-project schools operated on triple-shifts. According to the survey, students at the non-project schools commented that classrooms were too cold for them to concentrate on classes, and dark and humid with mold. Teachers at these schools also commented that (due to triple-shift classes) classes start at 6 pm few days a week, and primary students are already tired by the time and cannot concentrate on classes. Level of satisfaction of teachers and students of the non-project schools with their classrooms were very low, which was contradictory to the result of the project schools (as shown in Table 2). Therefore, the result of this examination implies that the impact of the project on the project schools in terms of improving the educational environment is significant.

*2 The number of respondents was 51 persons (24 teachers and 27 students) in total at the five non-project schools. Since sample size is small and the data is collected only from the five non-project schools that the Ulaanbaatar city chose (not at random) and therefore cannot represent all non-project schools, the data should be used only for reference.

Republic of Guatemala (Grant Aid)

Project for the Promotion of Productive Activities with the Use of Clean Energy in the Northern Villages of the Republic of Guatemala

Contributed to the livelihood improvement of residents living in mountainous areas through electrification using micro hydroelectric power generation

External Evaluator: Hiromi Suzuki S. Global Group 21 Japan, Inc. *1

Overall	
B	
Effectiveness and Impact	3
Relevance	3
Efficiency	2
Sustainability	2

Project Description

Grant limit／Actual Grant amount:
1,003 million yen／1,003 million yen

Exchange of notes: January 2010

Project Completion: March 2014

Implementing agency:
Ministry of Energy and Mines (MEM)

Project Objectives

Overall Goal:
To contribute to the promotion of productive activities and improvement of livelihoods in the poorest area of the Department of Alta Verapaz

Project Purpose:
To improve the access of local residents to electricity

Output:
Micro hydroelectric power plants and distribution facilities are constructed, and technical assistance is provided for the operation and maintenance of these facilities and for the promotion of productive activities using electricity in the following three sites located in the Department of Alta Verapaz: (1) Las Conchas in the city of Chahal, (2) Seasir in the city of Cahabón, (3) Jolom Ijix in the city of Panzós)

*1: Affiliated to IC Net Limited. The evaluator participated in this ex-post evaluation as a reinforcement of Global Group 21 Inc

Power generation facility (Seasir). The penstock entering the facility can be seen in the front

A group of housewives preparing an evening meal under an electric lamp (Las Conchas)

Livelihood improvement: maize flour milling (Las Conchas)

Effects of Project Implementation (Effectiveness, Impact)

The number of households and people electrified in 2012, when the facilities started operation, were a total of 945 households and 4,862 people in the three sites. These continued to increase steadily, reaching a total of 1,155 households and 7,173 people by 2015, exceeding the target. Although the peak load has not reached its target, it is expected that it will increase gradually as the power demand increases from now on. It was recognized that the quality of life is improving as it has become possible to use electric appliances such as electric lamps, TV and refrigerators, with the use of electricity (please refer to "Main ways in which electricity is used at home"). In addition with the use of electric light, it has now become possible to study at night, personal computers have been introduced at schools and classes using these computers are now possible to conduct, showing that effects in the improvement of educational environment are also appearing. Other than this, assistance to productive activities using electricity for groups of women was implemented as a technical assistance of the Project. As a result, 13 groups are active at the time of ex-post evaluation, involving chicken farming, pig farming, maize cultivation and flour milling, thus impact on the livelihood improvement is recognized as well. In addition, through these activities, women acquired knowledge and know-how on productive activities, and at the same time, they have become more confident of their abilities, thus contributing significantly to the empowerment of women.

From the above, since most of the effects planned through the implementation of the Project can be recognized, the effectiveness and impact of the Project are high.

Relevance

The development policies of Guatemala promoted the electrification through construction of independent power supply systems utilizing renewable energy sources in regions that are difficult to reach by extending the power grid. In addition, the electrification rate was the lowest in the poorest region of the Department of Alta Verapaz, and the need to improve the livelihoods through electrification was high. The Project was also in line with Japan's ODA policy of providing assistance to developing countries engaged in the reduction of emissions and other measures to combat climate change, thus the relevance of the Project is high.

Efficiency

The project cost was as planned. The planned project period was 41 months, however, because among other reasons, it took six months to sign the contracts with the procurement agency and the consultant, which were supposed to be signed immediately after signing of the G/A, the actual

Planned and Actual Values of the Operation and Effect Indicators

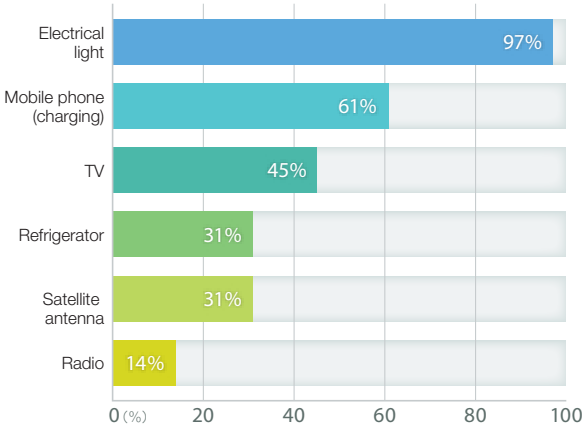
			Target	Actual			
			2016 3 years after project completion	2012 Starting operation of facilities	2013 1 year after starting operations of facilities	2014 2 years after starting operationsof facilities MAIN INDICATORS	2015 3 years after starting operations of facilities*2
1 Total number of electrified households			1,017	945	984	977	1,155
Total number of electrified persons			Approx. 6,200	4,862	5,671	6,279	7,173
Breakdown	Las Conchas	households	416	397	411	424	433
		persons	Approx. 2,500	1,985	2,466	2,968	3,031
	Seasir	households	204	209	218	217	362
		persons	Approx. 1,300	1,250	1,430	1,430	2,200
	Jolom Ijix	households	397	339	355	336	360
		persons	Approx. 2,400	1,627	1,775	1,881	1,942
2 Peak Load (kW)*3			251	81	93	106	125
Breakdown	Las Conchas	(kW)	94	28	32	45	50
	Seasir	(kW)	59	28	32	32	40
	Jolom Ijix	(kW)	98	25	29	29	35

Source: Questionnaire survey and interviews to each of the Development Associations' Electricity Administration Units.

*2: the evaluation was based on the information that could be collected at the moment of the ex-post evaluation which was the actual values for 2015 instead of those of 2016, which was the target year.

*3: the Peak Load target value was set as the same value as the power generation capacity.

Main ways in which electricity is used at home (multiple answers)



Source: Beneficiary Survey

The beneficiary survey was conducted from February 2 to 20, 2016. Sample size was 48 persons at Las Conchas, 51 persons at Seasir, and 51 persons at Jolom Ijix, totalling 150 persons (54% female and 46% male). Sampling was conducted through selecting villages by population distribution and accessibility. As a result, nine villages were selected out of 12 in Las Conchas, all four villages in Seasir, and five villages out of 11 in Jolom Ijix.

project period was 50 months (122% of the planned period). Therefore, the efficiency of the Project is fair.

Sustainability

The maintenance of the power plants and distribution facilities constructed under the Project, and the operation of the electricity business is conducted by the Electricity Administration Units of the Development Associations whose members are the residents and which were established in each site taking the opportunity of the Project. The maintenance status of the facilities in all three sites is good in general. With respect the management of the electricity business, in two of the sites the delinquency rates are high, and in one of the two, the annual balance is in the red for some years, partially having problems in the financial status. Therefore, sustainability of the Project effects is fair.

Conclusion, Lessons Learned and Recommendations

From the above, this Project is evaluated as satisfactory.

In this Project, it was necessary to create an organization in each site that could run the electricity business and conduct the maintenance of the power generation and distribution facilities, in order to electrify small settlements with populations of approximately 1,300 to 2,500 people through independent systems. The Project's characteristic was that a considerably large scale technical assistance (soft component) was conducted compared to other ordinary grant assistance projects. Specifically, in addition to the above mentioned assistance of productive activities for women's groups, it supported the establishment of Development Associations that would manage the electricity business in each site, and it got them to learn through On-the-Job-Trainings (OJT) the technical skills on electricity demand estimation and supply adjustment, electricity tariff setting and collection, financial management and accounting, operation and maintenance of power generation and distribution facilities. In addition, manuals and maintenance record forms among other things were prepared, in order to secure the sustainability of the effects of the technical cooperation. This proved to be effective, and the facilities are generally maintained and operated without problems at the moment of the ex-post evaluation. Depending on the site, there are some problems in the financial and tariff collection aspects, but they are being able to run the electricity business.

It is possible to say that the Project is a case that can be used as reference to other similar projects in the future.

Key Point of Evaluation

"Empowerment of women through assistance of productive activities using electricity"

Through the ex-post evaluation it was possible to find that in order to implement a project for electrification by putting into place an independent system in a region with unfavourable access conditions and secure its sustainability, it is important to meet the following three conditions: (1) the associations of the targeted community residents have a high ownership and can run the electricity business and maintain the facilities by themselves; (2) the residents understand the importance of paying the electricity tariffs and pay the charges without delay; (3) conduct productive activities using electricity, improve the livelihoods and aim for the economic prosperity of the community. With respect to (3), it was a characteristic of this Project that a technical assistance for productive activities using electricity was conducted targeting women. Through the group discussions conducted in the ex-post evaluation, it was recognized that the women's groups understood the resources that each of the communities have and selected productive activities, learned the knowledge and know-how necessary for these activities, and took decisions on how to manage these activities. In addition, it was also found that through these activities, women have attained self-confidence on their own capabilities, that they have learned the will to think and act on their own, and that the majority of men are showing their understanding and are cooperating with the women's productive activities. This Project is a case that contributed to the improvement of women's status and their empowerment in a Mayan society where women are considered to have a low status.

Arab Republic of Egypt (ODA Loan)

Borg El Arab International Airport Modernization Project

Responding to the increasing air traffic demand and contributing to the economic development of the Alexandria governorate.

External Evaluator: Kenichi Inazawa, Octavia Japan Co., Ltd.

Overall	
A	
Effectiveness and Impact	3
Relevance	3
Efficiency	2
Sustainability	3

Project Description

Loan amount / Disbursed amount:
5,732 million yen / 5,718 million yen

Loan agreement: March 2005

Terms and conditions:
Interest rate: 1.5%
Repayment period: 25 years
(grace period: 7 years)

Final disbursement date: September 2013

Executing agency : Egyptian Airports Company

Project Objectives

Overall Goal:
To contribute to the economic development of Alexandria governorate

Project Purpose:
To respond to the increasing air traffic demand and improve services at Borg El Arab Airport

Output:
Construct and expand the passenger and cargo terminal buildings and related facilities at Borg El Arab Airport

Passenger terminal constructed by the project

Inside the passenger terminal building

Check-in counter

Effects of Project Implementation (Effectiveness, Impact)

This project was implemented through constructing and expanding the passenger and cargo terminal buildings and the connecting facilities for Borg El Arab Airport (BeA), in order to respond to the increasing air traffic demand and improve the quality of services.

Because of the increase in Egyptian workers migrating to neighboring countries using Borg El Arab Airport, the number of international passengers significantly increased to 2,358 thousand per year in 2014 (four years after the project completion) as compared to the target of 840 thousand, five years after the project completion. As the number of international passengers increased, the number of international departures and arrivals also exceeded the initial targets. The actual figure for the number of domestic passengers is quite close to the initial target. Although cargo volume temporally decreased due to the influence of the Egyptian revolution (2011), it has been increasing recently. Meanwhile, with regard to degree of this project's contribution for the tourism sector, the overall number of hotels and hotel rooms in the Alexandria Governorate are either stagnating or decreasing, due to the impacts of the Egyptian revolution and the unstable security situation. Thus, the same is presumed for the number of foreigners who stay overnight, and it is concluded that the contribution is not so high, compared with the initial assumption. On the other hand, improvement of convenience at Borg El Arab Airport and airport's services were confirmed through the beneficiary survey. The benefit towards the local economy produced by Egyptians working abroad, who occupy 80-90% of the total airport users, is also confirmed. Thus, effectiveness and impact of this project are high.

