2014

JICA Annual Evaluation Report

JICA

Inclusive and Dynamic Development

Japan International Cooperation Agency

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JICA 2014

INDEX

Preface

2014 marked the 60th anniversary of Japan's Official Development Assistance (ODA). 2015 represents a new start for JICA as we reshape our strategy following the issuance of the newly established Development Cooperation Charter. In addition, this year is seminal for global development as we reach the target year of the Millennium Development Goals (MDGs) and embark on a sustainable pathway by setting new development targets as part of the Post-2015 Development Agenda.

JICA evaluates projects for two main purposes: 1) to improve individual projects and our cooperation strategy by utilizing lessons learned from evaluations, and 2) to ensure accountability by making evaluation results publicly available to stakeholders, including Japanese people. This year, we will further strive to fulfill these two purposes. As part of this effort, we will build on our past experience and take into account the evolving Japanese and international development contexts.

The Annual Evaluation Report 2014 summarizes the results of evaluations we conducted in fiscal year 2014.

In 2014, we placed particular emphasis on strengthening our capability to draw effective lessons from each project. In line with this objective, we conducted a cross-sectoral analysis of ex-post evaluation results in four sectors: 1) nature conservation, 2) irrigation, drainage and water management, 3) fisheries, and 4) disaster risk management. As a result, we have identified practical lessons that could be applied to these sectors. We have also developed standard indicator references to design and evaluate the effects of technical cooperation projects in several sectors.

Going forward, we will build on these outcomes to further improve our development tools for the betterment of developing countries.

We hope that this report helps deepen your understanding of JICA's activities.

Thank you for your continued support and trust in JICA.

March 2015
Akihiko Tanaka, President
Japan International Cooperation Agency (JICA)

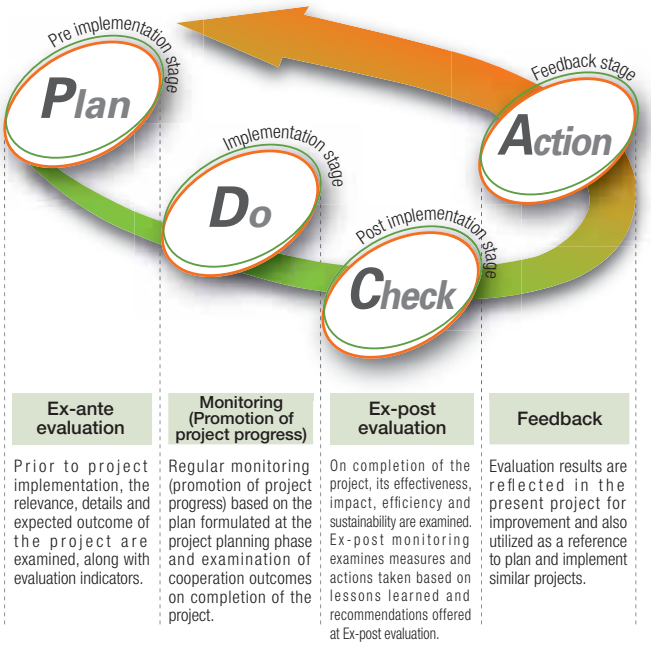
The JICA Operations Evaluation System

To improve its projects and ensure accountability to Japanese taxpayers, JICA implements operations 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 evaluation is conducted based on the PDCA cycle, regardless of the scheme of cooperation. Considering the characteristics of the scheme of cooperation, such as the assistance period and timeframe for the expected results, JICA monitors and evaluates each project stage (planning, implementation, post-implementation and feedback) within a consistent framework. By evaluating each stage of the PDCA cycle, it aims to improve the project development results. Details of the evaluation conducted at each stage are introduced on pp.4-6.



2 Coherent methodologies and criteria for three schemes of cooperation

JICA adopts an evaluation system using cross-sectoral methodologies and criteria applicable to all schemes of assistance. For Technical Cooperation, ODA Loans, and Grant Aid projects, respectively, 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 into consideration.

Specifically, an evaluation framework that reflects: 1) Project level evaluation based on the PDCA cycle; 2) Evaluation applying the Five DAC Criteria for Evaluating Development Assistance as laid out by the OECD-DAC (Organisation for Economic Co-operation and Development/Development Assistance Committee) and internationally accepted as an ODA evaluation method (Table 1); and 3) Publication of evaluation results based on a uniform style and using a rating system developed by JICA. For the Five DAC Criteria, JICA performs reviews to ensure a more appropriate evaluation judgment. The rating system and results are introduced on p.12 and pp.16-17.

Table 1 Evaluation Perspectives Using the Five DAC Criteria for Evaluating Development Assistance

Relevance	Examines the extent to which the aid activity is suited to the priorities and policies of the target group, recipient and donor: Does the goal of the aid activity 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 a program or a 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 aid uses the least costly resources possible to achieve the desired results.
Sustainability	Sustainability relates to whether the benefits of the project are likely to continue after the closure of the project.

The JICA evaluation system has the following five features:

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

3 Cross-sectoral and comprehensive evaluation through a thematic evaluation

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 differ from individual project evaluations, to derive recommendations and lessons learned which can be used across projects.

The challenge going forward is how to evaluate cooperation programs (a strategic framework designed to assist developing countries in achieving their specific mid- to long-term development goals), which JICA has been making efforts harder for, in line with the progress made to date in this endeavor. In response, JICA conducted the" Analysis to Enhance the Evaluability of JICA's Cooperation Programs "in FY2014, details of which are introduced on pp.52-54.

4 Ensuring objectivity and transparency

JICA has incorporated external evaluations according to project size in the ex-post evaluations which require objective verification of project implementation results for all three schemes of assistance; the findings of which are provided via the JICA website. JICA will continue making efforts to increase objectivity and transparency in its operations evaluations.

To improve 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 on the evaluation system and methodology from the Advisory Committee on Evaluation consisting of third-party experts (refer to p.7).

5 Emphasizing use of evaluation results

JICA's operations evaluations are not merely evaluations. The results also provide feedback to improve the" Action " phase of the PDCA cycle, which is also utilized as recommendations to improve the project and lessons learned for ongoing and future similar projects. JICA intends to further strengthen the feedback function to reflect the evaluation results in JICA's fundamental 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:

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

Pre Implementation Stage Evaluation (Ex-ante Evaluation)

To determine the needs for the project as well as set targets for project outcomes, JICA conducts the ex-ante evaluation.

What is pre implementation stage evaluation?

JICA conducts the ex-ante evaluation prior to project implementation to confirm the needs and priorities of the project, verify the project outline and anticipated outcomes, as well as establish indicators to measure the outcomes. During the ex-ante evaluation, JICA also confirms the implementations of appropriate safeguards after reviewing environmental and social considerations, as well as reflecting lessons learned from past projects.

Utilization of results of ex-ante evaluations

The results of the ex-ante evaluation conducted from this perspective are reflected in subsequent decision-making on project design and approach. Once the project commences, monitorings and evaluations are conducted based on the evaluation plan and indicators set at the time of the ex-ante evaluation.

Number of Ex-ante Evaluation Performed in FY2013*1

Technical Cooperation	94 projects
ODA Loans	49 projects
Grant Aid	68 projects

Evaluation at Pre Implementation Stage by Scheme

Scheme	Technical Cooperation	ODA Loans	Grant Aid
Evaluation scheme	**Ex-ante evaluation**		
Timing	Prior to project implementation		
Targets	In principle, all projects*2	All projects	In principle, all projects*3
Principals of evaluation	Internal evaluation		
Items evaluated and evaluation method	Confirming the needs and expected outcomes and verifying the plan of the project, in light of the Five DAC Criteria		

*1 Published as the Ex-ante evaluations performed in FY2013 (as of January 2015).

*2 In projects concerning less than 200 million yen, it is possible to apply a simple evaluation.

*3 JICA targets projects estimated at over 200 million yen for the implementation of a preliminary survey.

Post Implementation Stage Evaluation (Ex-post Evaluation)

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

What is post implementation stage evaluation?

JICA performs an ex-post evaluation on completion of the projects that cost 200 million yen or more, the results of which are immediately presented to the public in an understandable form. While projects that cost over 200 million and under one billion yen are subject to internal ex-post evaluation*1 by JICA overseas offices, those over one billion yen*2 are evaluated by third-party evaluators (external ex-post evaluation) to ensure more objective evaluation. Ex-post evaluation is conducted uniformly for all three assistance schemes after completion of each project and a comprehensive analysis is performed using the Five DAC Evaluation Criteria. For external evaluation, a rating system*3 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 toward improving the project, as well as planning and implementing similar projects in future.

Number of Ex-post Evaluation Performed in FY2013

Technical Cooperation	(External Evaluation) 20 projects (Internal Evaluation) 27 projects
ODA Loans	(External Evaluation) 38 projects
Grant Aid	(External Evaluation) 18 projects (Internal Evaluation) 23 projects

Evaluation at Post Implementation Stage by Scheme

Scheme	Technical Cooperation	ODA Loans	Grant Aid
Evaluation scheme	**Ex-post evaluation**		
Timing	In principle, by 3 years after project completion		
Targets	All projects with contributions of 200 million yen or more	All projects with contributions of 200 million yen or more	General and Fisheries Grant Aid projects with contributions of 200 million yen or more implemented by JICA and some other sub-schemes
Principals of evaluation	External evaluation / Internal evaluation *4		
Items evaluated and evaluation method	Based on the Five DAC Criteria		

*1 Refer to p.20 for the internal evaluation.

*2 For projects less than 1 billion yen but those are a high likelihood of gaining valuable lessons, ex-post evaluation is conducted.

*3 Refer to p.12 for the rating system.

*4 For projects over 1 billion yen and those where there is considered to be a high likelihood of gaining valuable lessons, external evaluations are conducted. Internal evaluations are conducted by JICA's overseas offices for projects over 200 million yen and under 1 billion yen.

Thematic Evaluation

JICA conducts a comprehensive evaluation and analysis of JICA's cooperation in relation to a specific theme or development goal, the results of which are utilized for future cooperation planning and implementation to be more effective.

JICA conducts thematic evaluation based on a specific theme, such as region, sector and assistance methodology, for projects that are relevant to the theme and using an evaluation criteria established for each theme. This includes comprehensive analysis, which extracts tendencies and problems common to particular issues or compares and categorizes projects to extract common features and good practices. Comprehensive analysis and examination of the evaluation results elicit recommendations and lessons learned relating to the specific theme. Furthermore, JICA also endeavors to develop a new evaluation methodology.

Moving forward, JICA will also evaluate JICA's cooperation programs, which are strategic frameworks designed to support the achievement of developing countries' mid- to long-term development goals. Taking into account the fact that cooperation programs will be subject to future evaluations, JICA will need to verify from the ex-ante evaluation stage: Whether the goal and indicators for the cooperation program are clearly set; and whether there is a consistent cause/effect relationship between the overall goal of the projects that comprise the cooperation program and the goal of the cooperation program.

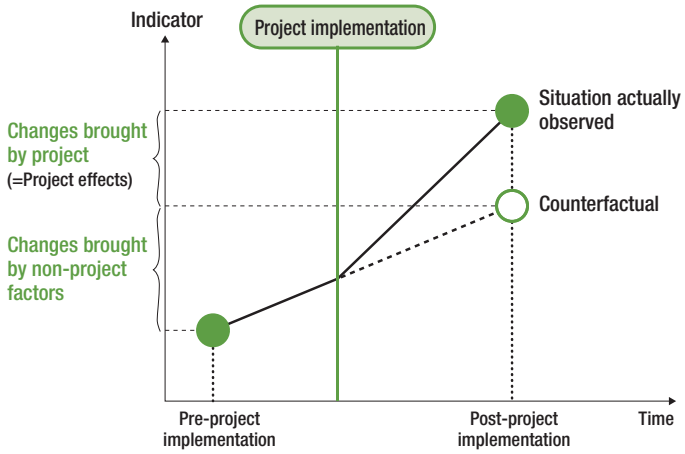
FY2014 Thematic Evaluation

- Extraction of "knowledge lessons" (a cross-sectoral analysis of evaluation results) (refer to p.42)
  - "Knowledge lessons" learned from nature conservation projects
  - "Knowledge lessons" learned from irrigation, drainage, and water management projects
  - "Knowledge lessons" learned from fisheries projects (inland aquaculture / fishery resource management)
  - "Knowledge lessons" learned from disaster management projects
- Analysis for Enhancing the Evaluability of JICA's Cooperation Programs

Impact Evaluation

To further enhance project effectiveness and quality, JICA has been promoting evidence-based project implementation and emphasizing the application of impact evaluation as a major tool for this purpose. Using statistical and econometric methods, impact evaluation assesses the changes in target society achieved by specific measures, projects, or development models to improve and solve development issues. JICA has introduced this evaluation method, in addition to those traditionally used to measure effects, for some projects to assess their effects more rigorously. These evaluation results can then be used as reliable evidence by JICA for project management and by partner countries for policy-making. In FY2014, impact evaluations were conducted for several projects, including the Technical Cooperation Project to Strengthen the Development of Human Resource for Health in Tanzania and the Technical Cooperation Project on Capacity Building to Disseminate Quality and Productivity Improvement (KAIZEN) in Ethiopia. Moreover, JICA's experience in impact evaluation was presented at an international conference co-hosted by the Asian Development Bank (ADB) and the International Initiative for Impact Evaluation (3ie) at the ADB headquarters in Manila, as described on p.57.

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 in July 2010 to enhance evaluations, strengthen feedback of evaluation results and consolidate evaluation accountability.

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

Outlines of expert advice provided by committee members during the meetings convened in August 2014 and January 2015 are as below.*1

List of Committee Members

(as of January 2015)

Chairperson	
Motoki Takahashi	Professor, Graduate School of International Cooperation Studies, Kobe University
Acting Chairperson	
Akifumi Kuchiki	Professor, College of Bioresource Sciences, Nihon University
Members (in alphabetical order)	
Hisashi Takanashi	Managing Director, Engineering and Consulting Firms Association, Japan (ECFA)
Kenichiro Yokoo	Director, International Cooperation Bureau, Keidanren (Japan Business Federation)
Kiyoshi Yamaya	Professor, Doshisha University Graduate School of Policy and Management
Kunihiko Hirabayashi	Director, UNICEF (United Nations Children's Fund) Tokyo Office
Masaichi Nosaka	Manager, Yomiuri Research Institute, The Yomiuri Shimbun
Toyokazu Nakata	Chairperson, Muranomirai
Yasuyuki Sawada	Professor, Faculty of Economics, Graduate School of Economics, The University of Tokyo
Yoshiko Homma	Lawyer (Yoshiko Homma Law Office) / Professor, The Graduate School of Law, Soka University

From the Meeting in August 2014

Increased efficiency and effectiveness of ex-post evaluation to use evaluation results strategically

- Although the concept of evaluating a group of projects as a program to enhance evaluation efficiency is the right direction for JICA, key to this approach will be the process and strategy on how to select projects for evaluation.
- The mid-term review and terminal evaluation reports of Technical Cooperation projects were replaced by regular monitoring sheets and project completion reports, respectively, both of which are to be prepared by project team members (e.g. consultants and experts) themselves. Attention should be paid to ensure this change does not undermine accountability.
- Recently, many Technical Cooperation projects are terminated within three years and sustainability is often problematic. They may have been evaluated mainly on outputs rather than outcomes. The results of the evaluation should be shared with project team members (e.g. consultants) to learn lessons for future projects.

Progress of the project evaluation plan in FY2014

- It is important to train JICA staff, particularly those assigned to overseas offices, on project evaluation. JICA should create a roadmap and further making efforts to accelerate human resource development.
- It is essential to link the two evaluation objectives: learning lessons from projects and ensuring accountability. In other words, JICA should consider how to share lessons learned from its activities with people outside the organization.
- JICA's efforts to promote the use of evaluation results are commendable. It is significant to make opportunities for each individual; not only to gain experience but also to share it with others. In particular, overseas office staff should be involved in this process.
- Although JICA's efforts to analyze and improve detailed technical aspects of the impact evaluation are worthy, it is more important to explore the most effective approach from a broader perspective.

From the Meeting in January 2015

Progress made in terms of improvement based on past recommendations of the Advisory Committee on Evaluation

- European and American donor agencies closely exchange views on aid effectiveness. JICA should strengthen its ability to convey opinions to play a leading role in the Asian donor community in future. Conversely, attention should be paid to ensure that the information dispatched does not take on a life of its own.
- Projects should be evaluated from the following three perspectives: (1) whether appropriate measures have been taken for partner countries; (2) whether the process was appropriate; and (3) whether there were any other options. In particular, the third perspective should be strengthened by promoting joint evaluation with other donors as well as third-party evaluation.

Comments on the draft of the Annual Evaluation Report 2014

- The Annual Evaluation Report has been made easy to read. It is essential to make it logically consistent from start to finish.
- JICA's efforts to convert lessons learned into knowledge are admirable. More emphasis should be placed on how to use and scale up knowledge.
- The public should feel it is inappropriate to evaluate efficiency by comparing estimated and actual costs and assessing the timeliness of disbursement. Typically, things do not go as planned.
- In general, Japanese people care whether assistance reaches those in need, rather than whether inputs are transformed into outputs. By evaluating efficiency from a Japanese rather than international perspective and presenting the results to the world, JICA can convey Japan's message. Moreover, the existing flowchart of the rating system must be reviewed.
- There is a comment that "There is a gap between the technology JICA intends to transfer to developing countries and the latest technology used by the private sector; therefore, JICA should remain aware of the latest technological development in the private sector." This perspective should be taken into account evaluation.
- With regard to effectiveness, efficiency and sustainability in particular, JICA should consider whether to design projects assuming developing countries lack the capacity to absorb support; whether to assist them in building that capacity and whether to implement projects in cooperation with other donors to optimize finite resources.

JICA's efforts

To improve its evaluation methods and systems, JICA will adopt as many of the above recommendations as possible after carefully considering them, particularly on the strategic selection of projects for evaluation, the development of human resources, the use of lessons learned for improvement, the publication of results and the improvement of the rating system, while taking into account resource limitations and the data available in project evaluation.

*1 The minutes of the Committee meetings are posted on the JICA website.

Toward Improving Operations Evaluation

To improve future projects, operations evaluations require a perspective of contributing to improve development outcomes by appropriately identifying project effects. In this chapter, some efforts to improve JICA's operations evaluations are described.

Introduction

JICA has been making efforts to further strengthen the PDCA cycle and enhance the quality of projects, to realize development outcomes and make them sustainable. Operations evaluation is critical for appropriately examining (evaluating) the extent to which development outcomes are achieved and ensuring that lessons learned and recommendations obtained through the evaluation are reflected in operations. This chapter describes JICA's operations evaluation efforts to implement effective projects which have been undertaken since FY2014.

FY2014 Operations Evaluation Efforts

In FY2014, JICA continued to improve systems related to operations evaluation, adopt new evaluation methods, promote the use of evaluation results and support efforts to enhance the evaluation capacity of stakeholders; taking into consideration the advice received from the Advisory Committee on Evaluation (refer to p.7). Furthermore, JICA continued to carry out holistic cross-sectoral analyses of detailed operations evaluations as a whole and compiled lessons learned from individual evaluations of project implementation efforts to exhibit development effectiveness (refer to pp.13-14).

Publication of JICA Guidelines for Operations Evaluation (Second Edition)

JICA has made efforts to strengthen its evaluation system since the new JICA was established in 2008. In 2010,"New JICA Guidelines for Project Evaluation (First Edition)"were developed and used to ensure consistent evaluation across the three cooperation schemes of JICA. As several years have passed since the first edition was published, the need has arisen to revise the Guidelines to reflect changes in the project evaluation system (e.g. the introduction of internal evaluation into the ex-post evaluation system). The second edition of the" JICA Guidelines for Operations Evaluation "was created and published on the JICA website in 2014.

With the main aim of fulfilling accountability to the public, the second edition summarizes the principles of JICA's operations evaluation.

Points of JICA Guidelines for Operations Evaluation (Second Edition)

(1)Purposes, objectives and basic principles of JICA operations evaluation and the concrete concept of evaluation in ex-ante and ex-post evaluations are compiled concisely.

(2)The objectives of JICA operations evaluation are 1) ensuring accountability and 2) further improvement of projects through PDCA cycle, as hitherto.

(3)As the basic principles of JICA operations evaluation, 5 items are specified: 1) ensuring quality of evaluations, 2) impartial attitude and ethical awareness, 3) ownership and communication, 4) accountability, and 5) effective feedback to project management.

JICA website

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

Efforts to improve the PDCA cycle of project management using lessons learned from evaluation

Various efforts have been made to use the evaluation results to improve projects management through the PDCA cycle. For example, a seminar for "Feedback of Operations Evaluation Results" was held this fiscal year to share the evaluation results with all project management departments. At the seminar, the findings and lessons learned from the evaluations performed during the previous fiscal year were presented to JICA staff and others concerned and shared across the organization. Moreover, a workshop-style training program "Learn from Ex-post Evaluations: How to Enhance the Effectiveness of Projects" was launched.

Meanwhile, JICA is working to analyze and convert the lessons learned from individual project evaluations into knowledge that can be easily applied to similar projects. In FY2014, practical and universal lessons were identified and systematized as" knowledge lessons (important lessons) "for four sectors: nature conservation; irrigation, drainage and water management; fisheries; and disaster management sectors (refer to pp.42-51).

Furthermore, JICA has developed Standard Indicator References covering a dozen sectors in each of two assistance schemes, Grant Aid and Technical Cooperation (refer to p.10). These References were created by selecting indicators that can be used to design new projects and classifying them by development objectives. JICA will promote the use of these References, as well as another existing references for ODA Loan projects, among JICA employees and others concerned. These documents are also available on the JICA website.

Many of the above-mentioned measures were implemented based on the recommendations made by the thematic evaluation in FY2013:" Analysis on the Improvement of Management System for Utilizing Lessons Learned in PDCA Cycle. "

Developing a new evaluation mechanism

JICA has promoted a cooperation program approach to optimize the performance of cooperation schemes by integrating independent projects under the strategic framework of a "JICA cooperation program" to achieve specific, medium- to long-term, higher-level goals of developing countries.