Relevance

The government of Egypt has put importance on the development and promotion of the aviation sector both at the time of appraisal as well as at the time of ex-post evaluation. Similar to the time of appraisal, demand for further expansion at Borg El Arab Airport are also high at the time of ex-post evaluation. Furthermore, the project is also in line with the assistance policy of the Japanese government. Therefore, relevance of this project is high.

Efficiency

After the commencement of this project, although the amount of floor space increased as a result of design change of layouts at the passenger terminal building, it was necessary to respond to the increasing number of passengers. As a result of the design change, the project cost was slightly higher than the initial plan, and the project period was also slightly longer. Thus, efficiency of this project is fair.

Sustainability

At the time of ex-post evaluation, there are no particular problems in the institutional and technical aspects of the operation and maintenance of the

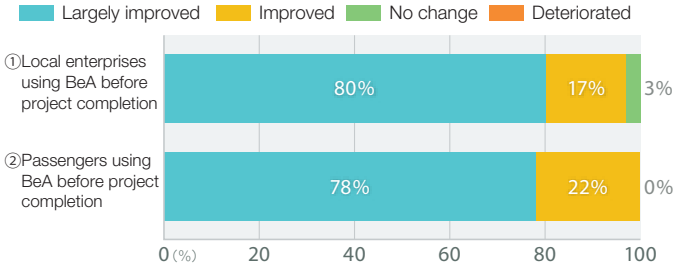
Data on Quantitative Effects of This Project (Figures in brackets are that of El Nouzha Airport*1 at the time of Ex-Post Evaluation.)

Indicator	At Appraisal		At Ex-Post Evaluation				
	2002	2014 (Five Years After Completion)	2005	2010	2012	2013	2014
	Baseline*2	Target	Year of L/A Signing	Year of Completion	Two Years After Completion	Three Years After Completion	Four Years After Completion
1) No. of International Passengers (thousand/yr)	350	840	233 [689]	707 [887]	1,833 [0]	2,118 [0]	2,358 [0]
2) No. of Domestic Passengers (thousand/yr)	90	150	0.6 [40]	3 [85]	127 [44]	133 [36]	137 [25]
3) Cargo Volume (thousand ton/yr)	2	4	N/A [N/A]	5.4 [0]	2.3 [0]	4.9 [0]	6.6 [0]
4) International departures and arrivals (thousand/yr)	4	8	2.3 [6.8]	6.7 [8.6]	17.9 [0]	20.6 [0]	21.0 [0]
5) Domestic departures and arrivals (thousand/yr)	2	1*3	0.057 [1.5]	0.13 [1.8]	2.9 [7.3]	2.6 [6.6]	3.1 [5.0]

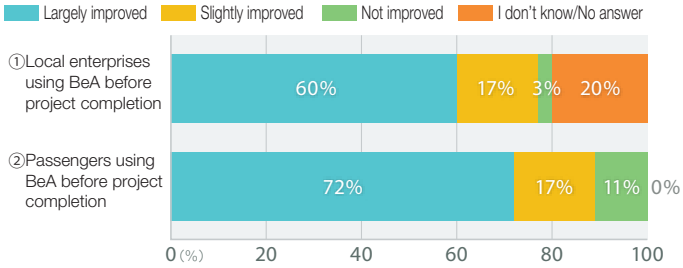
Source: (at the time of appraisal) Document provided by JICA, (at the time of ex-post evaluation) answers to the questionnaires, and the Ministry of Tourism of Egypt.
*1: In Alexandria, El Nouzha Airport and Borg El Arab Airport are operating. Before implementation of this project, passenger terminals were old at El Nouzha Airport and its short airstrip could not accommodate large aircrafts. Moreover, the airport was surrounded by residential buildings and the area is a swampland under sea level, which makes it structurally difficult to expand. Thus, it was presumed that El Nouzha Airport would not be able to respond to the increasing air traffic demands in the future. Cargo aircraft were not landing at the airport and cargo volume was not significant, either. Thus, there was a need to increase the capacity of the passenger and cargo terminals at Borg El Arab Airport, thereby responding to the increase in domestic and international air traffic demands.
*2: The baselines are the sums of Borg El Arab Airport and El Nouzha Airport (however, the cargo volume shows only that of El Nouzha Airport).
*3: It was aimed for domestic departures and arrivals to reduce from two to one thousand. This is because the number of passengers per aircraft was expected to increase as a result of the introduction of large aircrafts.

Result of Beneficiary Survey*4

Do you think that the convenience of Borg El Arab Airport improved from before the completion of this project?



Do you think airport services are better than before the completion of this project?



*4: Target of the beneficiary survey was (1) 30 from local enterprises using Borg El Arab Airport before project completion, and (2) 18 from passengers using the airport before project completion. In total it was 48.

executing agency. The executing agency is also in a good financial situation. In addition, there are no major problems in terms of the operation and maintenance status of the facilities developed by this project. Thus, sustainability of this project is high.

Conclusion, Lessons Learned and Recommendations

In light of the above, this project is evaluated as highly satisfactory.

A lesson learned from this project was that considering assistance regarding improvement of airport services is meaningful for project formulation, in addition to constructing the airport facilities. This is because "Airport Management Training" was conducted as an additional output and many employees working at Borg El Arab Airport participated in the training, and under the increase of departures/arrivals and passengers at the airport, it is thought that such training is contributing to some extent to the improved airport services for the flight check in, passenger guiding and hand luggage inspection, which are day-to-day operation and maintenance works.

With regard to recommendations to the executing agency, considering that the number of passengers is on the increase at Borg El Arab Airport, it is recommended that the executing agency continue to make efforts toward smooth airport operation and improve airport services. In addition, given the loads of luggage left behind at the baggage claim area, it is also considered necessary to take measures to remind passengers arriving at the airport to be aware of their belongings.

Key Point of Evaluation

"Response to passenger demand through development of airport infrastructure and study on its economic impact"

Since the Egyptian revolution in 2011, an increasing number of Egyptians have been working abroad in the gulf countries*5 due to the downturn in domestic economy. Under this circumstance, the number of passengers using Borg El Arab Airport is continuously estimated to be large. The airport has been responding to the increase, since the capacity of structure and facilities at El Nouzha Airport is limited. The government of Egypt is anticipating that the number of passengers at Borg El Arab Airport will continue to increase due to the demand from Low Cost Carriers (LCC). Thus, a request for a succeeding ODA loan project regarding construction of a new terminal building was forwarded to the Japanese government, and its loan agreement was signed in February 2016.

When this project started, it was expected that the number of international passengers and foreign tourists would increase after completion of the project. Although characteristics of the airport users and aspects of the initially anticipated contribution by the project have been different since the completion, it is analyzed that the airport has made migrating for work abroad easier for the Egyptians, and the role to assist the national economy has not changed due to the increase of foreign remittances and household incomes, as a result of constructing an infrastructure such as this project.

*5 According to Egyptian Statistic Agency, CAPMAS, there are about 2.7 million Egyptian migrant workers in the world, of which roughly 1.9 million are in the gulf countries, at the time of ex-post evaluation.

Burkina Faso (Grant Aid)

Project for Rural Water Supply in the Regions of Central Plateau and South Central

Ensuring reliable access to safe drinking water by constructing water supply facilities and developing the operation and maintenance system

External Evaluator: Yasuo Sumita, Global Link Management, Inc.

Overall	
B	
Effectiveness and Impact	3
Relevance	3
Efficiency	2
Sustainability	2

Project Description

Grant limit / Actual Grant amount:
1,459 million yen / 905 million yen

Exchange of notes: June 2009

Project Completion: August 2012

Implementing Agency:
General Directorate of Drinking Water, Ministry of Water and Sanitation

Project Objectives

Overall Goal:
To improve the livelihood environment of the residents in the target areas

Project Purpose:
To ensure reliable access to safe drinking water

Output:
Constructing water supply facilities and developing the operation and maintenance system of the water supply facilities in the target areas*1; three provinces in Central Plateau Region and three provinces in South Central Region

*1 : Central Plateau Region has three provinces, namely, Ganzourgou (8 communes), Kourwéogo (5 communes), and Oubritenga (7 communes) Provinces. South Central Region has three provinces, namely, Bazéga (7 communes), Nahouri (5 communes), and Zoundwéogo (7 communes) Provinces

Deep well with hand-pump facility

Livestock watering hole (spilled water from the pump flows to the hole through the drainage)

Gravel around the well, and hedge to avoid livestock animals (developed by the residents to avoid a mud puddle and scouring)

Effects of Project Impelementation (Effectiveness, Impact)

The project was implemented for the purpose of contributing to the improvement of the livelihood environment of the residents in the target areas in Burkina Faso through improvement of reliable access to safe drinking water by constructing deep wells with hand-pump facilities and developing the operation and maintenance system of the facilities. An increase of 90,000 people or more served by the constructed water supply facilities of the project was confirmed, and the number of facilities operational at the time of ex-post evaluation was 294 (98.3%) among the total of 299. In addition, as qualitative effects, abnormalities and problems relating to water quality were not reported, and the amount of water required by water users was supplied. For the impact, it was confirmed that working hours and school hours increased due to the reduction of water fetching labor by the shortened distance to water facilities and the decreased time to fetch water. The hygienic awareness was disseminated by the hygienic education during the project, and water-borne diseases have been reduced among the water users in the target areas. There was no negative impact on the environment, and the construction of water supply facilities has been carried out with no resettlement. In light of the above, it can be concluded that planned effects were largely achieved. Therefore, the effectiveness and impact of the project are high.

Relevance

At the time of project planning, many people in the rural areas of Burkina Faso had poor access to hygienic drinking water, and also women and children were forced to engage in severe labor of fetching water. There is also a need to keep improving access to safe drinking water in the target areas of the project at the time of ex-post evaluation.

In light of the above, the project has been relevant to the development policies and development needs of Burkina Faso at times of project planning and ex-post evaluation as well as Japan's ODA policy at the time of project planning. Therefore, its relevance is high.

Efficiency

The 299 deep wells with hand-pump facilities were constructed out of the target value of 300. All the activities for the project's capacity building programs were conducted as planned, and items borne by the Burkina Faso side were carried out without problems. Although the project cost was within the plan, the project period was longer than planned. Therefore, efficiency of the project is fair.

Sustainability

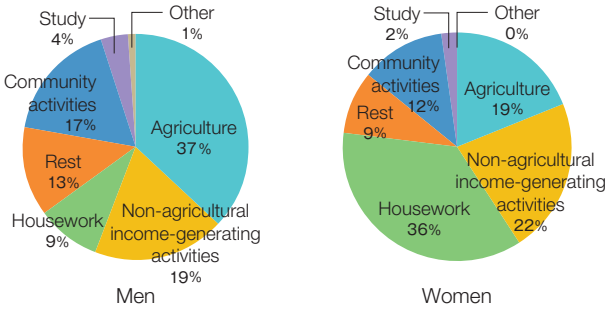
Although the current situation for operation and maintenance of the

Transition of Population Supplied with Water

Name of Indicators		Baseline 2009 Baseline Year	Target 2012 Project Completion	Actual 2010 1st Term Completion	Actual 2011 2nd Term Completion	Actual 2012 3rd Term Completion / Project Completion	Actual 2013 1 year after the Project Completion	Actual 2014 2 years after the Project Completion	Actual 2015 3 years after the Project Completion
Water Supplied Population	Central Plateau	442,448	Not set	454,804	478,357	523,532	537,103	549,490	561,899
	South Central	429,492	Not set	449,050	477,619	527,811	556,717	575,957	608,332
	Total—①	871,940	961,940	903,854	956,156	1,051,343	1,093,820	1,125,447	1,170,231
	Water supplied by AfDB—②*2	———	———	———	———	31,500	———	———	———
	①—②	———	———	———	———	1,019,843	———	———	———

Source: Answers for the questionnaire and interviews of the Implementing Agency
*2: The target region of the project that overlaps with that covered by the assistance by AfDB is South Central Region in 2012 only.

Use of Time Obtained by Shortened Water Fetching Time (Men / Women)



Source: Beneficiary Survey (Multiple answers by 81 men and 119 women who answered "water fetching time was shortened")

Operational Status of the Deep Wells with Hand-pump Facilities Constructed by the Project (2015)

Region	No. of sites	No. of wells in operation	No. of wells out of operation	Operation rate
Central Plateau	128 (including 4 existing wells)	124	4	96.9%
South Central	171	170	1	99.4%
Total	299	294	5	98.3%

Source: Water Supply Sanitation Department, Regional Offices of Central Plateau and South Central

facilities is favorable, the revised operation and maintenance system is ongoing. However, there are differences in the rate of progress in establishing the revised system in each region, and understanding of the residents towards the revised system is not enough. The water sector in Burkina Faso is largely dependent on the funds from development partners. As stated above, some minor problems have been observed in terms of the future system and the financial status. Therefore, the sustainability of the project effect is fair.

Conclusion, Lessons Learned and Recommendations

In light of the above, the project is evaluated to be satisfactory.

As lessons learned, it is mentioned that (1) "Importance of selecting appropriate implementation sites where favorable maintenance will be continued and the operation rate will be high in the future". Evaluation criteria related to the ownership of the resident was used in addition to water source and water quality surveys when the target sites were being short-listed from the candidate sites proposed by the Burkina Faso side. It is considered that keeping maintenance after construction and operation rates in mind, the selection of the sites for implementation as such will lead to the sustainability of the project. It is also important that (2) "appropriate selection of the management entity and implementation of capacity building have contributed to the stable operation and maintenance of the facilities".

As recommendations made to the implementing agency towards the development of the revised operation and maintenance system currently being promoted throughout the country, there are "strengthening of staffs and budget allocation to the responsible administrative agency", "establishment and implementation of appropriate monitoring and evaluation plan", and "formulation of a communication strategy for enlightening people and an advocacy strategy to stakeholders for the importance of water supply system".

Key Point of Evaluation

"Capacity building program focused on the sustainable operation and maintenance system for the constructed water supply facilities"

At the time of project planning, the operation and maintenance system for water facilities has been changed from the previous system to the revised one in accordance with a policy to delegate power to the local authority. The operation and maintenance system used to be carried out by the water facility site committee established for each well; however, the revised system is carried out by water users' association established for each village to manage all the wells within the village. Basically, the revised system was expected to be carried out for all newly costructed wells. On the other hand, in the capacity building program of the project, establishment and organization of a water facility site committee by single well units was supported as in the previous system. The ex-post evaluation tried to examine if it was adequate for the project to stick to the previous system instead of responding to the revised system. The ex-post evaluation found out that the facilities supported in the project have been well maintained and have high operation rates. Therefore, it can be evaluated that the selection of management entity in terms of sustainable operation and maintenance for the constructed water supply facility was the factor that led to the high operation rate. It should be noted that the revised system is being promoted and supported in parallel by a technical cooperation project.

Republic of South Africa (Technical Cooperation)

Capacity Building of Medical Equipment Maintenance and Management in Southern Africa

Inappropriate project plan and revision had a negative impact on the achievement of the project goal.

External Evaluator: Kozue Amemiya, Foundation for Advanced Studies on International Development

Overall	
D	
Effectiveness and Impact	1
Relevance	2
Efficiency	1
Sustainability	2

Project Description

Total cost: 347 million yen

Period of cooperation: June 2009 – March 2013

Partner country's implementing organizations:
National Department of Health
Eastern Cape Department of Health

The number of experts dispatched:
(Long term) 2 Experts
(Short term) 1 Expert

The number of technical training participants:
In Japan: None

Main equipment provided:
Biomedical test equipment, Hand tool for medical equipment maintenance, etc

Project Objectives

Overall Goal:
Good Practice models in South Africa make an impact on the improvement of Medical Equipment Maintenance and Management (hereafter, MEMM) practices in the country

Project Purpose:
A holistic provincial model to improve MEMM is developed, which is applicable to other provinces in South Africa

Output:
Output 1: A MEMM training package is developed in the pilot province based on evidence of the effectiveness of a training package model (Support the establishment of a provincial practical training institute for clinical engineering in the Eastern Cape)
Output 2: The organizational structure of MEMM in the pilot provinces is reinforced (Strengthen HTC function in the Eastern Cape)
Output 3: Enabling environment is prepared to disseminate the MEMM improvement model (Contribute towards the finalization of national standards and its application at provincial level)

Training Center rehabilitated by the Project (Frere Hospital)


Clinical Technicians trained by the Project (Butterworth Hospital)


Biomedical Test Equipment provided by the Project (Frere Hospital)

Effects of Project Implementation (Effectiveness, Impact)

The project was implemented to improve MEMM in the Republic of South Africa (hereinafter South Africa) by providing a holistic model that contains the development of a training system for clinical technicians in order to build the capacity of MEMM and by strengthening the organizational structure for MEMM in Eastern Cape Province, the pilot province, and by utilization of the developed model by other provinces.

Although the training room was renovated, and the training for new staff was conducted by local agents and teaching staff at universities, the training system was not established. Although the District Health Technology Committees (hereafter, DHTCs) were established at six out of seven districts, any DHTCs were not approved by the National Department of Health (hereafter, NDOH). Moreover, the Health Technology Committees (hereafter, HTCs) in the province, in the district and in the institution have not established close coordination with each other. Therefore, strengthening the organizational structure for MEMM was not achieved. Medical equipment inventory was conducted in order to improve the environment to share the model with other provinces, which was also a trial to utilize the computerized maintenance management system (hereafter, CMMS) for medical equipment inventory. However, the inventory was insufficient to meet the objectives, thus the result was not utilized. As mentioned above, each output was not sufficiently achieved and the project planning and approach were not appropriate, therefore an "applicable model" for other provinces could not be established. It was found that the skill for clinical technicians attended the training was improved but to a limited extent. No activities were observed in other provinces after the project completion. In conclusion, it was recognized that the improvement of MEMM was not achieved.

Therefore, the effectiveness and impact of the project are low.

Relevance

The project was consistent with the development policy and development needs of South Africa, the aim of which were to secure health technology and develop human resources. The project's consistency with Japan's ODA policy, which gave priority to capacity development in the

health sector, was also high. However, each output of the revised Project Design Matrix*1 (hereafter, PDM) was inadequate to achieve the project purpose; thus the project plan was not appropriate. Cousequently, the relevance of the project is fair.

Efficiency

The project period was 125% longer than planned and the project cost was 192% higher than planned due to the provision of the test equipment, which was not expected at the time of planning. The equipment provision did not contribute to enhancing expected outcome of the project. Therefore, the efficiency of the project is low.

Sustainability

While sustainability in terms of the policy aspect is high, the financial problems have led to a shortage of human resources because it is difficult to promote employment at NDOH and the Eastern Cape Department of Health (hereafter, ECDOH). The MEMM skills of clinical technicians have not been established because the staff has changed frequently. While the project is sustainable in terms of its financial aspects, there are some problems with the budget allocation. Therefore, the sustainability of the project effects is fair.

Conclusion, Lessons Learned and Recommendations

In light of the above, this project is evaluated to be unsatisfactory.

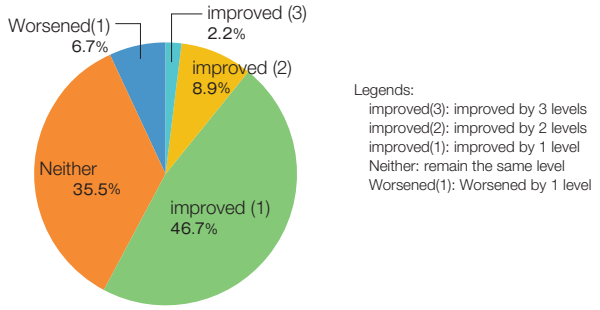
Lessons learned are as follows. (1)As related to the low relevance of project planning and approach, when a project that aims to expand a pilot case to other areas is planned, the possibility of applying the model to other places and ways to expand the model need to be carefully considered at the time of planning, paying attention to the governance structure such as a level of decentralization. (2)As related to the cause of low efficiency, when investment of the additional budgets is considered, it is required to assess whether this input is really necessary for the project in light of the project design and whether the additional input contributes to increasing the project outputs and outcome. (3)When it is difficult to find Japanese experts in certain areas such as MEMM in African countries, hiring a local person with good knowledge of the local situation can be considered so as to contribute to improving smoothness of project implementation and the efficiency of the project. (4)Depending on the situation in the country, the provision of training and the establishment of the management system in collaboration with local agents and manufacturers can be considered effective for the MEMM project.

A recommendation is as follows. It is recommended that not only NDOH and ECDOH but also the health technology sections at the institutions having workshops with several clinical technicians support the department of health in the districts, which do not have any clinical technicians.

*1: PDM is a matrix to show the overview of a project plan, which clarifies the objectives, activities, input, important assumptions, objectively verifiable indicators, etc., and the logical relationships among them.

Comparison of MEMM Before (2008) and After (2013) the Project [n=45]

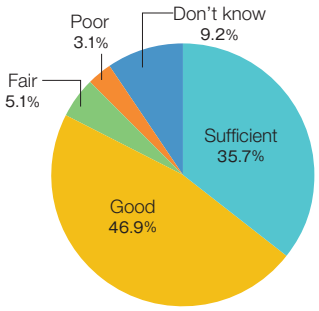
Source: Beneficiary survey



The beneficiary survey was conducted for medical staff who worked at the same pilot institution before (2008) and after (2015) the project. Samples were selected by means of judgment sampling who were introduced by the chief executive officer or chief medical officer at each institution. The sample size was 45 (Doctors 10, Nurses 24, Mid-wives 11 / Male 9 and Female 36).

Technical Level of Knowledge and Practical Skill for Clinical Technicians from the Perspective of Medical Staff such as Doctors, Nurses, and Midwives at the Time of the Ex-post Evaluation [n=98]

Source: Beneficiary survey



The beneficiary survey was conducted for medical staff at the pilot institutions. Samples were selected by means of judgment sampling who were introduced by the chief executive officer or chief medical officer at each institution. The sample size was 105 (Doctors 29, Nurses 50, Mid-wives 26 / Male 22 and Female 83, No answer 7).

Key Point of Evaluation

"Project design in order to expand a model to the whole area in a country promoting decentralization"

At the time of planning, it was noted that the project goal may not have been appropriate for this project with the small amount of resources available. Moreover, the PDM was revised three times during the project period, which set new indicators that corresponded to lower level outputs compared to the planned outputs stated in the initial plan. As the plan was revised to correspond with the situation at the time, the modification is judged to be appropriate. Meanwhile, the revised plan is not appropriate because of a lack of the logical relationship between outputs and the project purpose, which had a negative effect on the achievement of the project purpose.

Causes of this failure are considered as (1) difficulties in spreading the pilot project model to other areas in a country that accelerates decentralization and (2) a lack of the logical relationship in the project plan. The project required to consider the following points in order to avoid the similar failure;

- To involve other areas as well as pilot areas from the time of planning of the project

As for a project that aims to expand a pilot case to the whole area in a country, the project needs to involve the whole area from the time of planning; in particular, a country having a difficulty in expanding the pilot activities at the national level due to decentralization.

- To develop and revise a plan with consideration of the logical relationship

It is a matter of course that the PDM is developed with consideration of the logical relationship at the time of planning, and also, when it is modified to correspond with the situation at that time, it is necessary to confirm whether the logical relationship between the project purpose and outputs is appropriate and relationships among outputs are maintained.

Measures for Projects Cited as Having Issues

La Union Port Development Project — El Salvador

1. Overview of the evaluation results and issues observed

This project constructed the La Union Port in the Gulf of Fonseca in eastern El Salvador to strengthen the port capacity of the country and meet the increased demand for maritime cargo transportation, thereby stimulating the flow of goods and improving its efficiency as well as contributing to the economic development of the eastern region of the nation.