To assess the achievements of JICA cooperation programs from a more objective perspective, JICA conducted a study to explore

how best to evaluate them by focusing on their evaluability. Please refer to pp.52-55 for more details.

Training to enhance the evaluation skills of JICA staff

Training programs, such as "How to Set Clear Objectives and Appropriate Indicators," "Learn from Ex-post Evaluations: How to Enhance the Effectiveness of Projects," and "Impact Evaluation Training," were provided for JICA staff and others concerned to deepen their understanding of project evaluation so that they can use the evaluation results for improving projects. Moreover, training programs on "Introduction to Ex-post Evaluation" were organized for the relevant national staff in overseas offices.

Strengthening the network with other development partners

Against a global backdrop of emphasizing outcomes, many operations evaluations are implemented by international organizations, such as the World Bank and bilateral aid agencies. JICA exchanges information with the evaluation departments of such aid agencies. JICA believes that information obtained from these agencies can be utilized effectively, including consideration of how the evaluation sections support evaluations implemented by operation sections, promotion of impact evaluation, the evaluation method of cooperation program. This year, JICA exchanged views with organizations, including the World Bank's Independent Evaluation Group (IEG), Development Impact Evaluation (DIME) in the World Bank's Research Group, Korea International Cooperation Agency (KOICA), Organisation for Economic Co-operation and Development/Development Assistance Committee (OECD-DAC) Network on Development Evaluation and the Asian Development Bank (ADB).

Moreover, JICA made presentations on its activities at international conferences on evaluation, such as the China-DAC Study Group Round Table, a forum held by the ADB Independent Evaluation Department, an international conference on impact evaluation co-sponsored by the ADB and 3ie and the ODA Evaluation Workshop; jointly organized by the Japanese Ministry of Foreign Affairs and the Malaysian Economic Planning Unit. In Japan, JICA also gave a presentation on its impact and ex-post evaluations and exchanged views with Japanese experts at a conference of the Japan Evaluation Society.

Column

JICA-AFD Joint Evaluation

Climate Change Program Loan in Indonesia

Although Indonesia is not listed in Annex I of the United Nations Framework Convention on Climate Change (UNFCCC), it is one of the worst-offending countries in the world in terms of greenhouse gas emissions; not only due to degradation of forests and peatlands but also soaring energy consumption driven by rapid economic growth. Moreover, its geographical and climatic conditions leave the country extremely vulnerable to climate change. In this context, the Government of Indonesia has been actively engaged on climate change issues, chairing the 13th UNFCCC Conference of Parties in December 2007, publishing the National Action Plan Addressing Climate Change, and developing other laws, regulations, plans, systems, and guidelines to promote measures to mitigate and adapt to the impacts of climate change.

To support the commitment of the Government of Indonesia to act on climate change, JICA and the French Development Agency (AFD) provided General Budget.

Support under the framework of a Climate Change Program Loan (CCPL) from 2008 to 2010 , during which time 500 to 800 million US dollars were financed yearly. These funds were not targeted at individual climate change projects but directed toward the state treasury to support wide-ranging efforts of the Indonesian Government to mitigate and adapt to climate change, including institutional reforms.

JICA and AFD organized a joint ex-post evaluation to assess the results of the CCPL in 2012. This was the first opportunity for JICA to assess a sequence of support effects from bottom to top ("inputs" – "direct outputs" – "induced outputs") and vice versa ("impact" – "outcomes" – "induced outputs"). The external evaluators dispatched by JICA and AFD analyzed information collected from field visits, interviews, and document reviews. During the CCPL period, the Government of Indonesia established various laws and regulations addressing climate change and promoted reforms, while involving relevant ministries and state-owned and private companies in continuous policy dialog. Consequently, climate change measures were mainstreamed into Indonesia's development agenda. The CCPL framework was found to directly and indirectly contribute to this, particularly in the following three aspects: (i) promoting coordination and information sharing among different stakeholders in Indonesia as well as with development partners; (ii) identifying the progress, attainments, obstacles, and challenges of climate change policies in the forestry, energy, and transportation sectors as well as adaptation measures; and (iii) introducing remedial actions and additional project assistance to address the challenges and issues identified in the results of monitoring and policy dialog. Conversely, the evaluation revealed several problems regarding the capacity of local governments to collect basic data and information on climate change and develop adaptation and mitigation measures based on the collected evidence.

[1] The World Bank also joined this co-financing program only in its third year, 2010.

Development of Standard Indicator References to Improve Project Evaluation

Introduction

Individual projects are evaluated to assess their effects, improve their performance and help enhance aid effectiveness. To assess the effects of projects more precisely, JICA has recently been making efforts to develop Standard Indicator References.

Thematic Standard Indicator Reference for Grant Aid Projects

To objectively and quantitatively describe the effects targeted by Grant Aid and Technical Cooperation projects implemented by JICA in developing countries, standard indicators for development issues and problems to be addressed have been compiled and classified by development objective.

"Thematic Standard Indicator Reference for Grant Aid Projects" comprises standard quantitative indicators in 12 major sectors: basic education; health; water supply; rural water supply/groundwater; transportation (roads, bridges, land transportation, aviation and ports); agricultural and rural development; fisheries; disaster management; information & communication technology; broadcasting; energy; and solid waste management. These indicators are classified based on the Development Objectives Chart (*) made for Thematic Guidelines.

Thematic Standard Indicator Reference and Major Lessons Learned for Technical Cooperation Projects

" Thematic Standard Indicator Reference and Major Lessons Learned for Technical Cooperation Projects "comprises indicators and major lessons learned, in 12 sectors (as of December 2014): basic education; disaster management; agricultural and rural development, small and medium enterprise promotion; trade and investment promotion; water resources; legal system development; disability and development; gender and development; finance; health; and local administration. These indicators and lessons learned are classified based on the Development Objectives Chart made for Thematic Guidelines. The References will be further developed in other sectors.

* The Development Objectives Chart is a tree diagram that breaks down each development issue into " development strategic objectives ", " mid-term objectives "and " sub-targets of mid-term objectives ", and shows the causal relationships between actions and objectives to form an overall picture of the development issue across all sectors in developing countries (refer to Chart 1). This can contribute at the project planning stage to understanding the relevance between individual projects and development issues and set appropriate indicators based on clearer objectives. The Development Objectives Chart is expected to be used as a reference for those setting quantitative indicators, particularly at the project formulation and ex-ante evaluation stages.

Process to create the References / usage patterns / methods of use

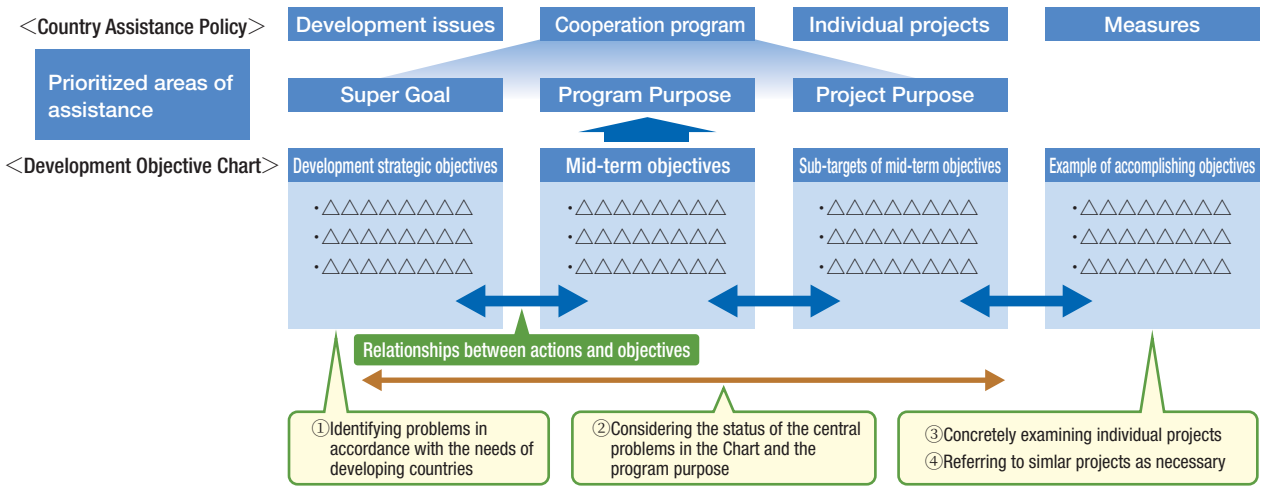
These References were compiled through the following process: first, the Evaluation Department sorted indicators set for past projects and analyzed how they were used in individual project evaluations to draft a set of standard indicators, which was then edited under the technical supervision of relevant Thematic Departments and Senior Advisors. The Standard Indicator References are effectively used by overseas office staff when formulating projects as well as headquarters staff when designing project plans at the ex-ante evaluation phase and monitoring and evaluating projects. They are not only used by JICA staff to reference their work but also published on the website to facilitate their use by development consultants and others involved in ODA projects. Moreover, they are being translated into English for reference by local staff in overseas offices. Furthermore, JICA is doing its utmost to build capacity. In-house training is also provided for JICA staff using the References.

＜Chart 1＞
What is the Development Objective Chart ?

Development Objective Chart — A tool for grasping an overall picture of the development issue across each sectors and examinig directions towards problem solutions and cooperation approach.

How to read the Chart — The chart breaks down each development issue into" development strategic objectives "＞" mid-term objectives "＞" sub-targets of mid-term objectives "(the causal relationships between actions and objectives) and shows "example of accomplishing objectives" (approach).

Figure: Development Objective Chart



This paragraph describes how to use the Standard Indicator References by taking a set of indicators for a Technical Cooperation project as an example (refer to the chart below). At first, (1) refer to the Development Objective Chart to set a clear objective for the project and confirm its positioning in a cooperation program. Then, (2) set an Overall Goal, a Project Purpose and objective and measurable Indicators for the project. Next, (3) refer to Major Lessons Learned to consider their applicability. Finally, (4) refer to Examples of Project Objectives, as well as similar projects listed in the column of Reference Projects, to gain a clear picture of the project.

Operation and Effect Indicator Reference for ODA Loan Projects

JICA has also compiled "Operation and Effect Indicator Reference for ODA Loan Projects," in which indicators for ODA Loan projects are classified by sector. It covers 20 sectors, including the solid waste sector newly added in July 2014, as follows: thermal power generation; hydropower generation; wind power generation; power transmission and substation facilities; power distribution; gas; roads; railroads; aviation; ports; information & communication technology; irrigation and agriculture; river improvement; afforestation; water supply; water drainage; education; health; tourism; and solid waste. This document is not only used by JICA staff as a reference for their work but also published on the website.

Improvements by applying the References and issues to be concerned

The efforts to extract knowledge from experience and systematize it in a way to facilitate practical use have greatly contributed to improving project management by JICA staff. By transforming unorganized information into knowledge, JICA has made considerable strides. The use of these Standard Indicator References and other reference materials is expected to enhance the quality of project planning processes, such as project formulation by overseas office staff and project designing and ex-ante evaluation by headquarters staff.

Conversely, it is important to keep in mind that these Standard Indicator References and other reference materials are not a framework or tool to analyze and develop the process for producing specific effects. It is essential to set indicators on a case-by-case basis to properly describe the project purpose, which is defined based on an analysis of the status quo and development issues of the target country.

Related link:

・Standard Indicator Reference

http://www.jica.go.jp/english/our_work/evaluation/indicators/index.html
http://www.jica.go.jp/activities/evaluation/indicators/index.html

Thematic Standard Indicator Reference and Major Lessons Learned for Technical Cooperation Projects (Sample)

Point

❶Standard Indicators for objectives at the program level (mid-term objectives) and project level (sub-targets of mid-term objectives) are listed, categorized by development issue type. This tree diagram enables those designing projects to always set clear objectives.
❷In addition to Indicators, examples of Project Purposes are listed to facilitate understanding of the logic model of individual development issues.
❸Lessons learned that need to be considered and applied are selectively listed (some of them are modified). This can reduce time required to find important lessons learned from a huge volume of data.
❹Examples of previous projects are listed for reference.

Model (1) Training of Teachers (Improving the Classroom Practices of Teachers)

Development strategic objectives	Mid-term objectives	Indicators for objectives at the program level	Sub-targets of mid-term objectives	Examples of Overall Goal / Project Purposes and indicators	Method and policy of indicator setting	Major lessons learned	Example of operation purpose (Image of projects)	Reference project
Country Assistance Policy	Development issues to be addressed by cooperation programs	Indicators set in line with the objectives (target years and indicators) of the relevant sector / area development plans of the partner country	Development issues to be addressed by individual projects	By producing (outputs), the project will achieve (outcomes) and thus contribute to (impacts)	Points to consider and keep in mind when setting indicators	Lessons learned and potential risks that should be studied for the projects related to this mid-term objective (Analyzed from the two viewpoints: 1) Planning stage and 2) Management)		Information about the projects that should be referred to as good practices
E.g. " Basic Education " 1. Expansion of primary and secondary education	1-2. Enhancing the quality of primary and secondary education	(1) Completion / achievement rates of primary / secondary education (2) National / achievement test results (Improvements in the academic achievements of students)	1-2-1. Increasing the number of teachers and raising their awareness, knowledge and skills (Improving the classroom practices of teachers)	(Model description) By enhancing the motivation and knowledge of teachers for classroom practices, the project will improve the classroom practices of teachers and thus contribute to enhancing the quality of learning for students. (Standard indicators) 1. Standard indicator of the Overall Goal: (1) National test results 2. Standard indicator of the Project Purpose: (1) Achievement of the targets set for classes	- In the case of indicators such as " More than 3.0 points when assessed with the classroom achievement evaluation tool, "it is necessary to set objective and understandable definitions and standards for the target values.	1) Planning stage: The reliability of data can be enhanced by comparing not only the changes in the target area over time but also the disparities between the target area and other areas or national averages. 2) Management: It is desirable that the counterpart organization bear the operating costs of teachers ' training (e.g., daily allowances for trainers and traveling expenses for trainees) in order to ensure sustainability.	By organizing in-service training for primary math and science teachers in △△ area, the project will establish an in-service teacher training model and thus contribute to improving the classroom practices of teachers.	- Mathematics and Science Education Improvement Project in △△ - Study on In-service Teacher Training Improvement Plan in △△

①Verifying "setting of clear issues" and the status in cooperation program based on the "Development Objective Chart" → ②Setting Overall Goal and Project Purpose of individual projects and objective and measurable indicators → ③Referring and utilizing major lessons learned → ④Referring similar project cases

Overview of Ex-post Evaluation Results

JICA conducts ex-post evaluations through external evaluations by external experts and internal evaluations primarily by JICA ṡ overseas offices, to ensure transparency and objectivity of project evaluations. The following presents an overview of the evaluation findings and analytical results from ex-post evaluations conducted in FY2013.

◆Ex-post evaluation system

JICA has made efforts to develop a common evaluation method for all three schemes of ODA Loan, Grant Aid and Technical Cooperation. In FY2013, ex-post evaluations (76 external evaluations and 50 internal evaluations) were conducted under the same uniform evaluation system as in previous years. In principle, projects costing over one billion yen are subject to external evaluations, by third-party evaluators based on the results of field evaluations to assure the objectivity and transparency of project evaluations. Meanwhile, projects that cost over 200 million yen and under one billion yen are not subject to external evaluation but to internal evaluation conducted by overseas office staff (refer to pp.20-21 for details of the internal evaluation).

◆Rating system

In the external evaluation process of the ex-post evaluation system, projects are rated in accordance with international standards (i.e. the Five OECD-DAC Evaluation Criteria). Each project is assessed for its relevance, effectiveness/impact, efficiency and sustainability. Based on the results, an overall rating is given 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 a means of indicating the effectiveness of projects, it does not take into account the difficulty of projects or the degree to which JICA has contributed toward their achievement. Thus, it does not reflect all aspects of development projects.

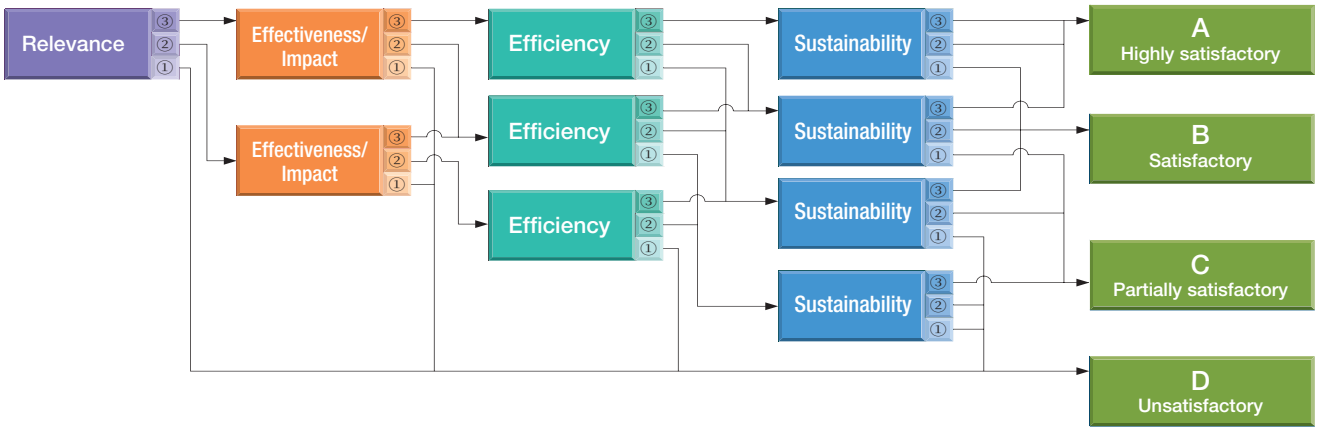
The“ Overview of Ex-post Evaluation Results ”on the following pages summarizes the results of external evaluations (pp.13-19) and internal evaluations (pp.20-21). Some of the individual external (detailed) evaluations are also outlined on pp.22-41.

Rating criteria and overview of main items examined

Rating criteria and main items examined		Reasoning		
		③	②	①
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 in consistency
	Relevance with development needs (needs of beneficiary, project area, and community)			
Effectiveness/ Impact	Achievement of expected project outcomes in target year (including use of facilities and equipment)	Objectives largely achieved, and project generated outcomes (80% or more of plan)	Some objectives achieved, but some outcomes were not generated (between 50% and 80% of plan)	Achievement of objectives was limited, and project did not generate outcomes (50% or less than plan)
	Status of indirect positive and negative outcomes	Project generated indirect outcomes as assumed / no negative impacts	Some problems with indirect outcomes generated / some negative impacts	Problems with indirect outcomes generated / 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, but prospects of improvement exist	Insufficient
	Financial sustainability (availability of operation and maintenance budget)			

* The criteria and items examined differ by assistance scheme and project.

Rating flowchart



External Evaluation

With regards to external evaluation, this Chapter first analyzes evaluation results in a cross-sectoral way and compiles the lessons learned from individual evaluations on " Approaches on Project Implementation for Realizing Development Effects ". Subsequently, it analyzes the rating results of external evaluation and their distribution to identify tendencies for each evaluation criterion. It also compiles some projects cited as having issues in external evaluations. Overviews of some external evaluation results are introduced after p.22.

Cross-Sectoral Analyses: " Approaches on Project Implementation to Realize Development Effects "

JICA, as the sole integrated implementing agency responsible for Japanese Official Development Assistance (ODA), has a vision of" Inclusive and Dynamic Development "and has been assisting developing countries to resolve their issues by utilizing optimum methods out of diverse aid methods. In terms of development assistance provided to developing countries, external evaluations have offered various implications, such as points to be noted in project implementation, trials for enhancing effects and so on. This year's cross-sectoral analyses extracts factors of these external evaluations which have influenced the effects achieved at various levels and introduce some results obtained.

◆Pilot activity approach to encourage outcomes to take firm roots

In implementing development projects, the approach to work involves developing capacity through pilot activities and assumes that pilot activities could become established to expand development effects within a certain limit of assistance resources. The following examples are introduced to explain certain perspectives considered important as part of ongoing efforts to ensure the effects of pilot activities take root.

" Local Governance and Rural Empowerment Project for Davao Region "in the Philippines (refer to p.28) aims to improve the capacities of personnel to provide water supply services by developing human resources in Local Governments of the Davao Region. Learning and establishment processes on daily concrete duties of the implementing agency such as underground water development and community organization, were incorporated into the technical cooperation resulting in applications by the Implementing Agency after the project's completion. The lesson learned here was that the effectiveness of any assistance fitting the challenges and needs of the Implementing Agency on daily duties is high.

" Strengthening the Flood Management Function of DPWH "in the Philippines secured opportunities, whereby knowledge learned from a series of processes covering planning, designing, constructing and maintenance management as regards to flood control could be ' practically used 'within the project. Since the actual utilization of acquired knowledge was confirmed to enable the steady acquisition of skills and techniques, it is indicated that trials of technical cooperation focusing on the ' learning process 'are effective.

Conversely, Southeast Asian Regional Cooperation on " Animal Diseases Control Project in Thailand and Neighboring Countries (Phase 1) / Regional Cooperation Project for Animal Disease Control among Cambodia, Lao P.D.R., Malaysia, Myanmar, Thailand and Vietnam (Phase 2) "have established networks for wider regional information sharing. According to the evaluation results, however, pilot activities ceased in many target countries. The reasons were assumed to be inadequacies in budgetary conditions, relevant policies and concrete consideration of exit strategies, which enable the continuation of pilot activities. Based on this, lessons learned suggested that certain points, such as how to utilize the results of pilot activities and share them with other stakeholders, should be clarified before the completion of the cooperation.

In addition, " the Project for Capacity Development on Non-Revenue Water Control "in Brazil (refer to p.34), aiming to improve non-revenue water control technology of the counterpart agency based on activities in a pilot area, distributed most of the limited resources in technical assistance to the pilot site, resulting in limited inputs for dissemination. Consequently, a scenario to expect expanded outcomes through assistance activities has become less likely. In light of certain targets, it is considered that proper inputs are required at implementing stages and needless to mention, an appropriate plan must be formulated.

These examples suggest the importance of an approach whereby knowledge and skills acquired in the project are practiced in the same project, based on consensus reached during the project implementation period on how to utilize the results after the project completion, when adopting pilot activities expected to take root.

◆Strategic use of resources to solve development issues

To realize developmental effects, inputs from various resources need to be properly combined. To overcome developmental challenges, JICA has assisted by ensuring aid schemes are effectively used. The following examples explain some of the efforts made in coordinating financial and technical cooperation:

The " Rural Secondary Education Expansion Project "in Morocco (refer to p.40) aimed at supporting efforts to narrow disparity between urban and rural areas as well as male and female students, by constructing secondary schools, particularly in areas with higher poverty indicators, to disseminate secondary education in rural areas. In addition to financial cooperation required to construct school buildings, JOCVs were dispatched to target regions as teachers in various subjects, including physical training, science and music. In rural secondary schools with limited learning opportunities, particularly for music, these activities are deemed to have contributed to improving education, as well as wider acknowledgement that school buildings were constructed by Japanese cooperation.

In“ the Project for Improvement of Infrastructure and Equipment of Training Schools for Health Personnel ”in Mozambique (refer to p.38), targeting the expansion and consolidation of facilities and equipment at national health human resources training institutes, there were some cases where equipment items were not fully utilized immediately on completion of assistance. Subsequently, JICA dispatched a short-term expert to provide continuous support for the usage of equipment. Consequently, an ex-post evaluation confirmed that the equipment items provided had been fully utilized with proper management. The lesson learned here showed that it is highly effective to provide not only training programs and workshops on how to use and maintain equipment during the project implementation but also assistance schemes after the project's completion.

In“ the Project for Improvement Fire Fighting Equipment in Yerevan City ”in Armenia, which was intended to strengthen fire control services of Yerevan City by consolidating fire-prevention equipment (vehicles and equipment) as well as instructions on how to operate the equipment, JICA group training regarding disaster prevention before the project commenced served to improve the acceptance environment in the counterpart agency. In addition, further JICA group training in the same field, which was implemented after completing the project, served to further strengthen the fire control educational system as well as realizing the project's effects and sustainability. The reasons behind this successful collaboration between JICA group training and the project are analyzed and include the following:

1) The counterpart agency selected personnel at managerial level and strongly motivated to improve;

2) On return from Japan, this former trainee was requested to prepare a concrete action plan based on the training results;

3) Sufficient budget was secured to realize this action plan.

As indicated by the previous evaluation results regarding coordination matters of different aid schemes, there are issues to be improved by adjusting implementing timing and periods and objectifying coordination per se is not desirable. Conversely, the above-mentioned examples are considered to have shown strategic utilization of resources to overcome sectorial issues by overlooking sector conditions and entire aid schemes as well as realizing the sustainable effects of individual projects.

◆Risk analyses regarding project implementation schedule and how to respond to delays

To enhance development effects, some examples were introduced to show a pilot activity approach expecting the activity results to take root in the pilot site as well as strategic utilization of resources to solve development issues. As well as enhancing development effects, it is also important for the beneficiary side whether or not a certain service is delivered within the deadline as initially planned. If projects are delayed, benefits which are supposed to be obtained also tend to be delayed, which significantly inhibits the development effects.

In the“ Greater Mekong Power Network Development Project ” in Laos, delays in planning the consolidation of power transmission lines and constructing a power generation plant caused a decrease in the volume of electricity conveyed into power transmission lines installed by the project. Consequently, the rate of facility operation of these lines declined below the initial assumption. A lesson learned from this experience suggests that, to ensure effects could be realized for an entire transmission network, it is necessary to confirm the feasibility of implementing related projects and the practical schedule with the implementing agency and donor organizations. This also needs to be followed up after launching the project by requesting that the implementing agency work on power transmission lines at proper timing.

In the“ Regional and Provincial Hospital Development Project ” of Vietnam, consultant selection was considerably delayed, which meant the actual project implementation period considerably exceeded the planned period. It is suggested that, taking into account the procurement procedures in the borrowing country at the time of appraisal, a practical schedule for project implementation should be planned. In addition, countermeasures should be secured to respond to risks, in case when the counterpart government is not familiarized with procurement procedures as stipulated in the ODA Loan agreement, which might result in delays.

In the“ Inland Higher Education Project (Regional Vitalization, Market Economy Reform Support, and Environmental Conservation) (Heilongjiang Province) ”in China, complicated procurement procedures ended up delaying the project schedule. However, the implementing agency learned a lesson from the previous human resource development projects; opting to shift from the initial plan to procure equipment by type for an entire ministry to a package approach to procure equipment for each school during the project implementation, to minimize the effects of any delays on each school. Here, the analysis reveals the importance of flexibility to change procurement methods and minimize the effects of delays in facility procurement.

In all cases, the difficulty of resolving project delays is acknowledged and various limitations are expected. However, there is a need to work and realize development effects promptly, by strengthening project monitoring and so on.

◆Way forward

JICA has made efforts to strengthen its management by utilizing lessons learned in the PDCA cycle. As part of this commitment, in this year's thematic evaluation, processing lessons learned into knowledge, which analyzes and processes relevant information on lessons learned from project evaluation results into“ knowledge lessons ”with higher practicability and versatility, was implemented to deal with issues in the four fields (refer to p.42). By utilizing the“ knowledge lessons ”created by this process, project management for the coming period is expected to improve.

In terms of the aforementioned examples, including“ Pilot activity approach to encourage outcomes to take firm roots ”, “ Strategic resource utilization to solve developmental issues ” and“ Risk analyses regarding project implementation schedule and how to respond to delays ”, their applicability must be carefully examined according to circumstances. There seems, however, to be further room for improvement on the effort of JICA.

Column

Analysis of Best Practices Contributing to Women's Economic Empowerment and Basic Capacity Development

JICA has focused on "gender equality and women's empowerment" as priority issues and incorporated gender perspectives into its projects for years. The ex-post evaluation in fiscal 2013 revealed that the following three projects had contributed to women's economic empowerment and basic capacity development by integrating gender perspectives into the project plans.

Bangladesh The Eastern Bangladesh Rural Infrastructure Development Project, which focused on constructing main rural roads in poor rural areas, hired a total of 1,945 poor women for maintenance in two years, who were tasked with repairing rural roads and foresting slopes. The project also introduced a mechanism whereby part of the wages of the project workers would be deposited into their accounts. An interview survey of the women engaged in the project for five years found that this mechanism had not only enhanced their food and living conditions by increasing their incomes but also built up their self-esteem and motivated them to start their own small businesses. In other words, this income-generating mechanism, which had been effectively applied in rural development projects in Bangladesh since the 1980s, was key to the success of this project. Because both the Bangladeshi and Japanese project implementing organizations recognized the importance of this mechanism and incorporated it into the project plan and because the Bangladeshi organization also had some experience in applying it in practice, the project effectively promoted women's economic empowerment.

India The Chhattisgarh Sericulture Project provided facilities, equipment and technical assistance to silk-raising farmers. Sericulture is considered a good job for poor women because it requires minimal investment but can generate relatively high incomes and is careful work. Targeting female farmers, who earned below the poverty line and owned no land, this project created jobs for approximately 3,350 farmers and spinners. In a survey of the female farmers having benefited from the project, almost all respondents (135 of 136) answered that their "social status had improved." They gave reasons for this, such as the fact that they were able to develop their self-esteem as they supplemented their family income by raising silkworms and that their higher confidence helped them establish an equal relationship with their spouses. This project was found to have boosted the earning capacity of poor women, changing their attitudes and thus improving their social status. This was done by narrowing down the target group to poor female farmers in the project planning stage, formulating an action plan for gender equality and promoting the activities of female self-help groups based on the same.

Morocco The Rural Secondary Education Expansion Project constructed secondary schools in provincial areas. During the project planning stage, both the Moroccan and Japanese sides recognized the problem of gender disparities in secondary education in Morocco. Based on this shared understanding, the project targeted provinces with (i) low secondary school coverage; (ii) low enrollment rates among 12-to-14-year-olds; and (iii) a low proportion of female students. The ex-post evaluation found that the project had contributed to an increase in the number of female students at secondary schools in provincial areas. In fact, 17,867 out of the 48,105 students who attended the secondary schools constructed under the project were female in the 2013-2014 school year. This was considered due to the fact that the Government of Morocco had started providing meals at school, constructing dormitories for students living outside commuting range and offering scholarships and other support at the same time as the project was undertaken and because women had preferentially benefited from these measures. Aware of the particularly large impact of school dormitories, JICA now integrates dormitory construction into its own projects. (Refer to p.40 for the summary result of external evaluation on this project)

The ex-post evaluations of the above-mentioned three projects elicited lessons on how to make projects more effective by promoting gender equality and women's empowerment. First, it is essential to devise measures to benefit women as well as men at the project planning stage, e.g. by analyzing data by gender and selecting proper target groups based on the analysis. Secondly, a common key to the success of these three projects was that the project implementing organizations had recognized the importance of benefiting women from the beginning and shared this awareness with JICA. These two points are also considered important when determining the effectiveness of projects.

Rating of External Evaluations*1 *2

Country	No	Scheme*3	Project name	Page*4	Relevance	Effectiveness*5	Efficiency	Sustainability	Overall rating
Armenia	1	G	The Project for Improvement of Fire Fighting Equipment in Yerevan City		③	③	③	③	A
Bangladesh	2	L	Eastern Bangladesh Rural Infrastructure Development Project		③	③	②	②	B
Cambodia	3	T	Capacity Development of Provincial Rural Development in Northern Provinces		③	②	②	②	C
	4	G	The Project for Improvement of Kampong Cham Hospital in Kampong Cham Province		③	③	②	②	B
China	5	L	Hunan Province Road Construction Project	26	③	③	②	③	A
	6	L	Jiangxi Urban Flood Control Project		③	③	①	③	B
	7	L	Inland Higher Education Project (Regional Vitalization, Market Economy Reform Support, and Environmental Conservation) (Xingjian Uygur Autonomous Region)		③	③	②	③	A
	8	L	Inland Higher Education Project (Regional Vitalization, Market Economy Reform Support, and Environmental Conservation) (Jilin Province)		③	③	②	③	A
	9	L	Inland Higher Education Project (Regional Vitalization, Market Economy Reform Support, and Environmental Conservation) (Anhui Province)		③	③	②	③	A
	10	L	Inland Higher Education Project (Regional Vitalization, Market Economy Reform Support, and Environmental Conservation) (Henan Province)		③	③	②	③	A
	11	L	Inland Higher Education Project (Regional Vitalization, Market Economy Reform Support, and Environmental Conservation) (Qinghai Province)		③	③	②	③	A
	12	L	Inland Higher Education Project (Regional Vitalization, Market Economy Reform Support, and Environmental Conservation) (Ningxia Hui Autonomous Region)		③	③	③	③	A
	13	L	Inland Higher Education Project (Regional Vitalization, Market Economy Reform Support, and Environmental Conservation) (Heilongjiang Province)		③	③	②	③	A
	14	L	Shandong Tai'an Pumped Storage Power Station Project		③	②	③	③	A
India	15	L	Chhattisgarh Sericulture Project		③	②	②	②	C
Indonesia	16	L	Depok Depot Construction Project		③	③	②	②	B
	17	L	North Java Corridor Flyover Construction Project		③	③	①	②	C
	18	L	Maritime Education and Training Improvement Project	22	③	②	②	②	C
Lao PDR	19	L	Greater Mekong Power Network Development Project (Lao PDR)	32	③	③	②	②	B
	20	T	The Aquaculture Improvement and Extension Prject Phase 2		③	②	③	②	B
Malaysia	21	L	Sewerage Treatment Plant Project		③	③	①	②	C
Mongolia	22	L	Two-Step-Loan Project for Small and Medium-Scaled Enterprises Development and Environmental Protection		②	②	③	②	C
Sri Lanka	23	L	Sri Lanka Tsunami Affected Area Recovery and Takeoff Project		③	③	②	②	B
	24	T	Project for Establishment of Japan - Sri Lanka College of Technology to Strengthen Technical Education and Training in Sri Lanka	24	③	①	②	①	D
	25	T	Capacity Upgrading Project for the National Solid Waste Management Support Center		③	②	③	②	B
	26	T	The Project for Promoting Energy Efficiency Improvement		③	②	②	②	C
	27	G	The Project for Improvement of Anuradhapura Teaching Hospital / The Project for Improvement of Anuradhapura Teaching Hospital (Phase II)		③	③	②	②	B
Thailand	28	L	Transmission System and Substation Development Project (Sixth Stage Phase I)		③	③	②	③	A
The Philippines	29	T	Local Governance and Rural Empowerment Project for Davao Region	28	③	③	②	③	A
	30	T	Capacity Development Project on Water Quality Management		③	②	②	③	B
	31	G	The Project for Improvement of Flood Forecasting and Warning System in the Pampanga and Agno River Basins		③	③	②	③	A
	32	T	Strengthening the Flood Management Function of DPWH		③	③	②	②	B
	33	T	Information Technology Human Resource Development Project		③	②	②	②	C
	34	L	Rural Road Network Development Project (Phase III)		③	③	①	②	C
	35	L	Urgent Bridges Construction Project for Rural Development		③	③	①	②	C
	36	L	Central Mindanao Road Project		③	③	②	②	B
	37	L	Arterial Road Links Development Project (V)		③	③	①	②	C
	38	L	Iloilo Flood Control Project (I) (II)		③	③	①	③	B
	39	T	Establishment of Ecological Solid Waste Management System		③	②	③	②	B
Tonga	40	G	The Project for Construction of the Inter-Islands Vessel		③	③	②	②	B
Uzbekistan	41	L	Tashguzar-Kumkurgan New Railway Construction Project		③	③	②	③	A
Vanuatu	42	G	The Project for Improvement of Port Vila Main Wharf		③	③	②	②	B

Country	No	Scheme*3	Project name	Page*4	Relevance	Effectiveness*5	Efficiency	Sustainability	Overall rating
Vietnam	43	L	Regional and Provincial Hospital Development Project		③	③	②	③	A
	44	L	Transport Infrastructure Development Project in Hanoi		③	③	①	③	B
	45	L	Central Vietnam Rural Telecommunication Network Project	30	③	③	②	②	B
	46	T	Project for Enhancing Functions of Agricultural Cooperatives		③	②	②	③	B
	47	T	Forest Fire Rehabilitation Project		②	③	②	②	C
	48	G	The Project for Empowerment to the Community Damaged by Forest Fire in Ca Mau Province		②	②	③	②	C
Southeast Asia Region	49	T	Animal Disease Control in Thailand and Neighboring Countries (Phase I) / Regional Cooperation Project for Animal Disease Control among Cambodia, Lao P.D.R., Malaysia, Myanmar, Thailand and Vietnam (Phase 2)		③	②	③	②	B
Brazil	50	T	The Project for Capacity Development on Non-Revenue Water Control	34	③	②	②	③	B
	51	L	Northeast Water Resources Development Project		③	③	①	③	B
Costa Rica	52	L	Pirris Hydroelectric Power Development Project		③	③	①	③	B
El Salvador/ Honduras	53	G	Project for Construction of the Japan-Central America Friendship Bridge	36	③	②	②	②	C
Guiana	54	G	Project for Water Supply in Corriverton (Phase I and Phase II)		③	②	①	③	C
Honduras	55	G	Urgent Water Supply Project in Tegucigalpa		③	②	②	③	B
	56	T	Project for Improvement of Teaching Method in Mathematics (PROMETAM) Phase 1 & 2		③	③	③	②	A
Mexico	57	L	Baja California Water Supply and Sanitation Project		③	③	②	②	B
South America Region	58	T	Project of the Capacity Development for Improvement of Livestock Hygiene in the Southern Part of South America through Regional Technical Cooperation		③	②	③	②	B
Angola	59	G	The Project for Emergency Rehabilitation of Port Facilities at the Port of Lobito and the Port of Namibe		③	③	②	②	B
Brundi	60	G	The Project for Rehabilitation of Public Transportation		③	③	②	②	B
Cameroon	61	G	Project for the Construction of Primary Schools (Phase IV)		③	③	②	②	B
Ethiopia	62	G	Project for Construction of Primary Schools in Oromia Region		②	①	①	②	D
Jordan	63	L	Tourism Sector Development Project		③	①	②	③	D
	64	T	The Project for Strengthening the Capacity of Training Management of Vocational Training Corporation		③	③	②	②	B
Morocco	65	L	Rural Secondary Education Expansion Project	40	③	③	②	③	A
	66	L	Marrakech-Agadir Motorway Construction Project		③	③	②	③	A
Mozambique	67	G	The Project for Construction of Bridges on Rural Roads in Zambezia and Tete Provinces		③	③	②	②	B
	68	G	The Project for Improvement of Infrastructure and Equipment of Training Schools for Health Personnel	38	③	③	②	②	B
Tanzania	69	G	The Project for Zanzibar Urban Water Supply Development (Phase I and II)		③	②	②	②	C
	70	G	The Project for Reinforcement of Transmission and Distribution Facilities in Oyster Bay Substation (Phase I and II)		③	③	②	②	B
Turkey	71	L	Seismic Reinforcement Project for Large Scale Bridges in Istanbul		③	③	②	③	A
	72	T	Project on Strengthening the Program of Expanding Industrial Automation Technologies Department		③	②	②	②	C
Uganda	73	T	The Project for Instructors Training for Vocational Education and Training		③	②	③	②	B
Bulgaria	74	L	Sofia Metro Extension Project		③	③	②	③	A
Romania	75	T	Project on Reduction of Seismic Risk for Buildings and Structures		③	②	②	③	B
	76	L	Road Improvement Project		③	③	①	③	B

*1 ③ : High, ② : Moderate, ① : Low / A: Highly satisfactory, B: Satisfactory, C: Partially satisfactory, D: Unsatisfactory (→ refer to p.12 for details)

*2 External evaluations are for projects costing over 1 billion yen or other projects deemed to provide valuable insight.

*3 L: ODA Loan, G: Grant Aid, T: Technical Cooperation

*4 Regarding projects which have page numbers listed, please refer to p.22 and onwards of this report.

*5 Effectiveness includes evaluation of impact.

*6 New provision of ODA loan to China was halted with the six Loan Agreements in December 2007.

Explanation of Ratings Distribution

◆Overall rating

The results of the external evaluations conducted in FY2013 are as listed on p.16. Evaluations were conducted for 76 projects: 38 ODA Loan projects; 18 Grant Aid projects; and 20 Technical Cooperation projects, most of which were carried out in Southeast Asia, East Asia, and Latin America by region and in sectors such as road, higher education, power, port, and water supply and sewerage. The overall ratings of the 76 projects are: 20 projects were rated A (26%); 36 projects were B (48%); 17 projects were C (22%); and 3 projects were D (4%). A and B combined comprise 74% of the total; such projects largely generated results which were expected. Some of the reasons for rating projects C or D include“ changes in the environment surrounding the project, ”“ constraints on the exhibition of effectiveness due to delays in relevant projects ”and“ problems with the organizational structure of operations, maintenance, and management. ”

◆Criterion-based rating

With regard to **relevance**, 72 projects were rated“ ③ ”(95%) and 4 projects were“ ② ”(5%), which meant many were deemed relevant. Issues emerged in some projects although they were aligned with the partner country’s policies and the needs of the entire country. This was due to problems related to the appropriateness of the project design. Problems included,“ some problems in selection of target site, etc. ”and “ insufficient examination of environmental risks. ”

Regarding **effectiveness/impact**, 50 projects were rated“ ③ ”(66%), 23 projects were“ ② ”(30%), and 3 projects were“ ① ”(4%), so many were deemed as having effectiveness/impacts. Projects deemed to have issues of some kind included: projects which produced outputs, such as facilities, but did not exhibit the initially targeted degree of effectiveness; and projects in which the counterpart government did not adequately continue activities after the project’s completion. The reasons varied by project, e.g.“ continuing the initial plan became difficult due to changes in the environmental surroundings, such as political unrest within a region, ”and“ measures were not sufficiently taken for the continued delivery of project effects. ”

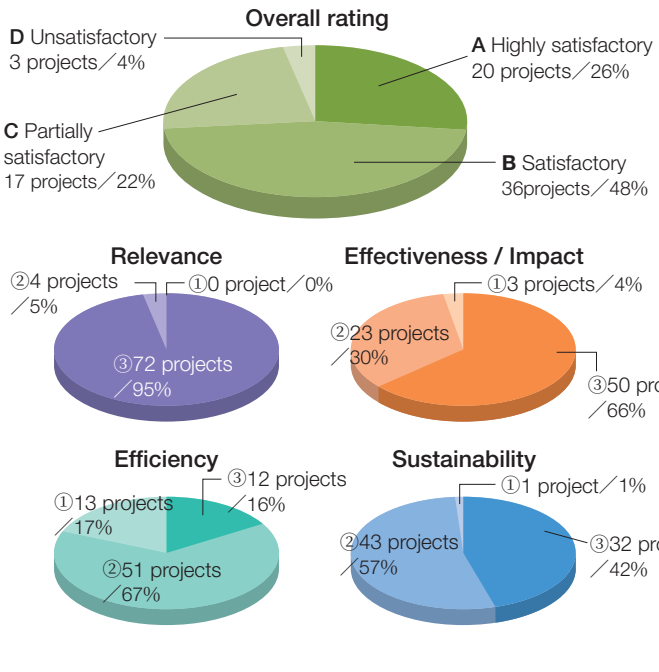
As for **efficiency**, 12 projects were rated“ ③ ”(16%), 51 projects were“ ② ”(67%), and 13 projects were“ ① ”(17%). Therefore, the projects were not necessarily efficient. Some projects were deemed to have issues primarily because they could not be completed within the planned period and/or budget. The reasons for these assessments are attributed to“ delays in construction and procurement ”,“ the need for revised design accompanying changes in the plan and the need for additional time for permit procedures ”, and“ the need for additional investment. ”

With regard to **sustainability**, 32 projects were rated“ ③ ”(42%), 43 projects were“ ② ”(57%), and 1 project was“ ① ”(1%). Therefore, there is room for improvement. While many factors are involved, such as organizational structural issues, many projects were found to have insufficient funds for operation and maintenance, and continued activities. The reasons for insufficient funds included“ insufficient budget allocations from central and local governments for project operation and maintenance ”and“ inability to cover the costs required for operation and maintenance from fee collection ”.