According to the evaluation results, the actual use of the port was very limited at the time of the evaluation. The project partially achieved its objectives, but hardly produced the expected outcomes. These results were attributed to insufficient water depth due to unexpected levels of sedimentation of the berth and access channels. Another reason was that the gantry cranes, which were excluded from the project scope and shifted to the responsibility of the private operator, had not been installed.

2. Recommendations and lessons learned

The Government of El Salvador was recommended to develop clear business policies for La Union and Acajutla so that these mutually complementing ports can fulfill their respective roles. The Autonomous Executive Ports Commission was also recommended to take measures to promote the use of La Union Port (e.g. contracting with a ferry service, continuing maintenance dredging and enhancing dredging capacity to keep the water sufficiently deep and developing an appropriate port operating system). Meanwhile, JICA was recommended to seek action from the El Salvadorian Government and the executing agency to use the outputs of the technical assistance provided in connection with this loan project. The evaluation also drew the following three conclusions: (1) the sedimentation volume should be carefully estimated, as required, at the planning stage; (2) when an important component is excluded from the project scope, a risk assessment and follow-up will be needed; and (3) an alternative operating system should be prepared in the event of failure to conclude a concession agreement.

3. Measures to be taken by JICA department in charge of the project

The Autonomous Executive Ports Commission, the executing agency of this project, has continued to engage in discussions and interviews with private companies to sign a concession agreement. JICA will follow up the progress, including dredging operations and examining the appropriateness of the operating system under consideration, while taking the situation faced by La Union Port fully into account.

Capacity Building of Medical Equipment Maintenance and Management in Southern Africa — South Africa

1. Overview of the evaluation results and issues observed

This project was implemented in the pilot province of Eastern Cape in the Republic of South Africa to develop a holistic model to improve medical equipment maintenance and management (MEMM), including a training package for clinical technicians in charge of MEMM and an improved organizational structure for MEMM, and thereby help to improve national MEMM practices. Although the project design was revised to spread the model nationwide, no indicator for dissemination to other provinces was set for this output in view of difficulty of execution, resulting in a lack of logical coherence between the output and project purpose in the project design. Accordingly, the project effect was evaluated as limited.

2. Recommendations and lessons learned

The evaluation of the project suggested a recommendation to involve the Provincial and District Healthcare Technology Committees, in addition to the Healthcare Technology Management of the Eastern Cape Department of Health, in strengthening the MEMM system of the province. Moreover, the evaluation drew a lesson that when a project aims to develop a model through pilot activities and disseminate it nationwide, due consideration should be given to both the administrative structure and applicability of the model and the dissemination method at the time of ex-ante evaluation.

3. Measures to be taken by JICA department in charge of the project

In FY2016, JICA conducted a follow-up study and decided to support the revision of MEMM manuals and guidelines and the capacity development (training) of those responsible for MEMM. Moreover, JICA will continue to monitor the use of the equipment provided through the project while discussing with the National and Provincial Departments of Health how to optimally exploit the same.

Project for the Construction of the Support Centre for Small Fisheries in Libreville

Gabon

1. Overview of the evaluation results and issues observed

This project developed the Support Centre for Small Fisheries in Libreville (Centre d'Appui à la Pêche Artisanale de Libreville; CAPAL), including a pier and equipment for ice-making and storage, in the capital city of Gabon to integrate existing fish landing sites into the CAPAL and help improve the sanitation and supply chain of marine products. The evaluation results revealed that this newly developed facility was hardly used, and the volume of landings from small-scale fisheries was far smaller than intended. This was because the Government of Gabon had not taken measures as required by the plan, including shutting down existing fish landing sites and constructing a seawall. Another reason was the reluctance of Gabonese artisanal fishermen to use the CAPAL pier due to their unfamiliarity with piers. The evaluation also identified problems with institutional, technical, and financial sustainability.

2. Recommendations and lessons learned

The evaluation suggested actions to address infrastructure and administration issues to promote the use of the facility. The evaluation also drew the following two lessons: (1) continued follow-up is required to ensure the implementation of policy measures that will significantly affect the project activities, such as integrating the existing fish landing sites; and (2) a project plan should take the local natural and cultural environments fully into account.

3. Measures to be taken by JICA department in charge of the project

The actions against infrastructure issues are encouraging the use of the facility. JICA will continue to seek policy actions from the Government of Gabon to promote the effective use of the CAPAL, such as closing existing fish landing sites and using the CAPAL as a basis to improve the fisheries administrative services for artisanal fishermen.

Moreover, when formulating a new project, JICA will carefully define the scope of actions to be taken by the recipient government to achieve the project outcomes and closely examine the feasibility of the actions at the preliminary stage.

Institutional and operational improvements in Grant Aid to ensure the completion of actions assigned to the recipient country's government

Some Grant Aid projects were rated low in terms of effectiveness at their ex-post evaluations. They elicited only small effects and benefits for their beneficiaries and target communities because the delay in preparations by partner countries, such as land acquisition and relocation of gas and water pipes, resulted in the construction of project facilities being postponed or their effects limited. The postponement of projects due to the delay in preparations by the governments of the recipient countries imposed significant cost and time burdens on companies undertaking the projects.

In light of the above-mentioned lessons learned, JICA has started working to improve the project operation mechanism of Grant Aid to ensure that the governments of the recipient countries take the necessary actions. To be more specific, future preparatory surveys will be required to carefully define the scope of actions assigned to the partner country's government, and these actions will be clearly specified as obligations in the grant agreement between JICA and the partner government to ensure the latter regularly reports progress to the former.

Process Analysis

JICA has been trying to find appropriate ways to revisit and deepen analysis on the process through which project outcomes are produced, under the technical guidance of the Advisory Panel on Enhancement of Ex-post Evaluation (see p.7 for more details). We have so far tested this for the projects in India and Kenya on which we applied different analytical approaches. One of them is the "project ethnography" approach. This is a method used to document the implementation process of a development project referring to Ethnography; a method used in anthropology to record findings from the field studies. The "project ethnography" approach involves the reconstruction of "realities of the ground" from diverse perspectives; not only those of project beneficiaries but also various other stakeholders, including donors, and describes the findings in a narrative style. It helps readers to vicariously experience what happened on the ground and to learn practical lessons by themselves.

Hereafter we shed light on the case of "The Delhi Mass Rapid Transport System Project" in India, one of the examples of process analysis using the "project ethnography" approach. To highlight the process of project implementation for the purpose of learning has been a global trend and a shared interest among donor agencies, as exemplified by the Global Delivery Initiative (GDI)*1 led by the World Bank. Our initiatives with Advisory Panel on Enhancement of Ex-post Evaluation also respond to such orientation.

List of Members of the Advisory Panel on Enhancement of Ex-post Evaluation (in alphabetical order)

Hiroshi Sato	Chief Senior Researcher Institute of Developing Economies, Japan External Trade Organization
Yasuko Matsumi*2	JICA Expert Egypt-Japan University for Science and Technology (E-Just) Phase II (Technical Cooperation)
Yuriko MInamoto	Professor Graduate School of Governance Studies, Meiji University

Process Analysis: Target Projects

	[India] Delhi Mass Rapid Transport System Project	[Kenya] Strengthening Management for Health in Nyanza Province
Scheme	ODA Loans	Technical Cooperation
Sector	Transportation	Health
Cooperation period	February 1997 to present	July 2009 to June 2013

*1: The GDI is a knowledge platform for the international development community. It is an initiative led by the World Bank and participated by the United Nations Development Programme and other multilateral and bilateral donors as well as development research institutions to share the results of systematic analyses focusing on what works, as well as why and how. To be more specific, this initiative aims to classify challenges when implementing development projects ("delivery challenges"), systemize the knowledge required to address such challenges and share it alongside information on personal networks that can help solve them so that development practitioners can access useful knowledge and experts on a timely basis to improve their project implementation.

*2: The JICA Research Institute (JICA-RI) publishes the series of "Project History" comprising books that review JICA projects to analyze their processes and results. Ms. Matsumi has authored one of the books in this series: *Will the Forests Disappear?: A Record of People Devoted to Protecting the Last Remaining Virgin Forest in Ethiopia*. This book uses the "project ethnography" approach to narrate the field-level experience of trials and errors as well as challenges in the Participatory Forest Management Project in Belete-Gera Regional Forest Priority Area (2003-2012; Technical Cooperation).

Process Analysis on "Delhi Mass Rapid Transport System Project" in India

The Delhi Mass Rapid Transport System Project (also known as the Delhi Metro project) in India is noted as one of the most successful ODA projects. This fiscal year, JICA conducted a process analysis focusing on the implementation stage of the project, in addition to the ex-post evaluation of the project (phase 2). We introduced the project ethnography approach to this exercise that involves interviews with a wide range of project stakeholders and collected information on various episodes that we could not pick up through the ex-post evaluation based on the Five DAC Criteria. These episodes reveal the difficulties faced by those involved in the project, the ingenious contrivances to which they resorted and the impacts the project achieved. We present the findings in a storyline so that each reader can draw lessons of their own.

Following are the table of contents and excerpts from the report "Breaking Ground- A Narrative on the Making of Delhi Metro." This narrative inspires readers to ask themselves the following questions: What did leadership mean to the Delhi Metro project? What shortened the construction period for Delhi Metro and enabled an earlier start of operation than planned, while those large-scale infrastructure projects tend to be delayed in India? What are the lessons learned from the Calcutta Metro project which is allegedly an unsuccessful case? What transformation is taking place in the life of Delhi citizens?

Table of Content

Diversion of Utilities: Yumiko Onishi, IC-Net Limited

There were quite a few things that the Delhi Metro project learned to tackle correctly after the agonizing experience in making the Calcutta Metro. Ask any Kolkata resident about those years and they would roll their eyes before describing their ordeal. Take for example, Anisha's mother who grew up with two younger brothers lived in Kolkata until the 1980s. Once the works on the Calcutta Metro started in bits and pieces along the whole stretch, the dug up earth divided the city into half, literally. Her mother would describe it as "Kolkata's open heart surgery." Unfortunately for Kolkata, there was no tunnel boring machine in those days that allowed the contractors to make one big hole in the ground, instead of digging up the entire stretch of the metro corridor, through which a humongous excavation machine would be lowered for boring underground. Technological advancement over the years benefitted the Delhi Metro immensely by reducing public inconvenience.

"We had to walk on wooden planks to cross ditches," said Anisha's mother, remembering the way she had to reach school pulling the hands of her younger siblings. Part of the reason why people were put through such a testing experience was the shifting of underground utilities. To build underground sections of the metro, the ground had to be excavated. Before one could go deeper, there would be a complicated network of water supply and sewerage pipes that needed to be shifted out of the way. Other government agencies in charge of these utilities had to be roped in before Metro Railway Calcutta (the metro project implementing agency, now Kolkata Metro Rail Corporation) could get their hands to it. In some cases, these other agencies were reluctant in such a manner that gaps were left in the ground so as not to actually shift the utilities. Coordination among multiple agencies has never been an easy task in India. While the metro agency had its own timelines, the others worked at their own pace causing inordinate delays.

Engineers at DMRC were well aware of the fallouts from the Calcutta experience. The current managing director, Mangu Singh, had worked on the Calcutta Metro project in the past. It was based on this experience that Sreedharan insisted Mangu Singh to join DMRC. Waiting for someone else who had no stake in the project would not yield fruit. Instead of requesting the utility owning agencies to shift the pipes and wires, DMRC decided to take the responsibility upon themselves. Singh recollects how other agencies initially resisted this new found idea. Afterall, it is their property, their territory and they had their own traditional way of working things.

After much persuasion a compromise was reached. The fact that DMRC was staffed by Indian Railways engineers helped convince the other agencies. DMRC would be in control of the diversion work, but would involve the other agencies in preparation of detailed drawings and approvals would be sought from them. During the execution, if they so desired, they could supervise the works. Besides, the contractors who were experienced with other agencies would be used. To make things smooth, DMRC at times recruited retired personnel from utility owning agencies who would liaise with their old colleagues. This way, civil contractors of Delhi Metro would not suffer, by having their machines lying idle on the side, waiting for the utility diversion to be implemented.

The benefit of shifting utilities on their own not only advanced the speed of work, this way, DMRC could make sure that the public would be least disturbed. The first few instances, where the utility owning agencies agreed, were used to demonstrate the capability of DMRC. Having directly witnessed DMRC's competence, other agencies too gained confidence in DMRC. In one instance, a 1.2 m water main needed to be diverted. It was supplying water to 500,000 people. Where the water supply agency would normally take 48 hours to complete a similar undertaking, DMRC did it in 12 hours. The motivation behind was fairly simple: on the account of Delhi Metro work, people should not be inconvenienced.

Assembling of a tunnel boring machine

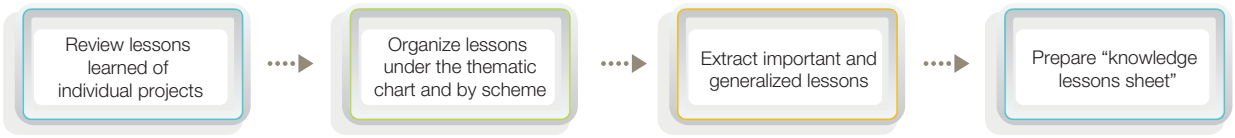
A Challenge to ODA Project Ethnography: Hiroshi Sato, Institute of Developing Economies, Japan External Trade Organization (IDE-JETRO)

As an ODA implementing agency, JICA not only undertakes various projects in developing countries to alleviate global poverty and ensure universal human security but also strives to fulfill its accountability to taxpayers and increase its presence in the international development community. It is important for JICA to evaluate its projects to confirm whether they were really effective. Even so, some say that evaluation reports are considered "boring" and "rarely read." While such comments are unavoidable to some extent, it is nevertheless regrettable that many impressive episodes that describe how Japan's ODA has contributed remain unknown to many in Japan and the recipient countries. One good example is the Delhi Metro project.

JICA newly adopted the "ethnography" approach, often used in cultural anthropology. The analysis through this approach itself was a new "project" for JICA. How did readers perceive this report? One may not find it to be an evaluation report, but rather a novel. The report may also receive criticism from those who stress upon evidence/science-based evaluations. However, no matter how rigorously one quests for objectivity using numerical evidence, there are stories that a third-person cannot tell. The very "stories" have the power and resonate in the heart of people who wish to assist developing countries. I hope more and more people will ask for ODA project ethnography and an ambitious attempt of this kind will continue in the future.

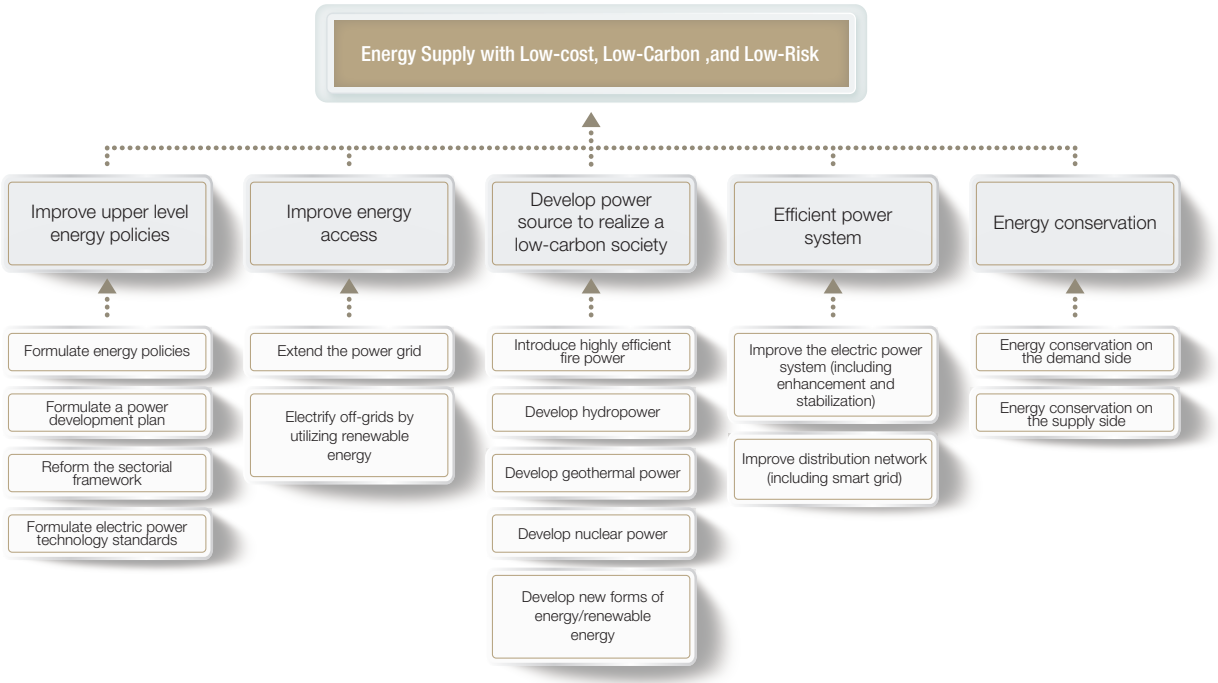
Meta-Analysis of Lessons Learned
~ Extraction of practical lessons for the energy sector ~

In FY2016, JICA conducted meta-analysis (to extract "knowledge lessons") in the energy sector via the flow shown below. First, the Industrial Development and Public Policy Department of JICA played a central role in selecting around 400 projects implemented under three assistance schemes (Technical Cooperation, ODA Loans and Grant Aid). Subsequently, we analyzed lessons learned from the projects under each scheme based on a schematic diagram of the development issues. This analysis underwent a total of four taskforce meegings; consisting of evaluation consultants, staff from the Industrial Development and Public Policy Department and Evaluation Department. Eventually, through the scrutiny of sector experts who used to have engaged in the JICA projects in the energy sector, 19 lessons were extracted as follows:



Flow of extracting lessons

In creating the "knowledge lessons sheets" for the energy sector, we revised the format by adding fields to show the applicable schemes and stages for each knowledge lesson, based on the comments from the oparational department who would be the main user, so as to ensure users would easily recognize an appropriate schems and timing to apply. It is expected these improvements will help facilitate smooth browsing of the knowledge lessons through sorting them by the schemes and stages, thus boosting the further utilization of knowledge lessons.



Reference: Schematic diagram of the development issues

Source: JICA's Strategy Paper for Energy Sector, May 2013

Results of Meta-Analysis in the Energy Sector

A total of 19 knowledge lessons sheets were developed through extracting lessons learned from Technical Cooperation, ODA Loan and Grant Aid projects. Specific considerations and countermeasures were suggested for each lesson as shown in the following examples

List of Titles

Lesson	Title
1	Confirmation of institutional framework and responsibility of implementing agency
2	Common understanding and construction of a cooperative system among multiple stakeholders in the partner country
3	Appropriate project design and monitoring
4	Confirmation of legal framework on energy conservation, technical standards on electric power facilities
5	Smooth implementation of technical cooperation by contracted consultant team
6	Timely procurement of equipment for training and research
7	Provision of incentives to trainees of training program
8	Coordination between ODA Loan, Grant Aid, Technical Cooperation and training programs etc. (Continuous assistance)
9	Step by step assistance with clear priority to country under rebuilding
10	Timely implementation of input of the Executing Agency

Lesson	Title
11	Consistency between preparation of up to downstream facilities in the grid
12	Scheduling to avoid delay
13	Preliminary analyses—risk assessment and examination of alternatives
14	Prior written agreement on important matters in project implementation
15	Secure stable supply of inexpensive fuel
16	Risk hedge of private investment part and promotion of private investment
17	Effective rural electrification and small-scale decentralized sub-projects
18	Effective countermeasures for environmental and social consideration
19	Consistency and synergy with related development projects including these other than energy

Examples of Lessons Learned

Lesson 1	Confirmation of institutional framework and responsibility of the implementing agency
Applicable cases	All projects
Risks	The institutional framework and responsibility of the regulatory institution may not be clearly defined in countries where power sector reform such as debundling of electric power sector was implemented. There is possibility that the institutional framework in charge of power development planning and supervising the implementation of the plan may not be clear, even after establishing the regulatory institution.
Possible measures to be taken	○ JICA should identify the institution in charge of power development planning and managing the plan. ○ JICA conducts a sector survey to confirm the institutional framework and its capacity, if JICA did not identify such institution.

Lesson 4	Confirmation of legal framework on energy conservation, technical standards on electric power facilities
Applicable cases	Technical cooperation projects on establishment of legal framework of energy conservation and technical standards on electric power supply and enhancement of executing the legal framework.
Risks	○ Energy conservation measures are not effectively executed without a legal framework. ○ It is difficult to decide the exact project schedule since developing the legal framework is dependent on the political situation and coordination among stakeholders in the host country
Possible measures to be taken	○ JICA needs to consider necessary amendments to the scope and schedule of technical cooperation project flexibly to respond on a timely basis to progress in establishing the legal framework in case of a technical cooperation project to assist with this. ○ To provide a technical cooperation project to respond to progress in establishing the legal framework, JICA needs to consider the timely provision of such technical cooperation projects in a step-by-step manner following progress made in the same area. ○ JICA should consider including the establishment of a legal framework of technical standards on electric power supply as a project indicator as much as possible since further effective dissemination of the standards is expected once the standards become mandatory by law.

Lesson 11	Consistency between preparation of up to downstream facilities in the grid
Applicable cases	All financial assistance projects
Risks	In countries and regions where the power generation capacity is insufficient, even if the power development plan, including the transmission and distribution network of the relevant country, have been thoroughly confirmed at the prior investigation stage, the following risks are considered: ○ Even if the rural electrification project is implemented by extending the grid, sufficient power supply will not be carried out due to delays in power development. ○ Electric power supply does not improve, even if the power generation capacity is strengthened due to delays in extending the grid.
Possible measures to be taken	○ Prior to financial cooperation to improve transmission and distribution networks in countries or regions where power generation capacity is insufficient absolutely, JICA needs to confirm future prospects, including progress of power development and funding and determine whether to provide grants/loans. In countries where the power generation heavily depends on Independent Power Producers (IPPs), there is a possibility of increased uncertainty, so the connection plan to the power plant concerned must be sufficiently confirmed. ○ In the power plant and substation construction projects, JICA should confirm the construction schedule of the transmission lines connecting these facilities and support construction as necessary. ○ In the project to construct substations and high-voltage transmission lines, JICA should confirm the status of the distribution network.

Lesson 15	Secure stable supply of inexpensive fuel
Applicable cases	Energy supply facilities projects requiring fuel and raw materials (esp., oil, gas and biomass)
Risks	○ There is a risk that the facility cannot operate as expected unless a sufficient supply of fuel (at a price within a range where profitability is feasible) is made, including unforeseen circumstances.
Possible measures to be taken	○ Carefully analyze the risk analysis of fuel supply as much as possible. If uncertainty still cannot be eliminated, JICA may consider design changes to the dual fuel type* as well as the possibility of abandoning the project. ○ In anticipation of unforeseen circumstances, take risk measures such as concluding a long-term contract on fuel supply as a prerequisite for implementing the main project, or as a condition for bid/contract consent in the project implementation. ○ Encourage the Executing Agency to undertake cross-sectoral and comprehensive risk analysis. *Specifications that can use multiple fuels such as natural gas and crude oil for power generation

JICA's Efforts in Promoting Impact Evaluation

Aiming to further enhance the effectiveness and quality of projects, JICA has been promoting evidence-based practice as well as the implementation of impact evaluation as a major tool for this purpose. Such evaluation is required to assess the effects accurately, especially when a project has little evidence for its effects or when a project is to be scaled up.

Because statistical and econometric methods are used for impact evaluation, a certain degree of understanding of these methods is required to plan and implement the evaluation and utilize its results. Accordingly, JICA has implemented capacity building for evaluators through several training programs.