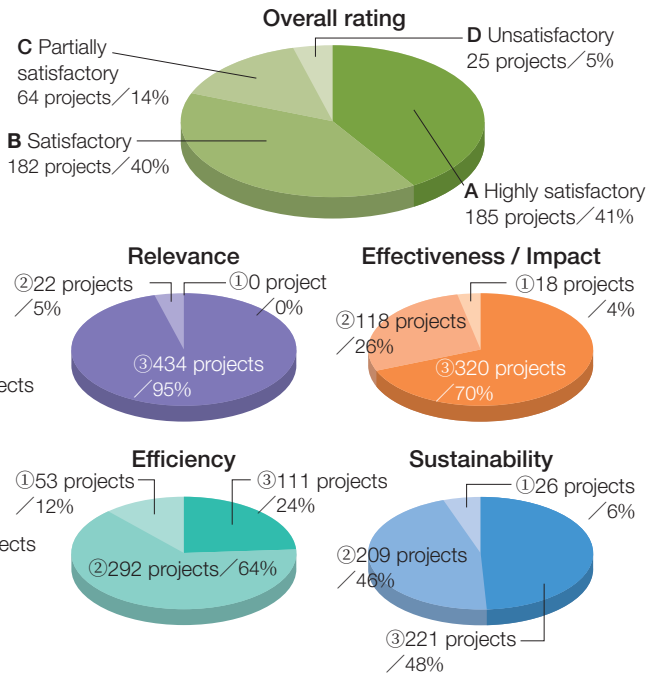
Regarding these issues, individual project evaluations identify the recommendations and lessons learned for JICA and the partner country. As the details are shown in“ Cross-sectoral analyses ”(refer to pp. 13-14), lessons are identified with regard to the“ approach of pilot activities with a view to their outputs being rooted, ”“ strategic utilization of resources to overcome development issues, ”and“ risk analysis on project implementation schedule and response to its delay. ”

The recommendations and lessons learned will be fed back to the partner country as well as to JICA to steadily improve the evaluated project and future new projects.

<Overall Rating for FY2013 External Evaluation and Distribution of 4 Criteria>



<Totals for FY2009 to FY2013 External Evaluation>



Projects Cited as Having Issues

Sri Lanka

Project for Establishment of Japan - Sri Lanka College of Technology to Strengthen Technical Education and Training in Sri Lanka

◆Outline of evaluation results and challenges

This project aimed to establish training courses for levels 5 and 6 of the National Vocational Qualifications (NVQ) at the Sri Lanka College of Technology (hereinafter referred to as the " Target School ") to train mid-level technicians and use the experience to develop the managerial and technical capacity of the Department of Technical Education and Training (DTET), a supervisory institution, to establish Technical Colleges in individual provinces. However, the project brought a whole host of problems in its wake, particularly regarding the training delivery at the Target School, due to a delay in establishing the qualification framework, delayed project activities, and a lack of commitment to the project on the part of the DTET. The ex-post evaluation also concluded that the managerial capacity of the DTET had not developed as expected. Although the Target School continued to offer the three training courses introduced by the project, they did not necessarily lead to higher pass rates on the NVQ assessment of levels 5 and 6 as expected, which meant that the project had not sufficiently developed training capacity. This was considered attributable to the shortage of personnel at the DTET and the lack of teaching capacity of instructors at the Target School. The training courses for NVQ levels 5 and 6 were planned to be transferred to University Colleges (UCs), which would be established nationwide, but no detailed plan for transferring the experience and human resources (e.g. instructors) of the Target School had been prepared.

◆Recommendations and lessons learned

The ex-post evaluation made the following recommendations: (i) to improve the training courses of Technical Colleges and develop the teaching capacity of their instructors to increase the pass rates on NVQ levels 5 and 6 among those having completed the courses; (ii) to effectively transfer the resources of Technical Colleges, including the Target School, to UCs. The evaluation also drew the following lessons from the project: (i) if a project includes activities concerning a new qualification system that has yet to be established, it is essential to devise measures to be taken in the case of a delay in introducing the system and narrow down and focus on specific issues to ensure the steady implementation of the project; and (ii) if a project aims to develop training courses at higher levels than those existing, it should establish a framework and mechanism via which the partner country can continuously develop the teaching capacity of instructors by the end of the project period.

◆Measures to be taken by the project management department

Recognizing that vocational and technical training institutes and their supervisory authorities should cooperate closely in establishing training systems and developing the teaching capacity of instructors, JICA is providing training for both organizations to enhance their managerial capacity for vocational education. Moreover, when formulating a project to cover new fields or develop higher level training courses, JICA carefully designs it to help establish a mechanism for continuous capacity-building of instructors in the partner country. (Refer to p.24 for the summary result of external evaluation on this project)

Jordan

Tourism Sector Development Project

◆Outline of evaluation results and challenges

This project aimed to develop tourism infrastructure in Amman and other cities and thereby boost tourist numbers and the inflow of foreign currency and help promote the tourism industry.

The evaluation results found that the number of tourists who had visited the tourist facilities developed under this project and their surrounding facilities had not reached the original target, in part because certain facilities had not yet been launched. The reasons identified by the evaluation study included political instability in neighboring countries; a lack of promotional campaigns; a shortage of parking lots, etc.; and unfeasible project targets. Although the project had produced certain impacts, such as enhancing educational opportunities at museums and promoting nature conservation activities in the Dead Sea, the evaluation pointed out that its impact had been extremely limited (for example, the average stay of tourists had hardly increased).

◆Recommendations and lessons learned

Several recommendations were made based on the evaluation, including (i) the need to start optimally exploiting all facilities as soon as possible; (ii) making better use of completed facilities; and (iii) constructing car parks. The evaluation also drew lessons from the project: (i) to maintain the implementation system after the completion of a project; (ii) to set proper targets (e.g. in terms of the target number of tourists) and conduct tourism promotion campaigns.

◆Measures to be taken by the project management department

JICA will further encourage and advise the Government of Jordan to capitalize on all completed facilities. Moreover, JICA is planning to enhance the effectiveness of tourism campaigns by adopting a region-wide approach, involving neighboring countries, for which it is also implementing tourism projects.

Ethiopia

Project for Construction of Primary Schools in Oromia Region

◆Outline of evaluation results and challenges

This project aimed to extend and construct elementary school facilities and thereby improve access to primary education in Oromia Region. The evaluation results found that the number of enrollments had increased by only 2,673 persons, far below the original target of 17,400 persons. Several reasons were identified for this, such as (i) the actual output falling far below the target of the original project plan; (ii) problems with the project design (e.g. the selection of target schools and the assessment of local needs at the project planning stage); and (iii) new construction and extension of other schools in the vicinity of the project area. Conversely, the evaluation indicated that the clean and bright classrooms, well-equipped libraries and teaching material rooms developed by the project had enhanced students ' motivation to learn and also boosted the teaching practices of teachers. From a maintenance perspective, there was a budget shortfall, despite the need to repair some facilities and equipment.

◆Recommendations and lessons learned

Recommendations were made for the target schools to ensure daily maintenance and cleaning, and for the project implementing organization to secure a budget for maintaining facilities and hiring and retaining teachers. The lessons learned from the project include (i) the importance of assessing needs and setting proper indicators for evaluation at the project planning stage and (ii) the need for more precise project planning.

◆Measures to be taken by the project management department

After the ex-post evaluation, JICA confirmed the status quo that the target schools were properly used. JICA will further encourage the Ethiopian project implementing organizations to engage in daily maintenance. As far as this project is concerned, there were compelling reasons why fewer facilities were built than originally planned, such as a sudden price rise. Still, JICA has learned lessons from it and improved the Community Empowerment Grant Aid scheme to increase planning precision and ensure appropriate indicators are set.

Overview of Internal Ex-post Evaluation Results

◆About Internal Ex-Post Evaluations

Since FY2010, JICA has been conducting internal evaluations of projects over 200 million yen and below 1 billion yen, whereby overseas offices act as evaluators, assisted by the evaluation department. With internal evaluations, evaluators of overseas offices conduct evaluations by carrying out interviews with the implementing agency and project site inspections. This fiscal year, 50 internal evaluations were conducted, including some carried over from the previous year.

◆Overall evaluation

Internal ex-post evaluations were conducted for 50 projects: 23 Grant Aid projects and 27 Technical Cooperation projects. The scope was worldwide, with many projects in Southeast Asia, Central and South America, Africa and elsewhere. The projects covered a wide range of sectors, including health, water resources and disaster management, agricultural and rural development, etc. The overall evaluation of the 50 projects indicates that over half the projects delivered the expected result at the time of ex-post evaluation.

◆Evaluation by criterion

Evaluation results by criterion show that in terms of **relevance**, there is no specific problem observed from all the projects and they were consistent with the policies of the project-targeted countries in meeting their needs.

Regarding **effectiveness/impact**, approximately 40% of all projects achieved the expected outcomes, while the remaining 60% or so faced some challenges in achieving results compared to their plan.

For some grant aid projects, it is observed that changes in demand and problems with maintenance and management resulted in the underutilization of equipment and facilities. It is also observed that delays in partner countries ' portions hindered the planned effects.

For some technical cooperation projects, it is noted that (1) while the project purpose was achieved, the overall goal was not achieved at the time of ex-post evaluation and (2) the project purpose and overall goal were both not achieved as planned, although the projects produced certain effects.

Under circumstances whereby " while the project purpose was achieved, the overall goal was not achieved at the time of ex-post evaluation, " it was confirmed that (1) some projects ' effects achieved during the project were not sustained after the project completion (reason: reduction in budget/staff strength of the implementing organization, trouble with equipment, etc.) and (2) while the projects ' effects achieved during the project were sustained, the overall goal remained unachieved (reason: the projects ' goal was yet to be achieved at the time of ex-post evaluation, despite improvement having been observed, the logical linkage between the project purpose and the overall goal is weak, meaning achieving the project purpose did not elicit the achievement of the overall goal, lack of budget to execute plans, etc.).

Besides, there were some cases observed whereby the lack of information on indicators meant overall goal achievement could not be confirmed. Moreover, due to the weak logical linkage between the project purpose and the overall goal, it was not possible to determine whether implementing the project had helped achieve the overall goal.

As for **efficiency**, approximately 30% of the projects were completed within the planned period and cost while the remaining 70% or so exceeded the period and/or cost upon completion. In case of grant aid projects, delays in equipment procurement, facility construction and customs clearance extended the project beyond the planned period. As for technical cooperation projects, the project amount exceeded the planned amount as more funds were needed than initially planned to achieve the project purposes and outputs.

Concerning **sustainability**, more than 70% of the projects were identified as having some challenges, of which more than 70% were identified as having insufficient sustainability in financial terms, such as budgetary measures of implementing organizations. Some projects also encountered challenges including inadequate organizational structures and skills, as well as operation, maintenance and management, inadequate assignment of appropriate personnel, lack of technical capabilities and routine inspections and repairs.

◆Future efforts

The challenges identified in each project are relayed to recipient countries and relevant JICA departments as concrete recommendations, which are then used to facilitate improvements. Furthermore, through internal evaluation activities, overseas offices have gained a number of lessons to develop and monitor projects, which are also relayed to the relevant JICA departments, to be utilized for planning and monitoring of similar projects.

In implementing internal evaluations, JICA was mindful of utilizing quantitative indicators to increase objectivity. As well as ensuring the clarity of the evaluation result by increasing objectivity, JICA will examine more efficient evaluation approaches and continue to enhance the evaluation capacity of overseas offices while exploring means of further improvement, including the content and method of the assistance provided by the evaluation department.

Effective lessons

[Republic of Uzbekistan]

The Project for Improvement of Equipment for National Center of Rehabilitation and Prosthesis of Invalids

The internal ex-post evaluation confirmed that the maintenance and management method introduced in this Grant Aid project was continuously adopted and contributed to the sustainability of the project. Before the project started, Japan Overseas Cooperation Volunteers (JOCVs) introduced a methodology utilizing a ledger to record maintenance and management of equipment to the "State Scientific Center for Emergency Medical Services" in Uzbekistan, known as an "Equipment Use and Maintenance Passport." This methodology was subsequently used continuously and standardized in said medical institutions after the Volunteers' return to Japan. This was the background against which the project introduced the methodology to the targeting facility. The soft component of Grand Aid involves providing the minimum technical assistance required to facilitate the utilization of improved facility/equipment and the projects' effects achieved during the project are sustained. These ex-post evaluation results suggest the importance of the following points to ensure sustainability effectively with limited input: (1) conduct the survey appropriately to determine the current maintenance and management method adopted in the target country and (2) in case a maintenance and management method functions, the methodology is considered to be the most applicable for the country, which means it should be utilized to provide soft components.

Laos
Field Survey of the Development of the Faculty of Economics and Management of National University

Republic of Indonesia

Maritime Education and Training Improvement Project

Contributing develop human resources of Indonesian seafarers equipped with international standard qualifications

External Evaluator: Keishi Miyazaki, OPMAC Corporation

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

Project Description

- Loan amount / Disbursed amount: 7.669 billion yen / 5.75 billion yen
- Loan agreement: December 2001
- Terms and conditions (Loans): Interest 0.75%, Repayment 40 years (Grace Period: 10 years)
- Final disbursement date: June 2011
- Implementing Agency: Ministry of Transport, Transport Human Resources Development Agency

Maneuvering Simulator

GMDSS Simulator (Existing machine-type)

Project Objectives

Overall Goal

To help ensure employment opportunities for Indonesian seafarers and enhancing their opportunities to obtain foreign currencies

Project Purpose

To develop seafarers with international qualifications as required by the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers amended in 1995 (STCW 95*1).

Output

The project consists of constructing educational facilities, installing equipment and improving seafarer education and training programs at six national maritime educational institutes*2, in accordance with the International Treaty (STCW 95).

Engine Room Simulator Loaded on Board

*1 The STCW Treaty (the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers), ratified by the International Maritime Organization (IMO) in 1978, has stipulated the minimum technological and capable conditions with which seafarers shall be equipped to prevent maritime accidents as well as internationally unified standards regarding supervision of a ratified country's government toward seafarer education organizations and the issuance of certifications, etc. A comprehensive amendment was made to cover training conditions and qualification standards, etc in 1995, which is referred to as STCW 95.

*2 Merchant Marine College (BP3IP), Maritime Higher Education and Training Institute Jakarta (STIP Jakarta), Merchant Marine Polytechnics Semarang (PIP Semarang), Merchant Marine Polytechnics Makassar (PIP Makassar), Merchant Marine Polytechnics Surabaya (PIP Surabaya) (PIP Surabaya was upgraded from Merchant Marine School in 2013), and Merchant Marine School, Barombong (BP2IP Barombong)

Effects of Project Implementation (Effectiveness, Impact)

The project provided six national education and training organizations for seafarers with both soft- and hard-type assistance, including introducing high-level training equipment such as radars/ARPA (automatic radar plotting aid) simulators, maneuvering simulators, engine room simulators etc., as well as enhancing educational facilities for practical training utilizing simulators. The assistance covered the establishment of new educational programs utilizing the simulators in accordance with the IMO*3 Model Course, as well as developing the capacity of trainers through training sessions regarding operational techniques of simulators, instruction methods, and maintenance technologies and so on. Through these activities, all the target numbers assumed at the time of planning, including "the number of students who received seafarer educational training in line with the STCW 95" as well as "the number of graduates responding to the STCW 95", were accomplished. In addition, based on the results of beneficiary surveys conducted on students, instructors, and ship companies as well as stakeholders at the target six schools, certain effects were confirmed, such as improved educational levels at target schools, including enhanced capacity of instructors and students as well as enhanced educational programs, thanks to the implementation of seafarer educational training programs in accordance with requirements of the STCW 95 at the target six schools.

However, the annual operation hours of major simulators of the project have not yet met the target for the following reasons: (1) the operation of some simulators has been suspended due to breakdown and malfunction, (2) there were changes in the operation hours of equipment according to modifications of training curricula and increases/ decreases in the number of students, and (3) some schools reduced the utilization of project equipment because the transfer of ownership of the project equipment had not been completed. In this regard, each school has made efforts to fulfill the required hours for practical training based on the annual training curriculum by utilizing a combination of the project equipment and similar types of other equipment introduced with the assistance of other donors. It was confirmed that the project has positive impacts to some extent on ensuring employment opportunities for Indonesian seafarers, improving the safety of marine transport, and enhancing their opportunities to obtain foreign currencies. On the other hand, as some simulators introduced by the project have not been operated sufficiently, it is considered that other factors rather than this project contributed to the realization of the above positive impacts as well. Therefore, the effectiveness and impact of the project are fair.

Relevance

In Indonesia, where the maritime industry has been active and many seafarers have emerged, there is an urgent need to respond properly to amendments of the international convention (STCW) as well as continuously improve and enhance the country's seafarer certification system and seafarers' education to meet international standards. In this regard, the project's relevance is considered high, since it was prioritized to a greater extent in Indonesian developmental policy; both at the time of appraisal and ex-post evaluation.

*3 As a curriculum of seafarers' practical education and training meeting with the requirements of the STCW, IMO sets 35 model courses. Before the project was commenced, there were only 16 model courses set for seafarer education in Indonesia. After proposing the implementing agencies for development of new 19 courses following the IMO model course as well as improvement of existing 16 courses, the project was adopted by the agencies.

The number of graduates who passed seafarer certification examinations in accordance with the STCW 95 (Unit: Number of persons)

Type of Certificate	Base line (2000)	Target (Project Completion)	Actual		
			2011 (Project Completion)	2012 (1 year after Project Completion)	2013 (2 years after Project Completion)
Deck Department					
1. Deck Officer Class-I	62	240	393	544	542
2. Deck Officer Class-II	234	474	629	782	594
3. Deck Officer Class-III	1,141	1,462	1,215	1,612	1,696
4. Deck Officer Class-IV	164	330	678	874	704
5. Deck Officer Class-V	197	360	1,808	3,053	3,877
6. Deck Rating	60	540	2,219	3,904	4,084
7. Deck Watch Rating	240	1,380	1,519	1,074	731
Engine Department					
8. Engineer Officer Class-I	33	240	352	447	439
9. Engineer Officer Class-II	194	390	546	704	661
10. Engineer Officer Class-III	1,070	1,337	1,232	1,579	1,627
11. Engineer Officer Class-IV	150	300	616	747	682
12. Engineer Officer Class-V	155	360	1,267	1,987	2,592
13. Engine Rating	60	540	2,030	2,039	2,233
14. Engine Watch Rating	240	1,380	1,035	580	469
Total	**4,000**	**9,333**	**15,539**	**19,926**	**20,931**

The number of students who graduated from seafarer certification educational training programs in accordance with the STCW 95 (Unit: Number of persons)

Type of Certificate	Base line (2000)	Target (Project Completion)	Actual		
			2011 (Project Completion)	2012 (1 year after Project Completion)	2013 (2 years after Project Completion)
Deck Department					
1. Deck Officer Class-I	41	238	339	470	572
2. Deck Officer Class-II	223	473	574	710	659
3. Deck Officer Class-III	1,141	1,462	1,198	1,606	1,847
4. Deck Officer Class-IV	164	330	758	975	786
5. Deck Officer Class-V	192	359	1,385	2,920	3,571
6. Deck Rating	55	538	2,219	3,904	4,063
7. Deck Watch Rating	240	1,380	1,536	1,072	746
Engine Department					
8. Engineer Officer Class-I	26	239	320	416	466
9. Engineer Officer Class-II	194	390	471	776	702
10. Engineer Officer Class-III	1,070	1,337	1,226	1,587	1,609
11. Engineer Officer Class-IV	150	300	659	853	746
12. Engineer Officer Class-V	153	359	1,038	1,940	2,421
13. Engine Rating	59	538	1,206	2,039	2,233
14. Engine Watch Rating	240	1,380	939	565	474
Total	**3,948**	**9,323**	**13,868**	**19,833**	**20,895**

Efficiency

Although the project's cost was within the planned cost, the project's period exceeded the plan. Therefore, the project's efficiency is considered fair. The project period was extended for some reasons, mainly due to delayed procurement procedures, design reviews and changes due to the varying quantity of training equipment and target schools where such equipment is housed.

Sustainability

The sustainability of effects realized by the project is evaluated as fair for the following reasons:

(1) Technical problems: Levels of usage of knowledge, technology and manuals regarding maintenance management by instructors and technicians are not balanced across all schools;

(2) Financial problems: The Government's maintenance management budget cannot be utilized due to the delay in transferring equipment ownership from the Implementing Agency to the target six schools;

(3) Another problem: The usage of some equipment has been halted in each school due to UPS flaws and software defects.

Conclusion, Lessons Learned and Recommendations

In light of the above, the project is evaluated to be partially satisfactory. Implementing the project allowed the target six schools to offer seafarer educational training in accordance with the requirements of the STCW 95 and certain improvements in educational levels were confirmed. Meanwhile, some of the training equipment items introduced by the project have not been fully utilized due to flaws and defects, which is considered a challenge. In addition, some institutional problems inside the Implementing Agency, such as limited operational and maintenance management budget accompanying a delay in the transfer of equipment ownership from the Implementing Agency to the target six schools, were pointed out.