In those circumstances, the number of projects and sectors covered by JICA' s impact evaluation has been expanding every year. The JICA Research Institute, Evaluation Department, and operational departments have conducted impact evaluations in such sectors as health, education, and infrastructure.

Example 1. The Skills Training and Job Obtainment Support for Social Participation of Ex-Combatants and Other People with Disabilities in Rwanda

A Quantitative Evaluation of the Impact on Progress in Social Integration and Reconciliation

After the long-lasting civil war at an end, the genocide in 1994 and having resolved its conflicts with the Democratic Republic of the Congo and other neighboring countries, Rwanda faced urgent issues such as the demobilization and reintegration of soldiers. The situation was more severe for those injured in the conflicts, since all the support they could get was limited to medical assistance and rehabilitation equipment. In response, JICA launched a three-year technical cooperation project for the Skills Training and Job Obtainment Support for Social Participation of Ex-Combatants and Other People with Disabilities (hereinafter referred to as "this project") in March 2011 to promote the social integration of demobilized soldiers with disabilities. This project provided skills training for ex-combatants and civilians with disabilities, organized training for Skills Training Center staff and installed barrier-free facilities at the Skills Training Center.

This project was also characterized by its vocational training arrangements. Those demobilized from the Rwandan Defense Force, participated in the training for about six months alongside those from the former Armed Forces of Rwanda that had lasted until 1994, those from the armed groups that had operated outside the country after 1994 and civilians with disabilities. The training results showed, along with several episodes, that not only had it improved the livelihoods of the participants but also contributed unexpectedly to reducing stigma, enhancing mutual understanding between ex-combatants and civilians, and reconciliation. To assess these impacts quantitatively, JICA proceeded to undertake an impact evaluation.

While incomes and employment can be measured rather easily, it is difficult to quantify the changes in mental attitudes of people, such as a sense of discrimination and feelings toward one another. To account for this challenge, outcome indicators were assessed using the item count technique as one of the indirect survey techniques*1, as well as applying social psychological approach. The evaluation exploits the fact that the trainees were selected based on their screening test results in regression discontinuity design*2 to estimate causal impact of receiving the skills training on these diverse indicators.

The results of the statistical analysis revealed that the skills training had positive impacts on incomes and employment. Moreover, item count technique showed that the percentage of trainees who would feel upset if the former Armed Forces of Rwanda moved to their neighborhood had halved, from 40% to 20% compared to the non-trainees. Although the ex-combatants and civilians who participated in the skills training were both disabled but had very different social backgrounds, training that required them to work side by side by assigning collaborative activities succeeded not only in increasing their incomes but also in changing their attitudes. When considering the complicated historical background of Rwanda, the significance of this impact is clear.

The impact of vocational training on people with disabilities has rarely been evaluated worldwide; therefore, this impact evaluation provided valuable evidence. Moreover, the results also offered significant insights into peacebuilding assistance amid a post-conflict situation where ethnic issues remain unresolved.

*1: When answering sensitive issues such as moral and ethical attitudes and feelings, some respondents may hesitate to give truthful answers. Some may lie or say what they are expected to say. The item count technique uses a questionnaire designed to elicit the necessary information while allowing respondents to conceal their true thoughts.

*2: In regression discontinuity design, beneficiaries and non-beneficiaries near the cutoff are compared to estimate the causal effect of a project when beneficiaries of the project are selected on the basis of whether their score is above or below a cutoff clearly defined by external rules.

Example 2. Project for Enhancing Access and Capacity of EQUITV Program (Phases 1 and 2) in Papua New Guinea

An Analysis of the Impact of the Program Using ICT on Students' Learning

As an archipelagic country comprising nearly 10,000 islands, Papua New Guinea was faced with a shortage of schools and teachers in quantity and quality, particularly in remote areas. To deal with this, JICA launched two Technical Cooperation projects, the Project for Enhancing Quality in Teaching through TV Program and the Project for Enhancing Access and Capacity of EQUITV Program, in December 2006 and April 2012, respectively (hereinafter collectively referred to as "these projects"). These projects developed a video program on mathematics and science for grades 7 and 8 at primary schools (hereinafter referred to as the "EQUITV Program") and aired it on TV or distributed its DVDs to schools.

These projects were highly appreciated by the Government of Papua New Guinea and teachers cited its positive impact on pupils' understanding. Nevertheless, many schools have not adopted the EQUITV Program due to the lack of TVs. Accordingly, JICA decided to evaluate the impact of the EQUITV Program to encourage more schools to install TVs and adopt the program.

The impact evaluation used the fixed effects model*3 to compare improvements in students' learning between the intervention group (schools having adopted the EQUITV Program between 2012 and 2014) and the control group (schools that had not done so). The comparison was made using administrative data (completion exam ("Grade 8 National Exams") results, sex and age) on students in grade 8 between 2011 and 2014 (the students were replaced yearly). Since four years of data were available, the impact of the EQUITV Program was compared between three school groups who had taken the EQUITV method for one, two and three years, respectively.

The results showed that the students at schools who had taken the EQUITV Program for three years tended to perform better in the completion exam*4. The evaluation results also suggested that the more frequently per year the EQUITV Program was used, the greater impact it had on students' performance. These results will be shared with the Government of Papua New Guinea and are expected to encourage schools and communities to adopt the EQUITV Program.

*3: The introduction of EQUITV Program is not randomly assigned but chosen by each school. Therefore, in order to minimize potential biases school fixed effects are added to control each school's characteristics (including unobservable characteristics) that remained unchanged over time.

*4: All the intervention groups tended to get higher scores, regardless of the number of years they had taken the program. In most of the subjects (mathematics, integrated studies and English), however, a statistically significant difference (a 95% level) only emerged among the schools who had taken the EQUITV method for three years.

Presentation on JICA's Impact Evaluations at the Japan Evaluation Society

The Japan Evaluation Society held its 17th annual conference at Hiroshima University from November 26 to 27, 2016. At the conference, JICA organized a session to present its evaluation practices.

The presentation in the session gave an overview of ex-post evaluations JICA had conducted as well as various efforts it had made to improve its evaluation system. Subsequently, the presentation suggested future potential to conduct impact evaluation based on existing data ("real world evaluation") by reviewing recent trends in ever-diversifying evaluation approaches and referring to a case study (See "Example 2. Project for Enhancing Access and Capacity of EQUITV Program in Papua New Guinea). Although an impact evaluation may be costly and time-consuming for those needing to collect data alone, the cost and time can be reduced by using existing data (e.g. data collected by governments or monitoring ongoing projects). Accordingly, JICA will continue considering the active use of existing data for impact evaluations.

This session was attended by about 30 people (including presenters) engaged in evaluation and/or international development cooperation. The participants discussed various topics, such as the nature of the ideal evaluation model and how JICA can strengthen its evaluation system.

Presentation at the Conference of Japan Evaluation Society

Statistical Analysis on External Evaluations

Since FY2014, JICA has been engaging in statistical analysis of external evaluations to grasp the trends in performance of projects and gain insights from the ratings to improve project design and implementation.

1. An Overview of the Statistical Analysis

Background

Since FY2009, JICA has conducted ex-post evaluations based on coherent methodologies and criteria, including the Five OECD-DAC Criteria, for all the three assistance schemes of Technical Cooperation, ODA Loan, and Grant Aid. As of FY2015, the number of external evaluations in the meantime reached 923 (refer to p.9 for the rating criteria, main examination items, and rating flowchart for external evaluation).

Objectives

This statistical analysis aimed to analyze the past external evaluations (quantitatively and qualitatively) to understand their trends and gain insights to improve project design and implementation.

Subject of this statistical analysis

This statistical analysis was conducted on 923 external evaluations, consisting of evaluations on projects in all three schemes from FY2009 to FY2015*1 and those of ODA Loans from FY2003 to FY2008*2 (i.e. 117 Technical Cooperation, 186 Grant Aid and 620 ODA loan projects).

Method

The analysis of the trend and distribution of external evaluation results (overall ratings and sub-ratings based on the Five DAC Criteria) was conducted on a total of 923 projects across the three schemes. (Quantitative analysis (descriptive statistics))

* Following FY2015, hypotheses on factors that may influence evaluation results (qualitative analysis (multivariate analysis) is currently being further verified by adding more hypotheses for the analysis.

Notes

The rating system is a useful tool to assess the performance of development projects and provide hints that helps understand the current situation and ways for improvement. This system is, however, subject to the following constraints: (1) it limits the assessment to the scope of the DAC evaluation Criteria (for example, it does not evaluate aspects like contribution of the donor); (2) it cannot fully capture the different difficulties the project faced, such as the nature of assistance (e.g. necessity of innovations) and project environments (e.g. vulnerability of the recipient country); and (3) it only assesses the results of past activities but does not evaluate the ongoing activities or their future (potential) outputs. Therefore, it should be noted that the rating results do not represent a comprehensive outcome of the development projects. In addition, ODA Loans include Yen Loan and Private Sector Investment Finance, although projects under the latter finance have not yet reached the timing for evaluation. Therefore, it should also be noted that ODA Loans referred to in this analysis mean Yen Loans.

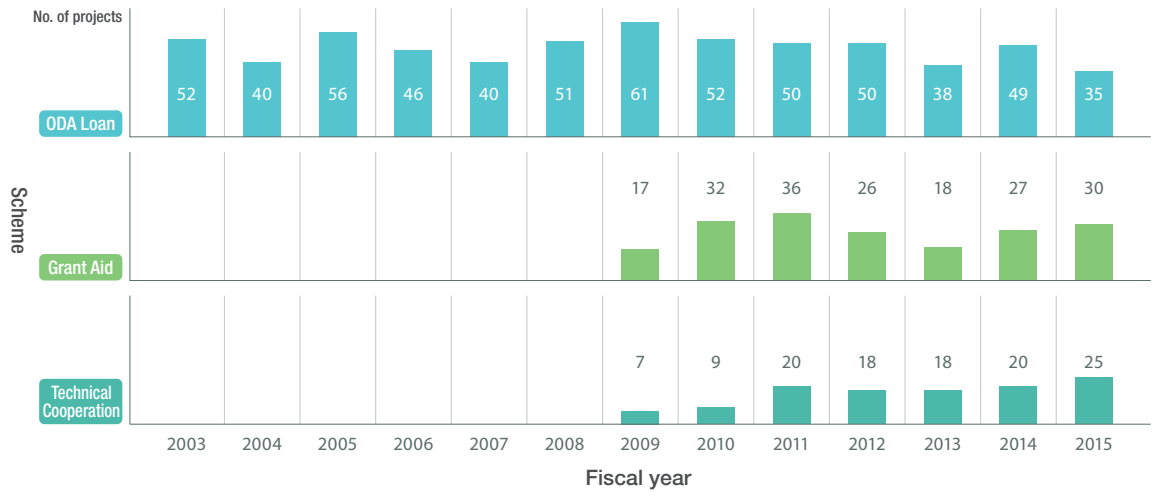
*1: External evaluation target projects with assistance of one billion yen or more and those likely to provide useful lessons learned.
*2: For the ex-post evaluations of ODA Loans conducted by the former Japan Bank for International Cooperation, those with ratings were covered in this analysis.

2. Analysis Results (Descriptive Statistics): Trends and Distributions of External Evaluation

Number of evaluation

The rating system was first adopted for the external evaluation of ODA Loans in FY2003. During the 13 years up to FY 2015, a total of 620 projects (an average of 48 per year) were evaluated. The same evaluation system was introduced to Grant Aid and Technical Cooperation projects from FY2009. To date, a total of 186 Grant Aid projects (an average of 27 per year) and a total of 117 Technical Cooperation projects (an average of 17 per year) were evaluated. The ratio of external evaluations for ODA Loan, Grant Aid, and Technical Cooperation is 67:20:13, respectively.