As a lesson to be learned, where the implementing agency differs from the operational/maintenance management organization for facilities and equipment, it is considered important for JICA to confirm whether or not legal and institutional procedures are needed, including the transfer of ownership at the time of appraisal and to encourage both the implementing agency and operational/maintenance management organization to promptly take necessary procedures on completion of any project.

The following recommendation are proposed:

(1) Transport Human Resources Development Agency should promptly take due procedures regarding the transfer of equipment ownership to the target six schools;

(2) BP3IP, which is considered to have the best equipment operation and maintenance management capabilities among the six target schools, should actively share its experience and expertise with other schools, to raise the standard of all schools' capacities in terms of operation and maintenance management;

(3) The target six schools should promptly consider their maintenance management plans after the guarantee periods by training equipment manufacturers;

(4) The target six schools should consider the utilization of service work revenues available to the schools as complementary budgetary sources in case of budgetary shortage;

(5) The target six schools should collect and manage relevant data concerning students' destinations at the time of their graduation at least, to confirm and improve their capabilities and levels in seafarer education.

Key Points of Evaluation

Sharing best practices through ex-post evaluation
- Contributing to enhancement of maintenance management capacity -

Among the target six schools, BP3IP received the largest number of training equipment items, and seventy percent of the major training equipment in BP3IP was introduced by the project. At the time of ex-post evaluation, all the equipment items were functioning without problems and the University's capabilities in equipment operation and maintenance management were the highest compared to the other five schools (the shares of equipment introduced by the project varied from 10 to 30%).

The reasons included the following:

(1) The University has more engineers with higher capabilities than other schools do (especially, there are engineers equipped with IT technology and knowledge capable of dealing with software defects as one of the main troubles regarding equipment flaws);

(2) The University has properly managed equipment maintenance management following maintenance manuals and fixed procedures;

(3) The University has provided instructors and engineers in charge of maintenance management with many opportunities for information sharing and mutual learning;

(4) The University has comparatively affluent self-budgets to be used for maintenance management;

(5) The University has a comparative geographical advantage as it is located in Jakarta, with ease of access to private service providers when repair and spare parts are requested from the same.

In contrast, the other five schools have suffered from a lack of the abovementioned five advantages.

Since the aforementioned trials and experiences of BP3IP were considered good practices for other schools in enhancing their operational and maintenance management capacities, the ex-post evaluation of the project, during the second round of field surveys, conducted a workshop targeting responsible personnel for maintenance management at the Implementing Agency and the six schools, where BP3IP was requested to make presentations on their trials and experiences regarding maintenance management to share information with stakeholders. Equipment manufacturers and local agencies were also invited to this workshop, to make a platform for discussions over the maintenance management plans on completion of maker guarantee periods. After this workshop, some of the target schools dispatched their instructors and engineers to BP3IP and initiated consultations with manufacturers and local agencies concerning their future plans for maintenance management. These concrete positive steps taken to enhance their capabilities in maintenance management will consolidate the prospects for further improvements in the coming period.

Democratic Socialist Republic of Sri Lanka

Project for Establishment of Japan - Sri Lanka College of Technology to Strengthen Technical Education and Training in Sri Lanka

A delay in establishing the framework of a new qualification system affected the project

External Evaluator: Tomoko Tamura, Kaihatsu Management Consulting, Inc.

Rating		
Effectiveness and Impact	①	Overall D
Relevance	③	
Efficiency	②	
Sustainability	①	

Project Outline

- Total cost (Japanese side): 707 million yen
- Period of cooperation: July 2005 – June 2010
- Implementing agency: Ministry of Vocational and Technical Training (current Ministry of Youth Affairs and Skills Development)
- The number of experts dispatched: Long Term: 8; Short Term: 18
- The number of technical training participants: Japan: 24; Third-country: 5
- Main equipment provided: Machinery and equipment for training (computer related equipment, component processing and control machinery for practical training and cutting, welding and testing machinery)

Project Objectives

Overall Goal*

Quality of the manpower trained in Technical Colleges / College of Technologies (CoTs) meets the labor market demand.
CoTs are established and managed by utilizing the lessons and experience of SLCoT.

Project Purpose

Department of Technical Education and Training (DTET) gains managerial and technical capacity to establish CoTs in each province by introducing model courses of National Vocational Qualification (NVQ) levels 5 and 6 in SLCoT to train mid-level technicians.

Output

1) NVQ levels 5 and 6 model training courses are introduced and conducted effectively in SLCoT in the fields of information and communication technology (ICT), mechatronics and metalwork.
2) DTET establishes a system for the training courses to meet industry's needs.
3) Management DTET capacity for training delivery of the NVQ level 5 and 6 courses and for implementing career guidance / counseling and textbook development and skills competitions is improved.
4) Know-how in fields of implementing NVQ level 5 and 6 courses, industry collaboration, career guidance / counseling and skills competitions is accumulated in DTET by establishing three model courses in SLCoT to share it with other Technical Colleges / CoTs.

* The overall goal, project purpose and outputs are those in PDM version four of the project. Although the PDM was revised to version five after the terminal evaluation of the project, the external evaluator decided to conduct the ex-post evaluation based on PDM version four, following an examination of the process and appropriateness of the modification from PDM version four to five. The terminal evaluation was conducted based on PDM version four, hence the basis for evaluating the terminal and ex-post evaluations is the same.

Sri Lanka College of Technology (SLCoT)

Training in the Metalwork Course at SLCoT

Carrier Guidance Center in SLCoT

Effects of Project Implementation (Effectiveness, Impact)

The project expected DTET, the supervising institution of SLCoT, to gain the necessary capacity in the future operation and management of all CoTs nationwide by participating in activities involving the introduction of model training courses for NVQ levels 5 and 6 at SLCoT.

On completion of the project, enhancement of the operational and managerial DTET capacity through participation in SLCoT activities, had not been realized, which meant the project purpose had not been achieved. This was mainly because; SLCoT had just produced the first batch of graduates and was not in a position to address the issues concerning the training delivery and help enhance the operational and managerial DTET capacity; participation of DTET in the project was inadequate due to chronic staff shortages and a lack of commitment of the then directors and the project team was unable to show strong leadership to promote efforts to boost the DTET capacity as long-term JICA experts were not dispatched as planned. The project did not contribute adequately to creating a workforce with NVQ level 5 and 6 qualifications, which was targeted as the overall goal and the managerial and technical DTET capacity for training course delivery did not develop as expected level at the time of the ex-post evaluation, due to chronic staff shortages and inadequate teaching capacity of the instructors. At the time of the ex-post evaluation, there were plans to transfer NVQ level 5 and 6 courses of the CoTs, including SLCoT, to University Colleges, which will be established nationwide in future.

Therefore the effectiveness and impact of this project is low.

Relevance

Both at the time of planning and completion of the project, enhancement of technical education and training programmes to develop the workforce were important tasks in the mid- and long-term development plan of Sri Lanka and there was a development need in the country to improve technical education and produce a workforce which could meet the demands of industry. These plans and needs were also in line with the strategy of Japanese assistance to Sri Lanka. Accordingly, the relevance of the project is high.

Efficiency

The chief advisor of JICA, JICA long-term experts on ICT and mechatronics were not dispatched as planned; and the level of participation in the project and effort to manage project progress rendered by the Sri Lankan project stakeholders were inadequate. Although the project period was within the plan, the project cost exceeded the plan. Accordingly, the efficiency of the project is fair.

Sustainability

As mentioned in "Effects of Project Implementation", there were plans to transfer NVQ level 5 and 6 courses to University Colleges.

Performance of Students of the Model Courses after Project Completion*

(Unit: person)

Year	2010				2011				2012			
No of students	Enrolled	Course completed	Passed department exam	Passed NVQ assessment	Enrolled	Course completed	Passed department exam	Passed NVQ assessment	Enrolled	Course completed	Passed department exam	Passed NVQ assessment
ICT	45	39	17	17 (44%)	20	19	17	17 (89%)	24	22	11	6 (27%)
Mechatronics	24	21	13	7 (33%)	22	21	7	7 (33%)	22	18	9	9 (50%)
Metalwork	17	12	1	1 (8%)	12	9	6	2 (22%)	11	6	0	0 (0%)
Total (%)	**86**	**72 (84%)**	**31 (43%)**	**25 (35%)**	**54**	**49 (91%)**	**30 (61%)**	**26 (53%)**	**57**	**46 (81%)**	**20 (43%)**	**15 (33%)**

Sources: Number of students who enrolled, completed the courses and passed department exam were given by DTET, and the number of students who passed NVQ assessment was given by Tertiary and Vocational Education Commission.
*" Course Completed "are those who completed the course study with the successful attendance rate. Percentages shown in the table indicate as follows:" Course completed ": Completed the course study/enrolled x 100," Passed department exam ": Passed DTET exam/completed the course study x 100," Passed NVQ assessment ": Passed assessment of NVQ 5 or 6/completed the course study x 100

Status of Employment of Former Students of the Model Courses (N=113)

(Unit: person)

Items	ICT	Mechatronics	Metalwork	Total
a. Employed (including self-employment)	23	26	19	68
b. Looking for employment	17	3	3	23
c. Not looking for employment due to study, sickness, etc.	16	6	0	22
d. Total (a + b+ c)	56	35	22	113
e. Employment Rate (a/(d-c) x 100)*	58%	90%	86%	75%
f. Engaged in course-related employment	13	23	12	48
g. Percentage of those engaged in course-related employment out of the total employed (f/a x 100)	57%	88%	63%	71%

Source: Beneficiary Survey (telephone interview was conducted in November 2013 targeting all the former students of the model course, of which 113 former students were contacted)
*" e. Employment rate "is the ratio of those who are employed out of the samples excluding those who are not looking for an employment due to study or sickness.

However, since no detailed plan had been prepared for transferring experience of course delivery, human resources, equipment and machinery of SLCoT, there is uncertainty concerning the sustainability of the project effect. In addition, DTET had several problems involved with the operational and technical aspects. Accordingly, the sustainability of the project is low.

Conclusion, Lessons Learned and Recommendations

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

Lessons learned from the project were: (a) if a project is going to conduct activities in accordance with a new system, without awaiting the establishment of its framework, JICA should be aware of the risks posed by a possible delay in establishing the framework and prepare a scenario and measures to be taken in the event of such delay. The project design should be developed after narrowing down proposed activities according to priority, which can be steadily introduced and implemented, taking given time and resources into consideration and (b) a focused and continuous effort to improve the teaching capacity of instructors should be made when a training course at a higher level than those existing, or with a curriculum that intensively reflects industry needs, is introduced.

Recommendations made to the counterpart organizations included: (a) to develop a specified plan to utilize and transfer resources of CoTs effectively and implement the same according to plan when the training courses of CoTs were transferred to the University Colleges, (b) to analyze reasons for the low pass rate of NVQ assessment of levels 5 and 6 and implement the required remedial measures and (c) to allocate the necessary budget for periodic updates of software in several pieces of equipment for the ICT and mechatronics courses of SLCoT, so that the training always meets market needs.

Recommendations made to JICA included to maintain a regular channel of communication with the relevant institutions in the vocational training sector, such as the Ministry of Youth Affairs and Skills Development, DTET and Asian Development Bank and focus on ensuring effective utilization of the project effects.

Key Points of Evaluation

Common issues and support measures for vocational training.

A comparative study was conducted to determine their features and effects, by taking examples from four technical cooperation projects: "The Project for Instructors Training for Vocational Training" in Uganda, "The Project on Strengthening the Programme of Expanding Automation Technologies Department (SPREAD)" in the Republic of Turkey, "The Project for Strengthening the Capacity of Training Management of Vocational Training Corporation" in Jordan and this project. Consequently, the following matters emerged as important to ensure project effect and sustainability.

(1) When a project is implemented alongside the development of new policies and systems for vocational training, a delay in the development or change in the systems can be a risk factor for the project to achieve its purpose or elicit the expected effects. It is important to conduct an adequate study of the implementation capacity of the government institutions, which are responsible for developing the policies and systems and collect information on the contents and progress of the policies and systems to be developed.

(2) It is essential to assist the counterpart officers until they are able to operate the training management cycle independently in projects to assist in establishing a cycle, which includes planning, implementing, monitoring, evaluating and improving training courses.

(3) To introduce measures that reflect the needs of industry in training courses, it is important to establish a system that incorporates advice from industry representatives into training courses immediately, rather than just receiving advice from them.

(4) It is important for projects targeting capacity-building of instructors to adequately identify the gaps between the existing capacity of instructors and what is required to conduct training courses and establish a system for the implementing agencies to continuously improve the capacity of instructors using resources available in their own countries, as well as the training sessions in Japan and technical transfers from JICA experts.

People's Republic of China

Hunan Province Road Construction Project

Realizing a synergetic development effect through the integrated construction of highway and local roads

External Evaluator: Masahiro Oseko, OPMAC Corporation

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

Project Description

- Loan amount / Disbursed amount (Loan): 23 billion yen / 22,948 million yen
- Loan agreement (Loan): March 2002
- Terms and conditions (Loan): Interest Rate: 2.20%, Repayment Period: 30 years (Grace Period: 10 years)
- Final disbursement date (Loan): October 2009
- Executing agency (Loan): Hunan Provincial People's Government

Project Ovjectives

Overall Goal

To help boost the quality of life and reduce inland poverty in China.

Project Purpose

To improve accessibility to markets and facilitate regional development in the target area.

Output

Construction of a highway with overall length of 160km between Shaoyang and Huaihua cities and improve a local road (class II) with overall length of 100km between Dongkou County's Zhushi and Chengbu County in Shaoyang City in Hunan Province in China.

Shaoyang-Huaihua Highway

Zhushi-Chengbu Provincial Road

Effects of Project Implementation (Effectiveness, Impact)

The objectives of the project included to improve accessibility to markets and facilitate regional development, thereby helping enhance the quality of life and reduce inland poverty by newly constructing a highway and improving a local road in Hunan Province in China. Regarding efforts to improve accessibility to markets and stimulate the regional economy, the project has boosted the quality of life and reduced inland poverty by increasing the shipping volume of agricultural products and employment opportunities for road users through increased traffic volume, decreased travel time and fewer traffic accidents.

The construction of the highway and provincial road under the project facilitated the passage of construction materials and equipment to rural areas, which meant that "Datang Huayin Nanshan Wind Farm," the largest wind power station in Hunan Province, could be built in Nanshan town located along the Zhushi-Chengbu provincial road. The power generated by this firm is supplied not only to local areas but also to the urban areas of Shaoyang City. Developing both a highway and a local road helped achieve synergistic developmental effects in both urban and rural areas.

Roadside stations "Michinoeki" were constructed by the project at two sites of Chengbu and Wugan along the Zhushi-Chengbu provincial road. Adopting the Japanese concept of Michinoeki, they have been used as public facilities for regional development.

This project has thus largely achieved its objectives; hence its effectiveness and impact are high.

Relevance

Under the Chinese government's development policies, both at the time of project appraisal and the ex-post evaluation, improving the road network has been consistently highlighted as a basic infrastructure requirement to develop urban and rural areas harmoniously. The development needs for the project were also high against the economic background of low income due to insufficient infrastructure in the target area. Given the consistency with Japan's ODA policies, the relevance of the project is high.

Efficiency

The project cost was within the budget (88% of the budget) with cost-cutting efforts made by the executing agency. However, the project period exceeded the plan (119% of the planned schedule) due to the prolonged detailed design, which involved detailed investigations, and designs reflecting the need for thorough consideration of environmental, economic and safety aspects. Accordingly, the efficiency of the project is fair.

Sustainability

The "Shaoyang City Highway Administration Bureau" has been responsible for operating and maintaining (O&M) the Shaoyang-Huaihua highway, while the "Road Administration Bureau" of the Shaoyang city government has been responsible for O&M of the Zhushi-Chengbu provincial road. As the Shaoyang City Highway Administration Bureau is a state-owned company, affiliated with the Hunan Province's Transportation Office, its annual budget is funded by the provincial government. No major problems have been observed in the institutional, technical and financial aspects of the O&M system by these two organizations and roads and their associated facilities have been effectively maintained. Accordingly, the sustainability of the project effect is high.

Conclusion, Lessons Learned and Recommendations

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

One lesson learned from this project comes in the form of the

Shaoyang-Huaihua Highway: Average daily traffic volume

(Unit: vehicles/day)

	2000 (Before the project)	Value planned (3 years after the completion)	Actual value		
			2007 (year of project completion)	2010 (3 years after the completion)	2012 (5 years after the completion)
	4,520	12,516	9,162	13,625	15,037
Ratio of Actual to Plan	36%	———	73%	109%	120%

Source: Shaoyang City Highway Administration Bureau

Shaoyang-Huaihua Highway: Average travel time

(Unit: hour)

	2000 (Before the project)	Value planned (3 years after the completion)	Actual value		
			2007 (year of project completion)	2010 (3 years after the completion)	2012 (5 years after the completion)
	6.1	2.1	2.0	2.0	2.0
Ratio of Actual to Plan	290%	———	95%	95%	95%

Source: Shaoyang City Highway Administration Bureau

Zhushi-Chengbu Provincial Road: Average daily traffic volume

(Unit: vehicles/day)

	2000 (Before the project)	Value planned (3 years after the completion)	Actual value		
			2007 (year of project completion)	2010 (3 years after the completion)	2012 (5 years after the completion)
	3,232	7,030	4,399	8,186	7,588
Ratio of Actual to Plan	46%	———	63%	116%	108%

Source: Shaoyang City Road Administration Bureau

Zhushi-Chengbu Provincial Road: Average travel time and speed

(Unit: hour)

	2000 (Before the project)	Value planned (3 years after the completion)	Actual value		
			2007 (year of project completion)	2010 (3 years after the completion)	2012 (5 years after the completion)
	2.4	1.3	1.25	1.3	1.3
Ratio of Actual to Plan	185%	———	96%	100%	100%

Source: Shaoyang City Road Administration Bureau

synergistic developmental effects realized by the integrated construction of a highway and local road. Improving the local road connecting with a highway has allowed local cities and towns to transport their agricultural products and mineral resources to urban areas and attract tourists from such urban centers to their places. Extending and expanding the local road facilitated the passage of construction materials and equipment, which meant a large-scale wind power station could be constructed in a rural area. The power generated by this power station is supplied to urban areas and benefits both urban and rural areas. As for future highway construction projects, it would be preferable to include construction of local roads as far as possible; anticipating synergetic developmental effects in both urban and rural areas, if a single executing agency is responsible for the entire project or if it is possible to achieve close communication and coordination between the implementing agencies of highway and local road.

Roadside stations constructed under the project, adopting the Japanese concept of Michinoeki, are used as public facilities for regional development. As "Michinoeki" introduced by the project can be evaluated as successful examples, it is recommended that the executing agency fully utilize the facilities by adding functions to provide information about health, hygiene, education and culture and promoting public relations to facilitate extensive publicity in China of successful cases of "Michinoeki."

Key Points of Evaluation

Successful case of Roadside Stations "Michinoeki", a base of local revitalization from Japan

Roadside stations "Michinoeki" were constructed under the project at two sites of Chengbu and Wugan along the Zhushi-Chengbu provincial road. Adopting the Japanese concept of Michinoeki, they have been used as public facilities for regional development. Agricultural product outlets, a vehicle repair yard, a sports facility, a rest house, an information desk and a first aid station can be found there, while local farmers also bring their vegetable and meat produce to the spacious premises. Many are happy with the facilities, which provide a stable and convenient venue for selling their products.

Visitors are commuters and truck drivers using the provincial road, while a fair number of neighbors also walk to the outlets almost daily. Although shopping is the primary attraction for visitors, others enjoy exercise on the basketball court open to all for free or a nice cup of tea at the rest house.

Chengbu "Michinoeki" is located in the Miao Autonomous County and features Miao's special tea is served in its rest house. A tourist information desk of the Miao Autonomous County is set up, with brochures and DVDs for attracting tourists are provided there. Waitresses and receptionists of the rest house and information desk are local Miao women. The Roadside Station "Michinoeki" thus boosts the local economy by providing job opportunities.

In China, there was a case of a construction project preceding the Michinoeki, which eventually ended up becoming a material storage space since the concept of Michinoeki was not properly introduced and the facility was constructed along the road but far from communities. In comparison, the roadside stations introduced under this project can be considered successful examples. However, as well as markets, Michinoeki are also expected to be facilities providing public services regarding health, hygiene, education and culture to local people. Since the Michinoeki introduced by the project do not quite fill this scope, the executing agency is currently examining what services could be provided with full-scale use of the facilities in mind.

Chengbu "Michinoeki"

Republic of the Philippines

Local Governance and Rural Empowerment Project for Davao Region

Technical cooperation approach which encouraged a transformation of working methods from rule of thumb to means of evidence by measurement

External Evaluator: Maki Tsumagari, IMG Inc.

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

Project Description

- Total cost: 280 million yen
- Period of cooperation: August 2007 ~ July 2010
- Partner country's implementing organizations:
  The Davao Integrated Development Program (DIDP)
- The number of experts dispatched:
  Short term: 6
- Main equipment provided:
  Electric exploration machine, computer, GIS server computer, etc.

Practical training of underground water exploration

Demonstration of water level measurement

Project Ovjectives

Overall Goal

Local Government Units (LGU) in Davao Region are able to implement water supply services by an enhance method based on the guideline.

Project Purpose

Capacities of Local Government Units (LGU) in Davao Region to provide water supply services are improved.

Output

1. The current conditions of small-scale water supply works are assessed.
2. Human resources regarding underground water exploration are developed.
3. Human resources regarding institutionalization of residents for operation and maintenance management of small-scale water supply facilities are developed.
4. Human resources regarding planning, designing and construction management of small-scale water supply facilities are developed.
5. Implementing procedures on improved water supply services are compiled in a guideline.

Water supply facility installed in LGU, South Davao Region

Effects of Project Implementation (Effectiveness, Impact)

The project implemented human resources development in water supply services by Local Government Units (LGU) in the Davao Region through personnel training for LGU personnel in charge of related duties. The personnel, who used to reply on their experience in facility designs before the project, have shifted to adopt a method to apply distribution network calculation to determine analysis and design optimal water supply facilities under certain conditions after having scientifically measured underground water analyses and the potentials of reserves. According to the beneficiary Survey*, which included a question over how often beneficiaries made reference as part of their duties to the most relevant parts of the database established under the project, which covered relevant information on more than 1,000 water supply facilities in the region, 95% of all beneficiaries answered that they had been using the database to date in various ways. The project also fostered the facilitation capacities of resident organizations responsible for operation, maintenance and management of small-scale water supply facilities in a series of processes, including preparation for their establishment up to technical support after the operation. Based on these experiences, a guideline was compiled to cover the processes of water supply work based on scientific measures and a collaborative system with local residents. At the time of project completion, the project achieved the project purposes to meet all target indicators. According to the beneficiary survey, 92% of beneficiaries answered that experiences obtained from the project's training had fully satisfied needs in accomplishing their duties up to the time of Ex-Post Evaluation. Since small-scale water supply services have continued to be implemented via this improved method, the project's effectiveness and impacts are considered high.

Relevance

The project, which promoted administrative capacity development by improving water supply services, has remained in accordance with the development policies of the Philippines, with strengthening governmental organizations one of the top priorities. Based on the "Support Package for Peace and Stability in Mindanao", Japan has focused on socioeconomic development of Mindanao with exclusively many national challenges. Thus, the project's relevance is high.

Efficiency

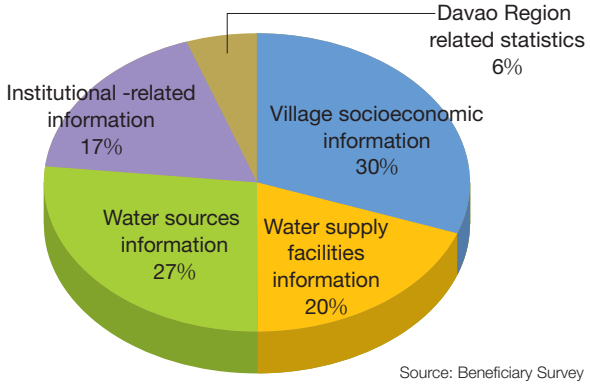
While the cooperation period remained within the planned period, additional activities to respond to human resources development in planning, designing and construction management of small-scale water supply facilities increased the personnel cost for local consultants and NGOs, etc., resulting in cooperation costs exceeding the planned level. Thus, the project's efficiency is considered fair.

Sustainability

Water supply services introduced under the project have been

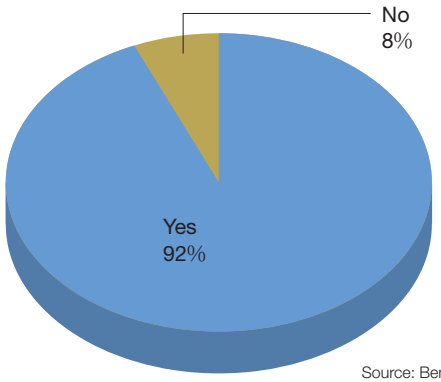
*Among those counterparts who participated in capacity development training course or pilot activity of the project, the survey was conducted to 78 counterparts who were available at the time of the ex-post evaluation for completing questionnaire as well as for an interview to confirm their response to the questionnaire.

Referential rates for database established by the project



Source: Beneficiary Survey

Do experiences with the project meet the needs in accomplishing your duties at the time of Ex-Post Evaluation?



Source: Beneficiary Survey

established as an implementing process for small-scale water supply services work by each LGU. Since there are no concerns confirmed in the policy/system, institutional, technical and financial aspects, the sustainability of effects realized by project is considered high.

Conclusion, Lessons Learned and Recommendations

In light of the above, the project is highly evaluated.

The project will provide referential implications to the results of other projects and activities to be focused on, since it successfully allowed LGU stakeholders to experience outstanding efficiency by providing residents with precise services, eliminating waste and encouraging active participation of LGU stakeholders in project activities. The project made this possible by focusing on and connecting crucial administrative services/development issues with which implementing agencies have been confronted in daily duties along with progressive decentralization into intangible outputs.

The project did not provide its counterparts (C/Ps) with an answer but instead, certain hints on the kinds of differences' improved methods' had compared to their previous ways, by (1) fostering awareness by comparisons with traditional methods of C/Ps and (2) a technical support approach to consolidate this learning process by local consultants/NGO who managed efforts to promote the activities in the absence of experts on project sites. This will be a benchmark for even those projects other than local administration projects when considering which implementation methods should be applied.

As a recommendation for the Implementing Agency, it is desirable to enhance the dissemination functions of participating LGUs 'experiences and further improve capacities to provide small-scale water supply services as entire participating LGUs. Their main roles to date have included providing relevant information and technology as a technical support hub. However, all the insightful information regarding individual trials by LGUs could be absorbed and compiled as data to be uploaded on the website. In addition, small-scale water supply services may be provided via an improved method, allowing a more efficient and effective response to water supply challenges. By prioritizing areas with less access to safe water for LGU trials, this could directly help improve access rates across the entire region.

Key Points of Evaluation

Implication from the ex-post evaluation result for formulation and implementation of a project for capacity development of LGU

The External Evaluator adopted interdisciplinary analyses on technical cooperation projects, which were often implemented by JICA to target improved public services by strengthening local governance functions, to extract highly referential implications for formulating, planning and implementing projects in similar fields. All the target projects for analyses were implemented to strengthen local government units focusing on areas with many development issues. The goals to equip the projects' C/Ps with the due capacities required to achieve administrative work through practical training programs before the completion of the project were accomplished.

Meanwhile, on completion of the project, differences have emerged in the implementation of newly developed projects. Once the project for Davao Region was completed, it was confirmed that C/Ps themselves autonomously/continuously developed the project's outputs. Here are some factors which were considered to impact on the differences.

- By limiting the target to traditional basic infrastructural duties (small-scale water supply services), the improved method allowing the capacity of service provision to be enhanced as an administrative body was secured, introduced and established.
- By discerning the capacities of stakeholders other than the target personnel, which were needed to achieve the project purposes, these stakeholders were included in the target personnel midway through the project period, creating new activity outputs.
- Learning processes along with daily duties, such as underground water development and resident institutionalization, of C/Ps and their establishments were incorporated into the technical transfer and combined with applications by C/Ps after the project's completion.
- By adding the target personnel required to achieve the purposes mentioned, the implementing processes of water supply services have been formulated across related departments and units, which remained valid up to the time of Ex-Post Evaluation.

Socialist Republic of Viet Nam

Central Vietnam Rural Telecommunication Network Project

Helping improve telecommunication services and eradicate villages with no telecommunication networks within 10 provinces of central Vietnam

External Evaluator: Masami Tomita, Sanshu Engineering Consultant

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

Project Outline

- Loan amount Disbursed amount (Loan): 11,332 million yen / 5,912 million yen
- Loan agreement (Loan): March, 1998
- Terms and conditions (Loan): Interest Rate: 1.8%, Repayment Period: 30 years (Grace Period: 10 years)
- FInal disbursement date (Loan): January, 2010
- Excecuting agency (Loan): Viet Nam Posts and Telecommunications (VNPT)

Project Objective

Overall Goal

To contribute to the reduction of regional disparities and promotion of economic development of central Vietnam

Project Purpose

To improve telecommunication services and eradicate villages with no telecommunication network in 10 provinces in central Vietnam

Output

Construction of telecommunication networks in central Vietnam, which lagged behind economically compared with northern and southern Vietnam

Digital Switching System

Microwave Transmission Tower

Effects of Project Implementation (Effectiveness, Impact)

This project aimed at eradicating villages with no telecommunication networks and improving telecommunication services within ten provinces in central Vietnam, by constructing telecommunication networks, including installing optical fiber cables and digital switching systems in the region.

At the time of project appraisal, in the ten provinces targeted by the project, the number of villages lacking telecommunication networks was over 800 out of approximately 2,000 villages in total, which had significantly decreased to 7 villages at the time of ex-post evaluation. Moreover, telephone density in 10 provinces was 0.64% (actual figure at the time of appraisal, average of 10 provinces, including fixed-line and mobile phones), which was expected to increase to 9.5% in 2010. At the time of ex-post evaluation, fixed-line phone density (actual) increased to 4.15% and mobile phone density (actual) increased to 14.15%*. While the increasing rate of fixed-line phone density is smaller than that of mobile phone density, this is in line with recent global trends showing a declining need for fixed-line phones. Accompanying this trend, the utilization ratio of digital switching systems for fixed-line phones procured and installed under the project has also been decreasing in recent years. Conversely, core transmission lines (optical fiber cables) developed under the project are also used for mobile and Internet communications and thus, it can be said that this project helped improve telecommunication services in the targeted areas by diffusing fixed-line and mobile phones and the Internet. Furthermore, central Vietnam has seen economic development soar over the past decade and this project is considered to have boosted this economic development to some extent, by improving regional telecommunication services. Therefore its effectiveness and impact are high.

Relevance

The improved telephone density nationwide in Vietnam is emphasized in Vietnam's national plans; both at the time of project appraisal and ex-post evaluation. Moreover, telecommunication networks are needed in project-targeted areas, both at the time of project appraisal and ex-post evaluation and the needs for the project are high. Furthermore, this project was consistent with Japan's ODA policy and its relevance is high.

Efficiency

The actual project cost was much lower than planned due to a cancelation of outside plant (cables), falling prices of telecommunication equipment and exchange rate fluctuation etc. The actual project period was significantly longer than planned due to; 1) the extended period required to obtain the required approvals from relevant domestic organizations for project implementation and delays in other administrative procedures; 2) telecommunication needs in the project-targeted areas changed while the project implementation was prolonged, which required resurvey, redesign and changes of

* While a telecommunication service provider in Vietnam was VNPT only at the time of project appraisal, there were many providers at the time of ex-post evaluation. The telephone density (actual) at the time of ex-post evaluation was calculated by dividing the actual number of VNPT subscribers in the region by its population.

Telephone Density in 10 Provinces

(Unit: %)

Province	Actual (1995)	Estimated (2010)	Actual (2013)	
			Fixed	Mobile
Thanh Hoa	0.32	5.9	4.78	13.29
Nghe An	0.47	8.8	3.84	12.54
Ha Tinh	0.30	6.8	1.90	N/A
Quang Binh	0.48	5.1	4.15	23.06
Quang Tri	1.05	8.3	4.20	19.00
Thua Thien Hue	1.08	18.4	10.17	14.10
Quang Nam	0.59	8.7	2.52	6.49
Quang Ngai	0.71	10.9	3.32	7.47
Binh Dinh	0.75	12.0	3.70	8.60
Phu Yen	0.65	9.7	2.97	22.78
Average	0.64	9.5	4.15	14.15

Source: actual figures in 1995: JICA internal document, actual figures in 2013: answers to the questionnaire
Note: Estimated figures for 2010 = estimated number of VNPT subscribers in each province written in JICA appraisal document / population in each province in 2010 x 100.
Actual figures = actual number of VNPT subscribers in each province / population in each province x 100.

configurations and locations for installing telecommunication equipment; and 3) the extended period required to procure transmission cables accompanying soaring copper prices etc. Although the project cost was within the plan, the project period significantly exceeded the plan and therefore the efficiency of the project is fair.

Sustainability

While no major problem has been observed in the institutional and technical aspects of operation and maintenance (O&M) at the time of ex-post evaluation, the financial situation of VNPT could not be sufficiently verified, as no financial statements were provided. Moreover, reorganization of VNPT is planned in the near future and its influence on future O&M remains somewhat uncertain. Thus, the sustainability of the project is fair.

Conclusion, Lessons Learned and Recommendations

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

The actual project period was 161 months compared with the planned period of 34 months and exceeded the plan (474% against the plan). The ex-post evaluation was conducted 15 years after the loan agreement and while the project aimed to increase the fixed-line phone density at the time of project appraisal, mobile phone communications have prevailed globally in recent years and the utilization ratio of digital switching systems procured under the project was decreasing at the time of ex-post evaluation. As a lesson learned, given the pace of technological innovation in the telecommunication sector, project planning and preparation must take into account the rate of future technological innovation and future income levels in a given country very carefully and be implemented promptly. In addition, during appraisal, there is a need for a detailed check of procurement procedures in the country where the project is going to be implemented, evaluate the implementation capacity of an executing agency and related risks and carefully consider whether the lending scheme as a Japanese ODA loan is suitable for the project.

Key Points of Evaluation

The need to carefully evaluate implementation capacity of an Executing Agency and speed of technological innovation at the time of appraisal

This project is implemented in Vietnam, as one of many Japanese ODA loan projects underway there. Under this project, processes involving selection of consultants, detailed design, selection of contractors and suppliers and construction and installation works were delayed due to the extended period required to obtain the necessary approvals from relevant domestic organizations for project implementation and delays in other administrative procedures. This tendency is not limited to this project, however. An extended period was also often required to coordinate among different organizations and departments in other projects in Vietnam. Moreover, in Japanese ODA loan projects, contractors/suppliers and consultants need to be employed by strictly following the steps stated in“ Guidelines for the Employment of Consultants and Procurement under Japanese ODA Loans ”. However, executing agencies are often unfamiliar with the procurement procedures stated in the guideline, which often delays the project implementation. Conversely, technological innovation advances swiftly in the telecommunication sector and if a project implementation is overly delayed, it tends to cause problems such as changes in telecommunication needs in the project-targeted areas and technological obsolescence, underlining the need to implement a telecommunication project promptly from project appraisal to completion. Accordingly, it should have been examined more carefully during project appraisal whether the lending scheme as a Japanese ODA loan was appropriate for this project. Therefore, when conducting project appraisals for similar projects in future, there is a need to carefully examine whether a Japanese ODA loan is an appropriate lending scheme for a project based on project components, procurement procedures and customs in a given country and sector and whether an executing agency has sufficient capacity to implement the project efficiently.

Lao People's Democratic Republic

Greater Mekong Power Network Development Project (Lao PDR)

Contributing to the regional economic development by achieving stable power supply through interconnecting separated domestic power grids

External Evaluator: Hirofumi Azeta, Japan Economic Research Institute Inc.

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

Project Outline

- Loan amount / Disbursed amount (Loan): 3,326 million yen / 3,326 million yen
- Loan agreement (Loan): March, 2005
- Terms and conditions (Loan): Interest Rate: 0.9%, Repayment Period:30 years (Grace Period: 10 years)
- FInal disbursement date (Loan): January, 2012
- Excecuting agency (Loan): Electricité du Laos (EDL)

Transmission lines constructed under the project

Savan – Seno Special Economic Zone where private investors are setting up new factories (Savannakhet province)

Project Objective

Overall Goal

Contribute to the upgrading of electrification rates, industrial development and poverty reduction in the central and southern region of Laos

Project Purpose

Respond to the growing electric power demand in the central and southern region including Savannakhet, where the East-West Economic Corridor/Road No.9 is located.

Output

Construct 115kV transmission lines between Pakxan and Pakbo (about 300km) and substations.

A drinking water factory which increased production after the completion of the project (Khammuane province)

Effects of Project Implementation (Effectiveness, Impact)

The objective of the project is to achieve a stable power supply and increase the electrification rate in the central region of Laos by constructing double circuits of 115kV transmission lines between Pakxan, Thakek and Pakbo (about 300km) and substations. By interconnecting the grid in the northern region, including the capital city of Vientiane and the grid in the central region, it was expected that surplus electricity in the northern region could be transmitted to the central region and meet growing demand for electrical power in the central-southern region of Laos.

In the ex-post evaluation, it was confirmed that the indicators set upon appraisal, including the utilization factor of transmission lines, number and time of forced outages, transmission losses and received energy at Pakbo substation, had been achieved. Accordingly, the ex-post evaluation concluded that the project had achieved its objective of increasing the energy transmitted from Pakxan substation to Pakbo substation without increasing the overloads and losses from transmission lines.

In the ex-post evaluation, it was also confirmed that private companies set up new factories and increased their production and employment as a result. In Savannakhet province, the development of the Savan-Seno Special Economic Zone (Zone C) was completed after completion of the project. Several factories which have already started operations answered that their main reason for establishing factories in the Savan-Seno Special Economic Zone was the stable power supply in Savannakhet province. It is also possible to say that the project has helped improve living standards in the region, as the regional per capita GDP increased and poverty rate declined.

Therefore its effectiveness and impact are high.

Relevance

The project has been relevant to Laos's development plan, which targeted poverty reduction, economic development and industrial development by expanding the domestic electricity transmission grid. It is also highly relevant to the development needs of Laos to meet the growing domestic power demand and to Japan's ODA policy, which emphasized efforts to enhance the transmission network. Therefore its relevance is high.

Efficiency

During the project implementation, the expected outputs, including construction of transmission lines and extension of 115/22kV substations, were achieved as planned within the planned budget, despite some minor modifications. Although the project cost was within the plan, the project period exceeded the plan, mainly because the initial bidding result was cancelled. Accordingly, the efficiency of the project is fair.

Power received at Pakbo substation (GWh)

Items	Target			Actual		
	2009 (1 year after completion)	2010 (2 years after completion)	2011 (3 years after completion)	2011 (Year of completion)	2012 (1 year after completion)	2013 (2 years after completion)
Power received at Pakbo substation	195	201	206	86	165	235

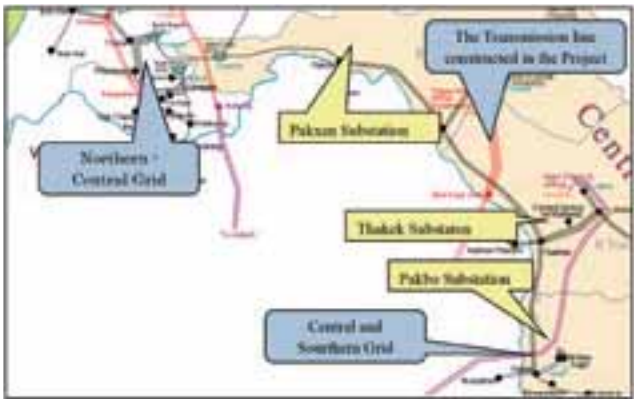
Source: created with reference to the project completion report

Socioeconomic indicator in the central-southern region

		2005	2012
Electrification rate	Khammuane province	59%	83%
	Savannakhet province	57%	79%
Per capita GDP	Khammuane province	USD 428	USD 1,490
	Savannakhet province	USD 525	USD 1,469
Poverty rate	Khammuane province	20%	5%
	Savannakhet province	20%	11%

Source: materials provided by project implementing organization

Transmission network



Sustainability

No major problems have been observed in terms of the institutional and technical aspects of the operation and maintenance system and current operation and maintenance status. However, some problems have been observed in terms of financial aspects of the Executing Agency, as it was unable to meet some of the financial obligations set by the World Bank and Asian Development Bank. Therefore sustainability of the project effects is fair.

Conclusion, Lessons Learned and Recommendations

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

In this project, the utilization factor of the transmission line was low, because of the low power inflow to the transmission line compared to the plan. This is due to the delay in other projects involving transmission line and hydropower plant development, which were supposed to provide electricity to the transmission line constructed in this project. Accordingly, the lesson learned from the project is the importance of examining the level of achievability of other related projects and whether or not they have realistic implementation schedules, at the time of appraisal, so that the effectiveness of the entire domestic transmission network can be secured.

It is recommended that the Executing Agency improve its inventory management for spare parts and reporting, to be prepared for any sudden serious problems. This is because it might take more than a month to fix sudden problems or failures at substations, as some spare parts have to be purchased overseas. It is also recommended to separate the current training course into distribution and transmission courses, respectively and also managerial and engineer courses, to allow for more needs-oriented courses.

Key Points of Evaluation

Helped reduce electricity imports from neighboring countries

At the time of appraisal, there were four separate electricity transmission grids in Laos, which were not inter-linked. From the electricity transmission grid in the northern and central regions, including the capital city of Vientiane, surplus electricity was exported to Thailand, while the grid in the central-southern region imported electricity from Thailand, given the lack of any power plants supplying electricity to the grid. The terms of trade were not favorable for Laos, because the electricity import price from Thailand exceeded the export price to Thailand.

Even after completion of the project, Laos continued importing electricity, despite the unfavorable conditions*, because the transmission line connections between Laos and Thailand at Pakxan substation, Thakek substation and Pakbo substation were maintained as before, following the contract between EDL and the Electricity Generating Authority of Thailand (EGAT). In September 2013, EDL started controlling electrical power flow in the domestic transmission grid by cutting or connecting several transmission line connections, in accordance with daily and regional power demand. EDL then started reducing power imports from Thailand by sending the electricity produced in the central-southern region to Thakek substation, where a large amount of electrical power has been imported from Thailand.

* In 2012, the power export price to Thailand was THB 1.6/kWh (peak hours) and THB 1.2/kWh (off-peak hours), while the power import price from Thailand was THB 1.74/kWh (peak hours) and THB 1.34/kWh (off-peak hours).

Federative Republic of Brazil

The Project for Capacity Development on Non-Revenue Water Control

Spreading Japan's high level of non-revenue water control technology throughout the State of Sao Paulo ~ Coordination between the technical cooperation project and the Japanese ODA loan project ~

External Evaluators: Yuko Kishino and Noriaki Suzuki, IC Net Limited

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

Project Outline

- Total cost (Japanese side): 362 million yen
- Period of cooperation: July, 2007 – July, 2010
- Partner country's implementing organizations: Sanitation Company of the State of Sao Paulo (SABESP)
- The number of experts dispatched: long term: 1; short term: 9
- The number of technical training participants: Japan: 50 persons
- Main equipment provided: Portable electromagnetic / ultrasonic type flow meters, sonic pipe locators, correlative water leak detectors

Project Objective

Overall Goal

Water supply will be stabilized by reduction of Non-Revenue Water (NRW) in service areas of SABESP.

Project Purpose

The capacity of SABESP's staff to control NRW is strengthened.