<Figure 1> Transition in the Number of External Evaluations per Fiscal Year by Scheme



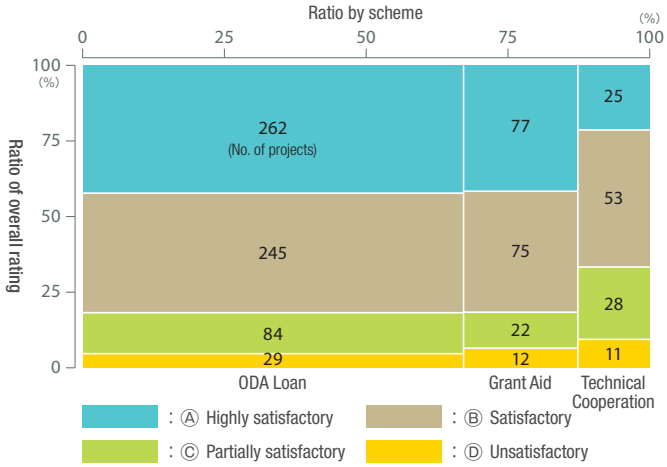
Rating Results

Figure 2 is a mosaic profit of the results for overall ratings per scheme. The vertical axis represents the share for each rating, and the horizontal axis the share for each scheme. The figures in the figure show the corresponding number of external evaluations. The width of each column indicates the proportion of the number of ex-post evaluations corresponding to the scheme (for example, that of ODA Loan is the widest and that of Technical Cooperation is the narrowest). The yellow boxes for all three schemes are small, indicating that only a few projects received a rating of "D: unsatisfactory." Figures 3 to 6 also show results for each evaluation criteria in the mosaic profit form.

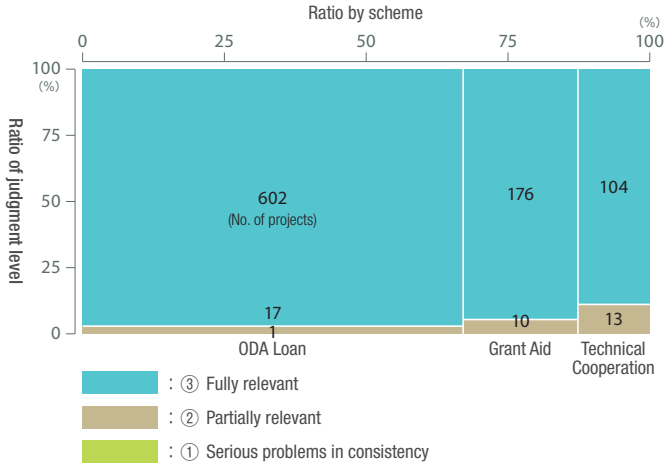
Specific differences among the schemes indicated by these mosaic profits are: efficiency shows the smallest proportion of projects rated ③ in ODA Loan; and sustainability shows a relatively smaller proportion of projects rated ③ in Grant Aid and Technical Cooperation.

Efficiency is evaluated by comparing the actual results against the planned project duration and cost. The duration of ODA Loans tend to be extended since the responsibility of the recipient country such as land acquisition is often included in its evaluation scope. Meanwhile, the sustainability of Grant Aid is shown to be lower than that of ODA Loan because countries receiving Grant Aid tend to have limited technical and financial capacity than those eligible for ODA Loan. A common trend for Technical Cooperation projects can be seen in effectiveness/impact with relatively smaller proportion of ③ ratings. This can be partly explained by the fact that capacity development of human resources or organization is set as the project goal in many Technical Cooperation projects, but there is difficulty in retaining and disseminating their effects after project completion.

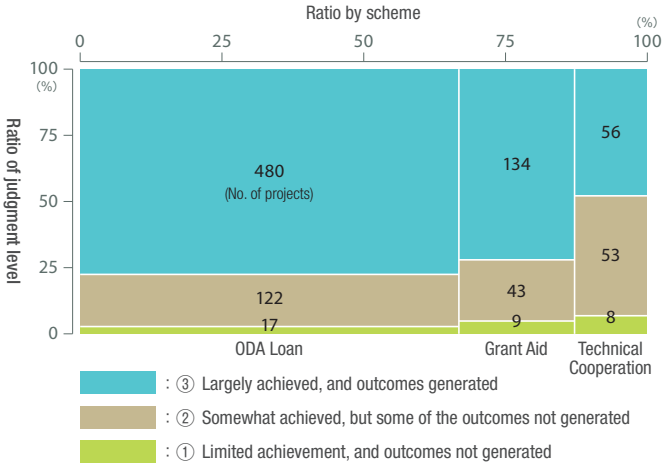
<Figure 2> Results for Overall Rating



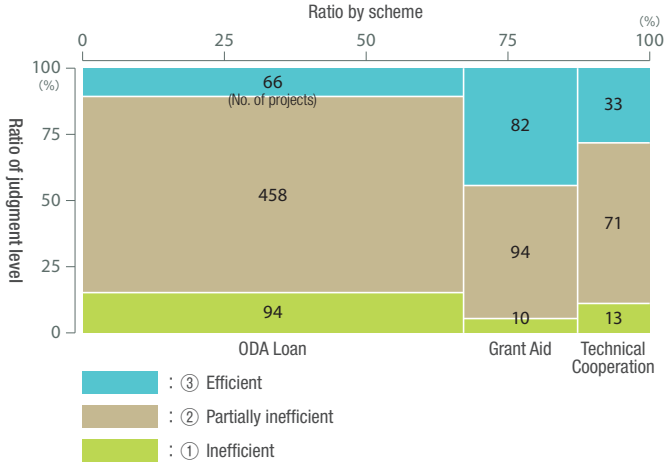
<Figure 3> Evaluation results for Relevance



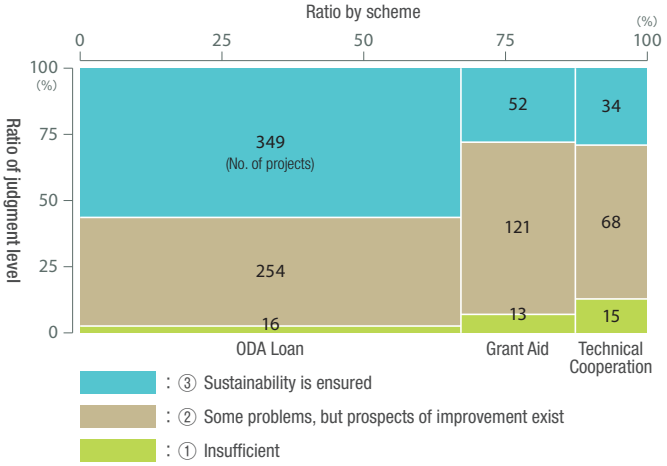
<Figure 4> Evaluation results for Effectiveness / Impact



<Figure 5> Evaluation results for Efficiency



<Figure 6> Evaluation results for Sustainability



3. Trends and Distributions of External Evaluation by Starting Year

In this section, the result of external evaluation shown in "2. Analysis Results" are reorganized focusing on their project commencement year. The heat maps (which represent the number of projects in colors by combining the perspectives shown in the vertical and horizontal axes) in Figures 7 to 10 present the rating results by region and sector. Based on this, the performance of external evaluation and tendency of ratings are analyzed. Here, the target projects range from those having started in 1981, which is commencement year for the oldest external evaluation project, to those in 2008*3 when the new JICA was established (by merger of former Japan Bank for International Cooperation and former JICA). Overall, 618 ODA Loan and 149 Grant Aid projects are covered. Technical Cooperation were excluded because fewer external evaluations were conducted *4.

It should be noted, however, that the following figures do not show the whole picture of JICA projects initiated during the said period*5 as they represent those for which external evaluation was completed and excludes projects that are ongoing or completed but awaiting evaluation.

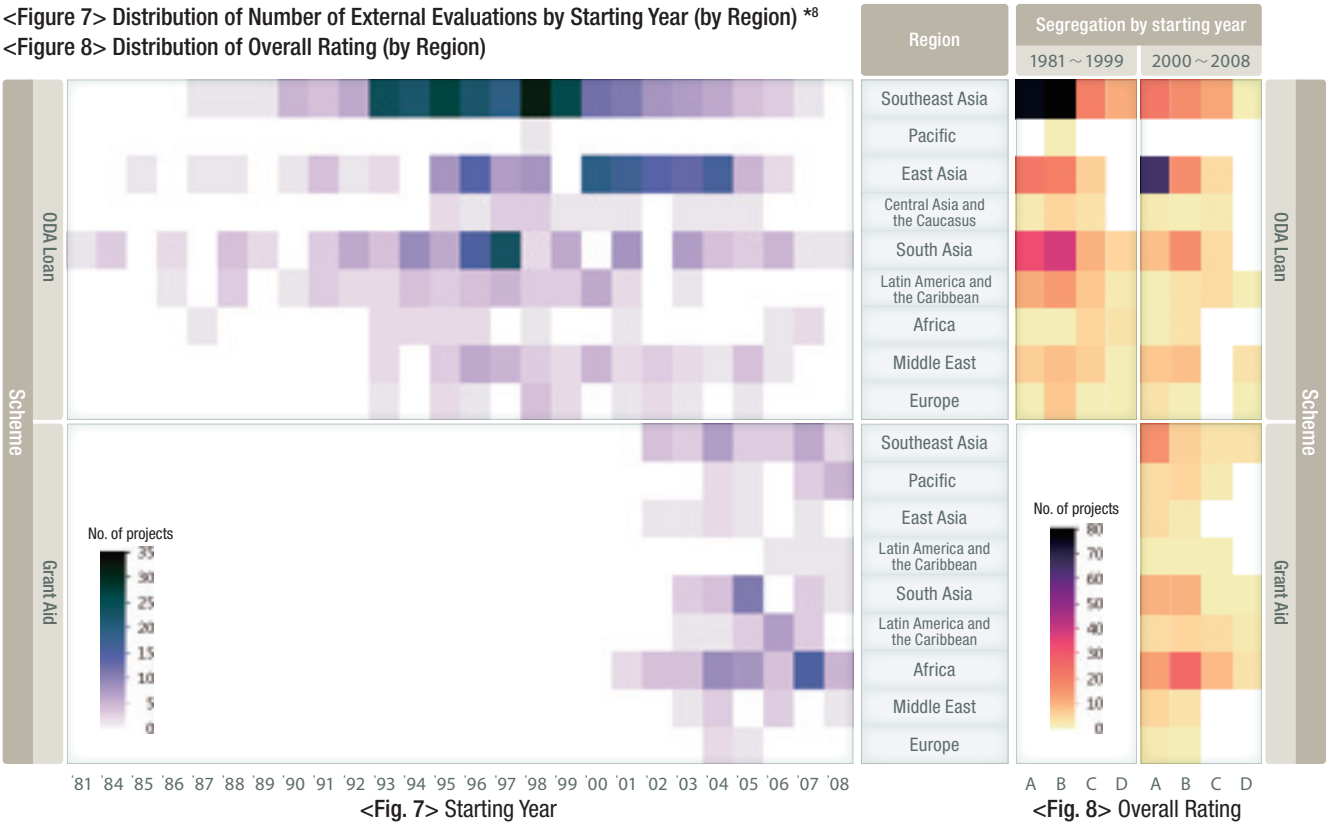
*3: Since the number of external evaluations is still limited for projects that started after 2009 (2 ODA Loan and 27 Grant Aid projects), they were excluded from the heat maps from the viewpoint of appropriateness.
*4: For Grant Aid projects, among the external evaluations conducted after FY2009 when ex-post evaluation was introduced, the earliest project was commenced in 2001. Therefore, the period from 1981 to 1999 remains blank for Grant Aid projects in all heat maps.
*5: The number of projects awaiting external evaluation increases as the year progresses, and their data is excluded from the figure. Since the project period for ODA Loan is usually longer than those for Grant Aid, many ODA loans that started in the late 2000s are yet to be evaluated at the time of analysis.

Distribution of Ratings by Region

Figure 7 is a heat map aggregated by region, representing the number of projects by their commencement year while Figure 8 represents the result of overall rating by region with dividing the project commencement year into two periods: (1) from 1981 when the earliest project started to 1999 when former Japan Bank for International Cooperation was established, and (2) from 2000 until 2008 when the new JICA was established*6.