Output

1. The SABESP staff who are involved in the project understand the significance of NRW control, and the system for the human resources development is strengthened.
2. Fundamental measures for NRW control are strengthened through practice in the pilot areas.
3. Corrective measures for NRW control are strengthened through practice in the pilot areas.
4. Preventive measures for NRW control are strengthened through practice in the pilot areas.

Instruction for electromagnetic flow meters (OJT)

Replacement of water service pipes

Effects of Project Implementation (Effectiveness, Impact)

The project was conducted with the aim of developing human resources and creating the systems needed to reduce non-revenue water to achieve a stable water supply in the State of Sao Paulo.

The non-revenue water control plans were carried out in all 15 business units and the Non-Revenue Water Rates of three business units in the pilot areas were considerably reduced following the implementation of the project. This was because the analysis of the System Input Volume progressed and water consumption was measured accurately by the transferred technology, which enabled specific non-revenue water control measures. However, the Non-Revenue Water Rates did not fall below 30%, the project target, in two business units due to delay in replacing the water service pipes and mains.

The technology penetrated within the business units of pilot areas and staff members engaged in non-revenue water control with high-level awareness, remained after completion of the project. Moreover, even at business units outside the pilot areas, it was confirmed that the percentage of those recognizing the importance of reducing the Non-Revenue Water Rate was high, between 80 and 100%. The project triggered a change in the activities of the counterpart and paved the way to establish solid foundations to control non-revenue water, such as allocating a sufficient budget. In particular, the great impact was the fact that national technical accreditation agency took over the training courses developed in the project to control non-revenue water and the private-sector enterprises involved in non-revenue water control were obliged to undertake certification training. The overall goal of reducing " The Non-Revenue Water Rate in service areas of SABESP to less than 30% "is expected to be achieved if the full-scale training courses starts and large-scale replacement of water service pipes and mains by the Japanese ODA loan project are completed.

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

Relevance

The path set in the plan to achieve the project purpose was insufficient such as dissemination from the pilot area to overall area, and there was some room for improvement. However, in light of the policy objectives for the efficient utilization of water resources, the project purpose was appropriate. In addition, the project was considered highly relevant to the country ṡ development plan and the development needs of Brazil, as well as Japan ṡ ODA policy. Therefore, the project ṡ relevance is high.

Efficiency

Despite the cooperation period remaining as planned, project costs were higher than planned. Although the implementation structure had room for improvement, such as not arranging a proper local coordinator, on-site technical instruction was provided effectively and efficiently. Therefore, the efficiency of the project is fair.

Table: Changes in the Non-Revenue Water Rate at each pilot areas (actuals) (Unit: %)

Pilot area name	2007 starting year (July – Dec.)	2008 (Jan. – June)	2008 (July – Dec.)	2009 (Jan. – June)	2009 (July – Dec.)	2010 Completion year (Jan. – May)
Jaguaré (MO)	46.3	44.6	Not calculated	42.6	39.0	30.9
Vila Baiana (RS)	58.5	62.6	60.2	51.2	44.2	27.9
Jardim das Colinas (RV)	61.2	36.1	32.3	35.4	40.5	37.4

Source: the evaluator's calculation based on materials provided by JICA

Table: Changes in the Non-Revenue Water Rate in SABESP service area (actuals) (Unit: %)

	2007	2008	2009	2010 (Completion Year)	2011	2012	2013
The whole of SABESP	35.8	34.1	32.4	32.3	32.0	32.1	31.2
The Sao Paulo Metropolitan Region Executive Office	34.6	32.7	31.4	31.9	31.3	31.8	30.8
The Regional Systems Executive Office	39.1	37.9	35.3	33.3	33.9	32.9	32.3

Source: materials provided by SABESP Planning Department

Sustainability

SABESP has a fully equipped business implementation system, including a department for managing non-revenue water and a system for developing private-sector operators. SABESP, the largest sanitation company in Latin America, has good financial standing and is expected to allocate a budget for non-revenue water control hereafter. Therefore, the sustainability of the project is high.

Conclusion, Lessons Learned and Recommendations

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

This project aimed to improve SABESP's overall non-revenue water control technology based on activities in the pilot areas. Conversely, much of the limited resources were allocated to technical support in pilot areas and inputs for dissemination were restricted. Ultimately, this adversely affected the achievement level of the Project Purpose.

Therefore, as a lesson learned, it is recommended that consideration for a reasonable plan be paid when forming a project, such as assigning experts who not only have technical competence but are also proficient in dissemination activities. For dissemination, consideration should also be given to actively utilizing local resources. Besides, at the start of the project, there were miscommunications between the Japanese and Brazilian sides due to differences in language and culture, which hindered various procedures at the preparatory stage. It is preferable that a person working as both interpreter and local coordinator be assigned at Japan's expense, from the start of the project. Furthermore, in cases where the project target area is vast, to facilitate project operations and strengthen the transfer of technology in local areas, the most appropriate implementation structure should be developed, such as assigning coordinators from among staff members of the implementing agency who are working in each respective area.

Recommendations to the implementing agency include establishing clear standards regarding the definition and calculation of the volume of water for social purposes and promulgating this to all business units. Recommendations concern the promotion of measures to reduce non-revenue water in slums, where few measures are taken.

Key Points of Evaluation

Japan's high level outputs of non-revenue water control technology throughout the State of Sao Paulo

The project developed a training program whereby 13 courses were created under four themes, to ensure staff members of SABESP understood the necessity for non-water revenue control and a reinforced system of human resource development involved in the non-revenue water control. Counterparts developed a training program taking the initiative and leveraging experience and knowledge obtained in business units in the pilot areas. They were also progressively making efforts to revise the training materials, even after the completion of the project. Of special note is the fact that they were officially adopted as the Brazilian Association of Sanitary and Environmental Engineering (ABES) training materials and institutionalized. In other words, it is a prerequisite for private businesses, which intend to engage in non-revenue water control, to apply for training and receive training from ABES, to pass the examination and obtain a qualification. The private-sector enterprises involved in the Non-Revenue Water Control Project in Sao Paulo State, Japanese ODA loan project, which started in 2012 and aimed to reduce non-water revenue and develop waterworks facilities, were obliged to undertake ABES certification training. It is highly probable that the project outputs will be utilized for engineers' training concerning the non-water revenue control. They are also expected to help reduce the Non-Water Revenue Rate in the State of Sao Paulo. Japan's high level of non-revenue water control technology will spread throughout the State of Sao Paulo, via coordination between the technical cooperation project and the Japanese ODA loan project and this long-standing cooperation would continue to produce results in the years to come.

Republic of El Salvador / Republic of Honduras
Construction of the Japan-Central America Friendship Bridge

The the new construction of the Japan-Central America Friendship Bridge has helped improve physical distribution in Central America. However, there is an urgent need to develop border crossing facilities.

External Evaluator: Takeshi Yoshida, Global Group 21 Inc.

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

Project Outline

- Grant limit / Actual Grant amount:
  650 million yen to El Salvador
  650 million yen to Honduras
  Total: 1,300million yen/1,297million yen
- Exchange of notes:
  El Salvador: June, 2007,
  Honduras: May, 2007
- Project Completion: July, 2009
- Implementing agencies:
  El Salvador: Ministry of Public Works, Transport, Housing and Urban Development (MOPTVDU)
  Honduras: Ministry of Infrastructure and Public Services (INSEP)

Project Objective

Overall Goal

To promote physical distribution, exchange and friendship between El Salvador and Honduras and also among the countries of Central America.

Project Purpose

To realise smooth transport between El Salvador and Honduras.

Output

To construct bridge (two lanes, 170m length), access roads, and river protection are constructed in the border between El Salvador and Honduras.

Japan-Central America Friendship Bridge

Rusted truss members of the Old Bridge

Large truck awaiting drug inspection on the New Bridge

Effects of Project Implementation (Effectiveness, Impact)

The project aimed to replace Goascorán Bridge on the border between El Salvador and Honduras with the Japan-Central America Friendship Bridge; possessing sufficient width and loading capacity, aiming to facilitate road traffic between the two countries.

At the time of project planning, it was assumed that on completion of the project, the New Bridge alone would be used, but in reality, border crossing time both for passenger vehicles and cargo vehicles was shortened by utilizing both the New Bridge for cargo transport and the Old Bridge for passenger vehicles at the same time. Because cargo traffic, largely comprising large-size vehicles, now uses the New Bridge, traffic safety has been improved. However, hazards have not entirely been eliminated because the Old Bridge that remains in use by large buses lacks sufficient load capacity due to under-maintenance. Moreover, on the New Bridge, because cargo vehicle congestion due to the border crossing procedure sometimes reaches back to the bridge itself, there is room for improvement as far as the border crossing time is concerned. While the cross border traffic volume has increased since the opening of the New Bridge, it has not reached the planned target figure for two reasons: 1) exchanges between both countries declined following the coup d ́état of 2009 in Honduras, and 2) cargo going to and from La Union Port over the bridge has not increased as projected because the port has not yet started full-scale operations. While the number of Honduran people visiting El Salvador has increased, no major impact on physical distribution has been confirmed.

Based on the above, the project has achieved its objectives to some extent; hence its effectiveness and impact is fair.

Relevance

In the Strategic Transportation Plan of Honduras (2004), the trunk highway network, including the project, was considered one of the future trunk corridors in Central America because of the considerable demand foreseen for these corridors. In the National Development Plan of El Salvador (2002), the development of the eastern area prioritized the development of La Union Port as a key industrial and logistics base as well as that of trunk roads in the area. This project is highly relevant to the development plan and development needs of both El Salvador and Honduras as well as Japan ́s ODA policy, meaning its relevance is high.

Efficiency

In terms of planned outputs, the construction of the bridge, access roads and river protection by the Japanese side was completed almost as planned. However, although there were plans for both countries to construct border crossing facilities by the time of completion of the Japanese work in July 2009, the border facility development plan remained incomplete during construction of the bridge and access roads. Time was subsequently spent adjusting with the planned border crossing facilities, which delayed the preparations for said facilities and the start of service on the New Bridge. Moreover, political disturbances

Changes of Border Crossing Time (Average Time of Replies by Freight Companies)

(Unit: minutes)

	Immigration	Customs	Quarantine	Border Police (Including Drug Control)
Before project	135	200	100	155
After project	20	25	15	25

Source: Interview results with freight company owners (7 companies in El Salvador and 6 companies in Honduras)

Changes in Cross-Bridge Traffic Volume (Cross-border Traffic Volume)

(Unit: Vehicles/day)

	2006 Actual Values (at time of planning)	2013 Actual Values (4 years after the completion)	Annual Average Rate of Increase
Car	213	374	8.4%
Bus	24	34	5.1%
Sub-Total	**237**	**408**	**8.1%**
Small Truck	209	151	-4.6%
Large Truck	158	26	-23.0%
Trailer	541	757	4.9%
Sub-Total	**908**	**934**	**0.4%**
Total	**1,145**	**1,342**	**2.3%**

Source: The Basic Design Study for 2006 figures (28th February, 2006).
The Ex-Post Evaluation Study (Traffic Volume Survey) for 2013 figures (27th November, 2013).
Note: All the vehicles used the Old Bridge in 2006. In 2013, passenger vehicles used the Old Bridge, and cargo vehicles (small and large vehicles and trailers) used the New Bridge.

meant that only temporary border crossing facilities were completed one year after the completion of the New Bridge structure and that the New Bridge went into service in September 2010, no permanent border crossing facilities have yet been constructed.

Therefore the efficiency of the project is fair.

Sustainability

There are no major problems regarding the operation and maintenance of the New Bridge. In contrast, the Old Bridge, which large buses still pass over today, lacks adequate maintenance and thus poses some danger. The FONDVIAL is experiencing limitations for road and bridge maintenance due to insufficient funding. Overall, some minor problems can be observed in financial aspect of operation and maintenance; hence the sustainability of the project effects is fair.

Conclusion, Lessons Learned and Recommendations

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

One lesson is that physically upgrading the border crossing by constructing a new bridge cannot fully achieve the intended effect of smoothing border crossing traffic unless border crossing facilities and a border crossing system, including customs clearance, are improved at the same time. In the project, the delayed construction of border crossing facilities was one factor behind the delayed opening of the New Bridge, limiting the full achievement of the project effect. Moreover, as the access roads were designed and constructed without a finalized border crossing facility construction plan, limitations were imposed on the subsequent planning of border crossing facilities, further delaying their construction.

This lesson thus illustrates the importance of considering inclusion of border crossing facilities and system into the project scope and examining the project feasibility as a whole, when a border bridge construction project is planned.

As a recommendation, the implementation agency and customs office in each country must urgently implement standardization and boost the efficiency of the border crossing procedure and relevant information system to capitalize on the shorter border crossing time due to the project. Also, both countries' implementation agencies need to secure safety on the Old Bridge by formulating and implementing an appropriate maintenance plan through mutual consultation.

Key Points of Evaluation

Urgent need to develop border crossing facilities and safety measures of old bridge

Replacing the decrepit Old Bridge with a new cement concrete bridge has guaranteed smooth passage for large trucks and significantly boosted the transportation sector. However the border crossing facilities and systems, which were planned to be established alongside the bridge construction, have not yet been introduced due to past political problems, so the border crossing procedure has yet to be improved. Moreover, because La Union Port in El Salvador is not yet fully operational, the anticipated impact on cargo transport has not been realized. Concern over safety due to the use of the Old Bridge, which was not originally planned, detracts from the sustainability evaluation. In other words, although the Japanese portion of the project has been effective, circumstances in other portions have adversely affected the overall evaluation.

Republic of Mozambique
The Project for Improvement of Infrastructure and Equipment of Training Schools for Health Personnel

Helping improve education for health personnel in Mozambique from qualitative and quantitative perspectives

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

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

Project Outline

- Grant limit / Actual Grant amount: 1,045 million yen / 973 million yen
- Exchange of notes: July, 2008
- Project Completion: October, 2010
- Implementing agency: Ministry of Health, Department of Human Resource

Project Objective

Overall Goal

To contribute to the improvement of the healthcare service in Mozambique

Project Purpose

To improve the educational environment and the quality of education at training schools for health personnel in Mozambique

Output

Classrooms, multipurpose classrooms and dormitories are expanded, and educational medical equipment is procured at 12 health personnel training schools in Mozambique

Constructed classroom (CFS* Massinga)
* CFS : Training schools for health personnel; mainly at basic level

Multipurpose classroom built in CFS Pemba

Provided equipment: Upper arm model for injection practice (for repeated intravenous use)

Effects of Project Implementation (Effectiveness, Impact)

This project was conducted with the aim of improving the educational environment and the quality of education at training schools for health personnel in Mozambique by providing infrasturcture and equipment for 12 training schools nationwide. This support helped expand the size and number of classrooms and dormitories at training schools, which had suffered from insufficient capacity before the project. Accordingly, the student intake and dormitory capacity were both increased significantly, while constructing multipurpose classrooms and pocuring practical educational equipment increased the opportunities for practical lessons and facilitated well-balanced theoretical and practical education. The result of beneficiary survey also shows that 97% of teacher respondents answered that“ the practical lesson become more effective by installing multipurpose classrooms ”and 98% of them recognized that“ practical lessons had improved and become effective thanks to the provision of educational medical equipment ”. It can be also said that this project, which allowed students to have experiences closely emulating real medical settings through practical lessons, helped improve the quality of medical education at training schools. The administrative equipment provided, including the PCs, also helped teachers to prepare classes efficiently by reducing the preparation time. It is confirmed that the number of training school graduates and medical personnel nationwide was boosted with the increased number of intake students at training schools. Thus the effectiveness and impact is high.

Relevance

This project is highly relevant to the development needs of Mozambique to expand facilities at training schools to respond to the insufficiency of the health personnel as well as Mozambique ṡ development plan, which has focused on the health sector in terms of improving accessibility to and quality of medical services. This project is also consistent with Japan ṡ ODA policy to Mozambique, which prioritized the health sector. Therefore, its relevance is high.

Efficiency

While the project cost was within the plan (89% of the plan), the project period slightly exceeded the plan (106% of the planned period) due to delays in customs clearance for the procured equipment. Therefore, the project efficiency is fair.

Sustainability

Thanks to support regarding the utilization of equipment provided by JICA experts or volunteers upon project completion, the facilities and equipment are in good condition, except for a few training schools. There are also no major concerns over the technical capacity of teachers. Conversely, there are some problems from institutional perspectives, such as the lack of Operation & Maintenance (O&M) staff and teachers and financial issues due to extensive repair work which will be required in coming years. 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.

Lessons learned from this project include the effectiveness of the continued support of JICA experts as well as volunteers; not only during but also after the project implementation, which allowed effective and continued utilization of the procured equipment. Under this project, even

The number of classrooms and students at target training centers

	Number of Classrooms[Note 1]		Number of Students			
	Before the project	After the project	Before the project	After the project		
	2007		2007	2011	2012	2013
ICS Nampula	9 (270 students)	13 (390 students)	614	908	967	1,113
CFS Pemba[Note2]	4 (120 students)	5 (150 students)	186	298	316	314
ICS Beira	9 (270 students)	13 (390 students)	609	1,196	1,265	1,370
CFS Nhamatanda	2 (60 students)	4 (120 students)	66	196	272	222
CFS Massinga	2 (60 students)	6[Note3] (180 students)	62	145	235	310

Source: Prepared based on responses to questionnaires to each training center
Note 1: Numbers shown in parentheses indicate classroom capacities.
Note 2: CFS Pemba is expected to increase capacity as two classrooms are under construction thanks to aid from a Spanish NGO.
Note 3: Two out of six classrooms at CFS Massinga were built by Canadian International Development Agency (CIDA) aid upon completion of this project.

<Result of the beneficiary survey> Improvement in practical lessons by providing medical equipment

	Considerably Improved	Improved	Unchanged	Worsened
Heads, Deputy Heads, Teachers	50.4%	47.3%	2.3%	0%
Students	57.1%	40.5%	2.4%	0%

<Result of the beneficiary survey> The improvement in medical service quality by graduates after providing educational equipment

	Considerably Improved	Improved	Unchanged	Worsened	N/A
Heads, Deputy Heads, Teachers	27.7%	66.0%	2.1%	0%	4.3%
Students, Graduates	28.6%	61.9%	0%	1.2%	8.3%

after its completion, short-term experts and those involved in the technical assistance project were dispatched, while members of the Japan Overseas Cooperation Volunteers Program (JOCV) also provided support to facilitate understanding of the methods and effectiveness of the equipment for practical lessons.

Recommendations to Ministry of Health (MOH) could include follow-up for further utilization of equipment to establish a maintenance system and examination of the plan and budget required for future O&M. During the ex-post evaluation, though the facilities and equipment were in good condition and fully utilized at most training schools, there were some instances of educational practical equipment being misused. One of the main factors cited was a lack of awareness on how to effectively use such equipment for practical lessons and improvement in this area is desirable. Furthermore, maintenance has only been performed after trouble occurs. Under current circumstances, this method of maintenance has not resulted in serious problems which may impair the project's sustainability. However, considering future increases in student numbers and deterioration of facilities, there is a need to establish a preventive maintenance system before large-scale maintenance is required. Moreover, it is also necessary to estimate the future budget which will be required, to make a plan and make budget proposals to the MoH based on the same.

Key Points of Evaluation

Follow-up activity of the project completion
-Contributing to the continuous and effective use of infrastructure and equipment and boosting users' understanding-

Support from JICA, which provided educational medical equipment to training schools in Mozambique, helped significantly improve education for national health personnel in the country. Medical education requires lessons in line with the curriculum, which includes both theory and practice in a balanced manner. Before the project, training schools focused on theory-based lessons due to the lack of equipment, which meant the students lacked any experience of touching medical equipment in hospitals or clinics prior to field lessons. Accordingly, training schools have a common awareness of issues concerning the quality of medical education. Thanks to the project, which procured abundant and varied equipment, students can take practical lessons under circumstances which resemble the actual circumstances of hospitals or clinics more closely. An interview survey of graduates working at hospitals and of health personnel revealed that the medical service had improved significantly since the project was implemented.

Furthermore, to ensure effective use of the equipment, continuous support was provided by coordinating activities with short-term experts and those involved in the technical cooperation project as well as JOCV. Thanks to this support, the staff and teachers of the training schools recognized the importance and effectiveness of using such equipment and it helped stabilize the provision of lessons balancing theory and practice. Many projects for procuring medical equipment have encountered problems in terms of inadequate O&M and underuse of the equipment provided. To avoid such cases, it is crucial for recipients to understand the importance and effectiveness of utilizing such equipment as well as related O&M methods. Accordingly, one lesson learned can be that providing continued follow-up activities by utilizing a range of needs-based support may be very effective, as shown by this project.

Kingdom of Morocco

Rural Secondary Education Expansion Project

Helping disseminate secondary education by constructing 98 secondary schools in the rural areas.

External Evaluator:Machi Kaneko, Earth and Human Corporation

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

Project Description

- Loan Approved Amount / Disbursed Amount
  8,935 million yen / 6,647 million yen
- Loan agreement: March, 2004
- Terms and conditions: Interest Rate: 0.9%,
  Repayment Period: 20 years (Grace Period: 6 years)
  Procurement: General Untied
- Final disbursement date : September, 2011
- Executing agency: Ministry of National Education and Vocational Training (MENFP)

Project Ovjectives

Overall Goal

To contribute to raising living standards of people in the rural areas of Morocco.

Project Purpose

To expand secondary education coverage and redress urban-rural and gender disparities in access to eduction through support to actions in the rural areas of the five target regions.

Output

Construction of 101 secondary schools and procurement of equipment in the rural areas of the five target regions.

A secondary school located the steep mountainous areas of Taza Al hoceima Taounate region

Classroom scene at Ibn Baja Secondary School in Doukala Abda region

Dining hall at Issen Secondary School in Souss Massa Draa region

Project Locations (Five target regions)

Effects of Project Implementation (Effectiveness, Impact)

At the time of the appraisal of this project, a lack of a sufficient number of secondary schools was identified as a serious problem in the rural areas of Morocco. In response, this project was determined to construct 101 secondary schools in five regions where most of their rural areas had higher poverty index, focusing on assistance in quantitative expansion. At the time of the ex-post evaluation, 98 secondary schools constructed under the project are in operation where approximately 48,000 students are enrolled. This accounts for 20% of the total number of students (about 240,000) who are enrolled in public secondary schools in the rural areas of the five target regions.