These heat maps clearly show that more ODA Loan projects were implemented in the Asian region throughout the whole period. According to Figure 7, the number of projects were first concentrated in Southeast Asia in the early 1990s and then in South Asia from the late 1990s, followed by East Asia from the 2000s*7. This tendency indicates that the region where JICA provided assistance shifted in accordance with the economic growth in each region. Regarding Grant Aid projects, many were implemented in the African region. The distribution of ratings by region in Figure 8 indicates more ODA Loan projects were assisted in Southeast Asia, South Asia and East Asia. Although in the case of Southeast Asia, results are distributed among all ratings, overall, the whole Asian region have relatively higher ratings, and the proportions of "A: Highly satisfactory" and "B: Satisfactory" are particularly higher in East Asia. Under the Grant Aid, in Africa and Asia where many projects were implemented, the ratings were mostly high. While in Africa, although the proportion of rating "B" is high, the proportion of "C: Partially satisfactory" is also at a certain level, which suggests that project effectiveness and sustainability may be more difficult to achieve in the African region compared with Asia.

<Figure 7> Distribution of Number of External Evaluations by Starting Year (by Region) *8
<Figure 8> Distribution of Overall Rating (by Region)



<Fig. 7> Starting Year

<Fig. 8> Overall Rating

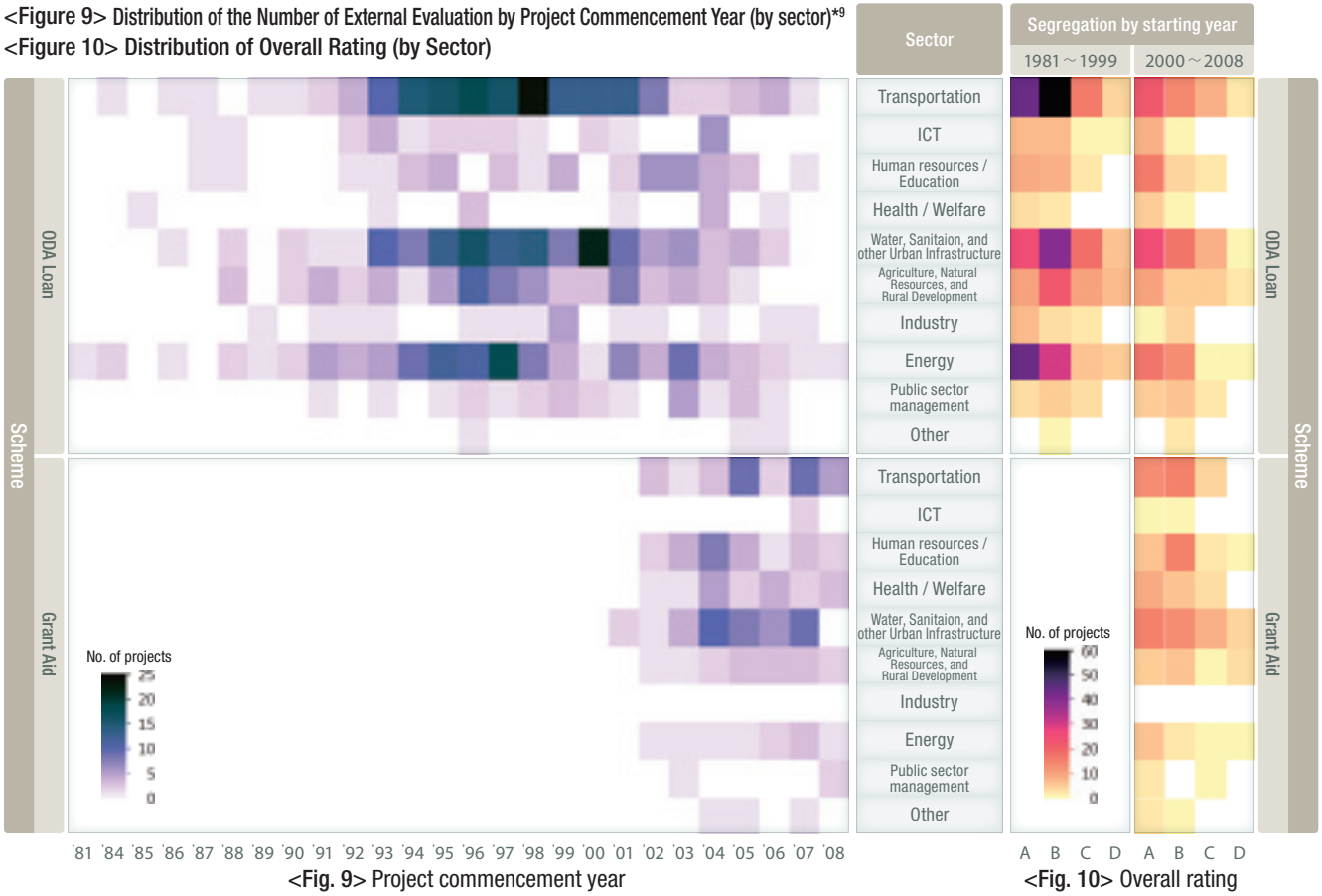
Distribution of Ratings by Sector

Figure 9 is a heat map aggregated by sector representing the number of projects by their commencement year while Figure 10 represents the overall rating, as in Figure 8. According to Figure 9, the proportions of projects for transportation and water, sanitation, and other urban infrastructure sectors are relatively higher under both ODA Loan and Grant Aid, followed by the energy sector, where power sector projects account for a large portion in ODA Loans. Under Grant Aid, the human resources/education sectors account for the second largest. Meanwhile, there are fewer ODA Loan projects in the health/welfare sectors because construction of hospitals and provision of medical equipment are basic infrastructure improvements, and tend to be covered under Grant Aid. Regarding the industry sector, since projects were extended for private sector development or small and medium enterprise financing in terms of loans, evaluation results were only available for ODA Loan projects.

Conversely, the distribution of ratings by sector as shown in Figure 10 indicates a very high concentration of ODA Loan projects rated as "A" in the energy sector, suggests projects under this sector are highly-rated. Similarly, higher ratings are distributed in the transportation and water, sanitation, and other urban infrastructure sectors while a certain number of projects have overall ratings of "C" and "D: Unsatisfactory" as there were many projects implemented. Regarding the tendency for the evaluation criterion for all projects rated "C" or "D," the proportion of sub-rating "③" in effectiveness was confirmed to be small, similarly to the tendency in the mosaic profit for effectiveness in descriptive statistics (p.55); and no differences were acknowledged between the starting years nor sectors. Conversely, efficiency and sustainability were rated "②" in relatively many projects; and it should be noted that there were no projects commenced after 2000 rated "①" for sustainability in their ex-post evaluation.

For Grant Aid scheme, the number of projects in the transportation and water, sanitation, and other urban infrastructure sectors rated as "A" or "B" is more or less the same; while those for the latter sector are vast, and distribution for "C" or "D" ratings also stand out. Throughout all sectors, for projects with an overall rating of "C" or "D", sub-rating by evaluation criteria shows relatively more distribution in "②" for efficiency, effectiveness and sustainability but there are also many projects rated "①" for sustainability compared to the other evaluation criteria.

<Figure 9> Distribution of the Number of External Evaluation by Project Commencement Year (by sector)*9
<Figure 10> Distribution of Overall Rating (by Sector)



<Fig. 9> Project commencement year

<Fig. 10> Overall rating

*6: Since the former Japan Bank for International Cooperation (JBIC) was established in October 1999 and the new JICA (by merger of former JBIC and former JICA) was established in October 2008, the periods are divided by the year of these establishments.
*7: Projects in China accounts for a large proportion of assistance in East Asia but new commitments for Grant Aid and ODA loans to the country ceased in 2006 and 2007, respectively.
*8: Each region includes the following countries: Southeast Asia: Indonesia, Cambodia, Thailand, the Philippines, Vietnam, Malaysia, Myanmar, Laos and East Timor; Pacific: Kiribati, Samoa, Solomon, Tonga, Vanuatu, Papua New Guinea, Palau, Fiji and Micronesia; East Asia: Republic of Korea, China and Mongolia; Central Asia and the Caucasus: Azerbaijan, Armenia, Uzbekistan, Kazakhstan, Kyrgyz, Georgia, Tajikistan and Turkmenistan; South Asia: Afghanistan, India, Sri Lanka, Nepal, Pakistan, Bangladesh, Bhutan and Maldives; Latin America and the Caribbean: Argentine, Antigua and Barbuda, Ecuador, El Salvador, Guyana, Guatemala, Grenada, Costa Rica, Colombia, Jamaica, Saint Vincent and the Grenadines, Dominican Republic, Nicaragua, Paraguay, Brazil, Peru, Bolivia, Honduras and Mexico; Africa: Angola, Uganda, Ethiopia, Eritrea, Ghana, Gabon, Cameroon, Guinea, Kenya, Côte d'Ivoire, Zambia, Sierra Leone, Zimbabwe, Swaziland, Seychelles, Senegal, Tanzania, Nigeria, Namibia, Niger, Burkina Faso, Burundi, Benin, Botswana, Madagascar, Malawi, Mali, Mauritius, Mauritania, Mozambique, Lesotho and Republic of South Africa; Middle East: Algeria, Iran, Egypt, Syria, Tunisia, Morocco, Jordan and Lebanon; and Europe: Albania, Ukraine, Slovakia, Serbia, Turkey, Bulgaria, Bosnia and Herzegovina, Macedonia and Romania.
*9. Categorization of sectors is based on those used in our statistical analysis.

Guide to JICA's Website

■JICA Homepage

▸https://www.jica.go.jp/english/index.html

■Evaluations

▸https://www.jica.go.jp/english/our_work/evaluation/index.html

☐Find out more on JICA's evaluation system

○Overview

▸https://www.jica.go.jp/english/our_work/evaluation/about.html

○Pre Implementation Stage (Ex-ante Evaluation)

▸https://www.jica.go.jp/english/our_work/evaluation/oda_loan/economic_cooperation/about.html

○Implementation Stage

▸https://www.jica.go.jp/english/our_work/evaluation/oda_loan/review/about.html

○Post Implementation Stage

▸https://www.jica.go.jp/english/our_work/evaluation/tech_and_grant/project/ex_post/about.html

○Thematic Evaluation, etc.

▸https://www.jica.go.jp/english/our_work/evaluation/tech_and_grant/program/index.html

○Impact Evaluation

▸https://www.jica.go.jp/english/our_work/evaluation/tech_and_grant/impact/about.html

○Evaluation Guides

▸https://www.jica.go.jp/english/our_work/evaluation/tech_and_grant/guides/index.html

○Advisory Committee on Evaluation

▸https://www.jica.go.jp/english/our_work/evaluation/advisory/index.html

☐Search for Ex-post Evaluations (Ex-post Evaluation Reports after 2008)

▸https://www2.jica.go.jp/en/evaluation/index.php

☐Read Past JICA Annual Evaluation Reports

○JICA Annual Evaluation Reports

▸https://www.jica.go.jp/english/our_work/evaluation/reports/index.html

☐Find out about Evaluations by other Organizations

○Evaluation links

▸https://www.jica.go.jp/english/our_work/evaluation/links.html

■JICA Library

▸https://www.jica.go.jp/english/about/organization/library/index.html

JICA Annual Evaluation Report 2016 is also available on our website:

▸https://www.jica.go.jp/english/our_work/evaluation/reports/2016/index.html

JICA Annual Evaluation Report 2016

Edited and Published by
Evaluation Department,
Japan International Cooperation Agency
5-25, Nibancho, Chiyoda-ku, Tokyo 102-8012, Japan
TEL: +81-3-5226-6660
https://www.jica.go.jp/english/index.html
E-mail: jicaev@jica.go.jp
Please direct inquiries regarding this report to the Evaluation Planning Division

ISBN 978-4-86357-075-7

Japan International Cooperation Agency
http://www.jica.go.jp/english/index.html