Indicators measuring effectiveness of the project have mostly achieved the planned targets. Namely, the age specific enrollment rates among 12- to 14-year-olds improved and the number of girl students enrolled in secondary schools also increased.

It should be noted that these improvements have been underpinned by the programs of the Ministry of National Education and Vocational Training (Ministère de l'Education Nationale et de la Formation Professionnelle; “MENFP”), which, concurrently with this project, promoted school enrollment through provision of school meals, development of school dormitories, financial assistance for households, etc. On the other hand, results of the beneficiary survey targeting the students indicated that many of the primary school classmates of the responding students gave up secondary schooling because of the reasons including “a long distance to school,” “poverty” and “marriage.” Further enrichment of support measures is needed in this respect.

Although urban-rural disparities in the enrollment rates remained at the time of ex-post evaluation, the expansion of secondary education in the five target regions has a positive impact on equitable access to secondary schooling (by redressing urban-rural and gender disparities).

In light of the above, the project has mostly produced its effects as intended, and its effectiveness and impact is high.

Relevance

Both at the time of the project’s appraisal and the ex-post evaluation, the Government of the Kingdom of Morocco has put broader access to secondary education in rural areas as a key development agenda. The project has been highly consistent with the country’s development plan, development needs, as well as Japan’s ODA policy. Therefore, its relevance is high.

Efficiency

Of 101 secondary schools planned, 100 sites launched their construction. As of the time of the field study (May 2014), 98 schools were completed and in operation. Although the project cost was within the plan, the implementation period significantly exceeded the plan. Therefore, the efficiency is evaluated to be fair.

Sustainability

Under the supervision of the Regional Education and Training Academy (Académie Régionale de l'Education et de la Formation; “AREF”) in each target region, Provincial Delegations and the target schools have developed in partnership an institutional setting for operation and maintenance of the project. No major problems have been thus observed in the institutional, technical and financial aspects of the operation and maintenance. Therefore, sustainability of the project effect is high.

Conclusion, Lessons Learned and Recommendations

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

As for the lessons learned from this project, it was pointed out that the ongoing new ODA loan projects should incorporate the activities to promote broader community understanding and

Table 1 Percentage of the Project's Target Schools among the Rural Secondary Schools (public institutions)

Target Region	Actual		
	Number of the Schools Opened	Number of Secondary Schools in the Target Regions*	Percentage of the Target Schools among the Rural Secondary Schools
a) Marrakech Tensift Al haouz	29	98	30%
b) Taza Al hoceima Taounate	7	74	9%
c) Doukala Abda	11	52	21%
d) Tanger Tetouan	12	53	23%
e) Souss Massa Draa	39	141	28%
Total	**98**	**418**	**23%**

Source: JICA document and Educational Statistics of Morocco 2012/13
* Results indicated in the Table are as of 2012/13.

Table 2 12-to-14-year-old Enrollment Rates (public and private institutions)

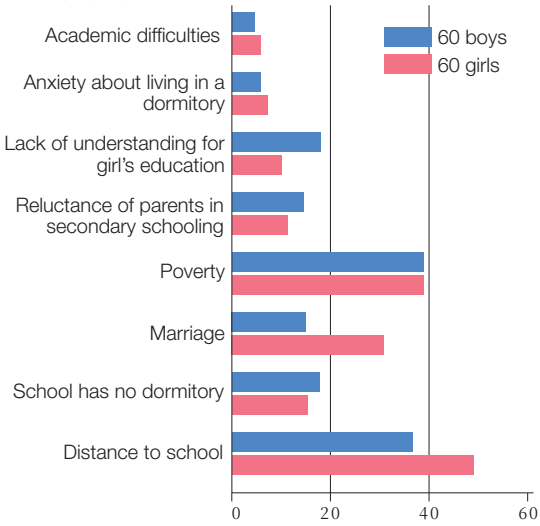
(%)

National Total and Region (AREF)	Target (Five years after the project completion)	Actual*1,*2	
	2008/09	2008/09	2012/13
National Total (Female)	**95.0**	**70.2(64.8)**	**85.1(80.1)**
a) Marrakech Tensift Al haouz	86.3	75.3(64.7)	84.7(75.3)
b) Taza Al hoceima Taounate	84.0	52.5(42.5)	67.0(58.9)
c) Doukala Abda	89.7	57.4(51.2)	82.3(74.3)
d) Tanger Tetouan	87.8	65.5(63.1)	76.9(75.6)
e) Souss Massa Draa	88.0	71.7(61.4)	86.6(78.3)

Source: MENFP data (provided in February 2014) and Educational Statistics of Morocco 2012/13
*1 Figures in the parentheses show the female enrollment rate
*2 Although two schools were yet constructed and didn't reach the target number of the school at the time of the ex-post evaluation of the project, effectiveness was analyzed based on the latest data available at the time of the evaluation.

〈Beneficiary Survey〉

Causes of Non-enrollment in Secondary School in View of Primary School Graduates (Multiple responses) (Survey targets: 60 boy and 60 girl students attending the target secondary schools of this project)



collaboration with the basic infrastructure sector, as well as to take measures for expanding girls' schooling in accordance with local needs through the performance of annual monitoring and evaluation of girls' share among new entrants.

When a project involves construction sites in remote areas with very limited access and steep mountainous areas, as is the case with this project, it may be hampered by unsuccessful tenders and construction delays. It is essential that JICA explain to the executing agency that the latter will need to start preparing for a tender at its detailed design stage by setting out a feasible design, cost estimation and construction period which foresee technical difficulties including geographical conditions, and obtain mutual confirmation on the said matter.

As for the recommendations to the MENFP, it was pointed out that the progress of work at the two schools under construction should be supervised rigorously in order to open these schools at the earliest possible time. It was proposed that the work supervision at these schools should be facilitated by sharing of information through regular reporting from AREF to MENFP and the submission of progress reports from MENFP to JICA Morocco Office for the entire period till completion. Besides, locating dormitories and upper secondary schools adjacent to lower secondary schools is an effective way to promote enrollment of more girl students at the schools constructed by this project, and discussion of the need for such arrangement is expected to take place. In addition, it is necessary to prepare a uniform nation-wide manual describing the processes and procedures for the maintenance of school facilities and equipment in order to avoid different practices among schools.

Key Point of Evaluation

Identification of achievements and problems in the expansion of secondary education in rural areas from this project

Although the expansion of secondary education coverage in Morocco has been slower than that of primary education coverage, the net enrollment rate for secondary schools increased from 50.2% in 2000/01 to 84.0% in 2012/13, marking a significant improvement during the past 10 years. However, urban-rural disparities remain, as the net enrollment rate for secondary schools in 2012/13 was 80.7% in urban areas while 30.6% in rural areas.

Based on the above educational statistical data and other information, the ex-post evaluation conducted a field study using interviews with the relevant AREF personnel in all of the five target regions and facility survey by questionnaires to each school. The study team visited 13 of the 98 schools constructed by the project to confirm the operation and maintenance of facilities and the learning environment of students, and also conducted interviews with students, teachers, and parent associations.

The results showed that the secondary schools constructed by this project were playing very important roles in helping the boys and girls in the vicinities enter secondary schools. In addition, secondary schools in remote areas far away from major cities and those in mountainous areas accessed via steep mountain paths also attracted many students. School directors and students revealed that many students would have been unable to obtain secondary education if the project had not provided the schools.

Although nation-wide educational statistics shows that major problems remain in the expansion of secondary education coverage in rural areas, the results of this ex-post evaluation confirmed the steady advancement of secondary education in rural areas. While the secondary schools constructed by this project are supporting the early steps in the expansion of secondary education coverage in rural areas, they at the same time also help us identify the problems for the future, such as what additional facilities and enrollment promotion measures are needed for the expansion of secondary education coverage including that for girls. The experience in this project is expected to be valuable for the expansion of secondary education in the rural areas of Morocco.

Extraction of “Knowledge Lessons” (A Cross-Sectoral Analysis of Evaluation Results)

(Nature conservation / irrigation, drainage and water management / fisheries / disaster management)

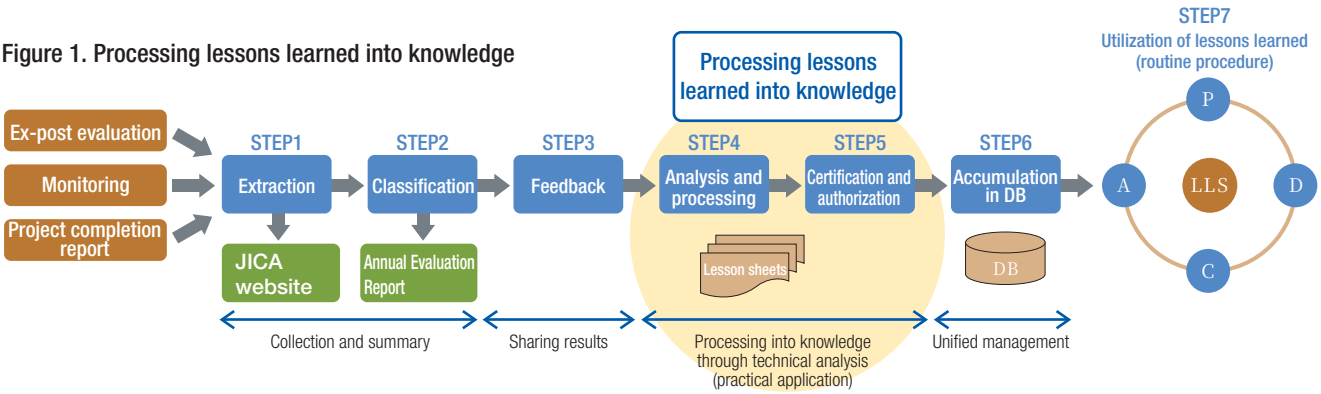
Operational consultant: OPMAC Corporation

1 Background to this study

Last year’s thematic evaluation “Analysis of the Improvement of Management System for Utilizing Lessons Learned in PDCA Cycle” proposed introducing the Lessons Learned System (LLS). One of its key points was using a template to ensure consistent analysis of risks and lessons learned and share the results among those concerned. The study also identified problems in using lessons learned: practicality (no concrete countermeasures had been suggested); accessibility (numerous lessons learned had not been compiled); lack of acknowledgement and identification of significant lessons learned for future projects; inconsistent use of lessons learned depending on the individual staff member; lack of assessment of the results obtained by using lessons learned.

This year’s thematic evaluation “Extraction of Knowledge Lessons (A Cross-sectional Analysis of Evaluation Results)” is an analysis based on the recommendations of the above-mentioned study. In particular, this year’s study focused on the following two steps to use lessons learned: analyzing and processing lessons learned from individual projects (Step 4) and certifying and authorizing lessons deemed as knowledge (Step 5). This study aimed to identify and systematize practical and universal lessons by reviewing previous cooperation projects in the following four sectors: nature conservation; irrigation, drainage and water management; fisheries; and disaster management. Moreover, this study proposed an approach of processing lessons learned into knowledge and training content to utilize lessons learned.

Figure 1. Processing lessons learned into knowledge



2 Process of generating “knowledge lessons”

This study performed a cross-sectional analysis of lessons learned, mainly from JICA’s completed projects, as well as capturing tacit knowledge of JICA staff and others concerned. They were analyzed and processed into practical and generalized knowledge that should be used to formulate and implement similar projects in future (processing lessons learned into knowledge). These important lessons were then systematized as “knowledge lessons.”

This study was conducted from April to December 2014, taking the steps illustrated in Figure 2 to generate “knowledge lessons”. In this study, a taskforce was formed, comprising members of the Thematic Departments and Knowledge Management Networks in the relevant sectors as well as the Evaluation Department, who held a total of four meetings to consider “knowledge lessons”. The first meeting aimed to share a common understanding of the design of this study, including basic perspectives; the second was to discuss the draft “knowledge lessons” (version 1); the third to exchange opinions with external experts in a workshop setting and discuss the draft “knowledge lessons” modified through field studies (version 3) and the fourth and final meeting to finalize the “knowledge lessons”.

1) Step 1: Select the sectors and projects for this study and share basic perspectives

The four priority sectors for which the lessons learned needed to be systematized to revise thematic guidelines and provide input to international conferences were selected for this study. Subsequently, the Thematic and Evaluation Departments selected the projects to be reviewed. The number of projects ranged from 50 to 90, depending on the sector. Subsequently, basic perspectives were adopted for the analysis by reviewing the relevant thematic guidelines, reports and documents of projects to be reviewed and other reports issued by thematic departments.

2) Step 2: Review evaluation reports and other relevant documents and analyze the cases of other donors

Through detailed analysis of reports and other documents of the selected projects, the study team (consultants) extracted information on the lessons learned that could be processed into knowledge. They were selected based on the following four criteria: (1) the concreteness of information; (2) logic; (3) universality; and (4) practicality. Subsequently, they were further categorized into three types: (1) lessons learned for project management; (2) sector-specific lessons learned; and (3) country/region-specific lessons learned. In addition to this document analysis, the study team interviewed JICA staff and Senior Advisors to capture their tacit knowledge and examined how other donors had drawn lessons from their experience.

3) Step 3: Draft the Knowledge Lesson Sheets

Knowledge Lesson Sheets (version 1) were drafted based on the above-mentioned individual lesson sheets. A cross-sectional analysis of lessons learned from individual projects was performed based on basic perspectives.

4) Step 4: Discuss and deliberate“ knowledge lessons ”during taskforce meetings

The study team modified the Knowledge Lesson Sheets as version 2 based on comments from JICA Senior Advisors, taskforce members and others concerned.

5) Step 5: Obtain comments from external experts

A workshop was held to receive technical comments on the draft“ knowledge lessons ”from external experts, including consultants engaged in ODA projects, academic experts in the fields of this study and staff from relevant government agencies. During this workshop, a number of valuable and concrete suggestions were made on a wide range of problems and their countermeasures. These opinions were then reflected in the draft Knowledge Lesson Sheets.

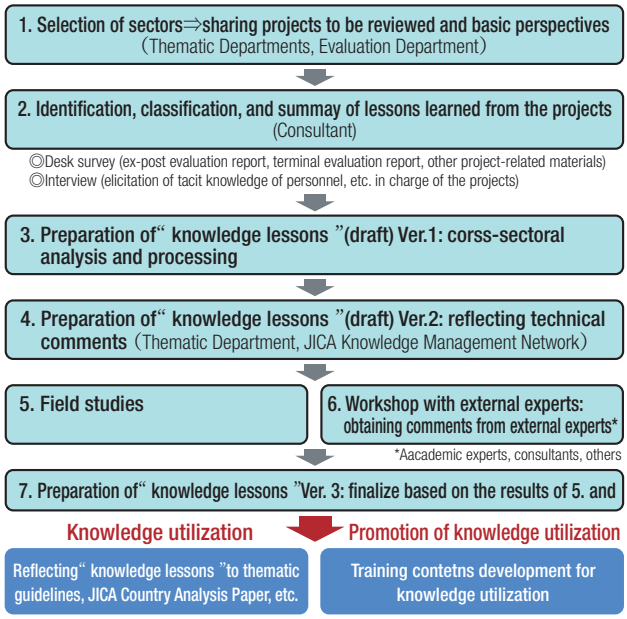
6) Step 6: Conduct field studies

To deepen the analysis of“ knowledge lessons ”, field studies were conducted in the following countries for the sectors covered in this study: Vietnam for the nature conservation sector; Cambodia for irrigation, drainage and water management sectors; Cambodia and Laos for the fisheries sector; and the Philippines for the disaster management sector. The criteria used to select these countries included involvement in many cooperation projects in the relevant sectors and the countries concerned having designated these sectors as priority development issues.

7) Step 7: Finalize the Knowledge Lesson Sheets

The Knowledge Lesson Sheets were revised as version 3 based on the results of the above steps and finalized during the fourth taskforce meeting. Eventually, a total of 67“ knowledge lessons ”were identified as“ knowledge lessons ”, including 14 for the nature conservation sector, 19 for the irrigation, drainage and water management sectors, 19 for the fisheries sector and 15 for the disaster management sector.

Figure 2. Process of generating“ knowledge lessons ”



3 Knowledge Lesson Sheets

The“ knowledge lessons ”refer to the practical and generalized lessons identified and systematized through the above-mentioned process. The Knowledge Lesson Sheet format includes the following items to describe them to facilitate efforts by the JICA staff and other project team members to determine any potential risks, when they may arise and how they can be reduced. Thus,“ knowledge lessons ”have been formulated to be applied easily.

Figure 3. Knowledge Lesson Sheet format

- Type of lessons learned
- Title and sector
- Key words
- Applicable cases
- Risks (where no countermeasures are taken)
- Timing of application
- Countermeasures
- Expected effects
- Projects from which lessons were learned

4 Transformation to a learning organization (promoting the use of“ knowledge lessons ”)

The“ knowledge lessons ”generated by this study are expected to be reflected in thematic guidelines and other project documents prepared by project management departments as well as presented on occasions such as international conferences. The“ knowledge lessons ”are also expected to be used in daily operations to enhance project management in the PDCA cycle, particularly when JICA staff analyze possible risks during the formulation and planning stages of new projects and explore measures to mitigate those pointed out in the Knowledge Lesson Sheets. JICA is planning to archive the Knowledge Lesson Sheets while creating a useful information system environment to ensure access to the necessary information. Meanwhile, to promote the use of lessons learned, JICA must further consolidate its culture as an organization that learns lessons from the past. Accordingly, this study also developed training content for JICA staff. The focus of the training is to increase awareness of how to manage risks in project management because the use of lessons learned means risk management.

Through the above-mentioned efforts, JICA is expected to improve its projects by further promoting the generation, accumulation and use of lessons learned.

“Knowledge Lessons” learned from nature conservation projects

In the nature conservation sector, the following 14 knowledge lessons were identified based on analysis of Technical Cooperation and ODA Loan projects, which adopted community-based participatory approaches to nature conservation. The following tables outline the points to be considered and measures to be taken for the “knowledge lessons”, including the applicability of participatory approaches and the development and deployment of model schemes.

◆ List of “Knowledge Lessons”

Lesson	Title
1	Assessing the applicability of community-based participatory approaches to nature conservation
2	Setting Overall Goals, Project Purposes and Indicators that can be shared among all project team members
3	Considering to provide long-term support by taking program approach
4	Developing and verifying model schemes
5	Disseminating model schemes (including scaling up mechanisms)
6	Selecting project target areas
7	Motivating local residents to participate in nature conservation activities

Lesson	Title
8	Potential for increasing cash income
9	Financial sustainability after the project completion
10	Criteria and selection of target groups
11	Using local human resources and knowledge
12	Involving multiple organizations in a project
13	Investigating the actual application of forest-related laws and regulations
14	Land ownership and land-use rights

The key “knowledge lessons” are as follows:

Lesson 1	Assessing the applicability of community-based participatory approaches to nature conservation
Applicable cases	When a project for nature conservation is requested, it is essential to assess the applicability of community-based participatory approaches before making any decision on whether to adopt such approaches.
Risks	・A new project may be formulated without acknowledging the valuable lessons learned from previous participatory approaches. ・Some projects may be designed without clearly defining how income-generating activities can contribute to nature conservation. ・Participatory activities may be discontinued after the end of the project period, due to the limited capacity of counterpart organizations and local communities.
Possible measures to be taken	**[Applicability assessment]** Review approaches to date in the target country/region. Carefully consider whether to adopt a participatory approach and, if appropriate, how to involve local residents in the project planning phase. **[Natural conditions]** Under a severe natural environment, it is difficult for community residents to independently manage and conserve natural resources, even if income-generating mechanisms are developed. Identify the level of government intervention required in such cases. **[Institutional conditions]** Determine how government systems promote participatory forest management (e.g. extension/support mechanisms). Examine laws and regulations on natural resource management and conservation as well as community organizations. **[Local residents]** Explore possible needs and incentives of local residents for nature conservation from a wider perspective, including not only individual income generation but also public welfare. Assess the educational and technical levels of local residents and traditional practices in relation to nature conservation.

Lesson 2	Setting Overall Goals, Project Purposes and Indicators that can be shared among all project team members.
Applicable cases	Where project team members do not share a common understanding or definition of the Project Purpose, Overall Goal, Indicators, etc. after the start of the project period.
Risks	・Project activities may be implemented in different ways depending on individual understanding due to the lack of a clear definition or common understanding of terms (e.g. “model” and “system”) among the organizations/people concerned. ・The progress and achievements of a project cannot be monitored or evaluated because some indicators are too vague to be measured or inadequate to assess the degree of contribution of the project.
Possible measures to be taken	**[Target setting]** Clearly define targets in the project planning phase (When abstract terms are used to describe the Overall Goal and Project Purpose, they should be specified by Indicators). **[Review and modification]** Create opportunities to review and revise, if necessary, the Overall Goal, Indicators and Activities to ensure the sustainability of project results and the achievement of the Overall Goal. **[Preparation for evaluation]** Conduct a baseline study to evaluate the achievement of the Project Purpose and Outputs (Identify the time and human resources required for the study). **[Indicator setting]** Set measurable Indicators. If the volume of forest resources is unmeasurable or inappropriate to evaluate the project results, the applicability of performance indicators should be considered, such as changes in the awareness and behavior of project participants.

Lesson 4	Developing and verifying model schemes
Applicable cases	When developing effective model schemes that can be scaled up is formulated
Risks	・Some model schemes cannot be verified by the end of the project period and thus cannot be appreciated by government officials or local residents in partner countries. ・Some projects may be terminated before completing the verification process to check whether the model schemes developed under the initiative of Japanese experts can be implemented by their counterparts. ・Some model schemes cannot be extended elsewhere due to the lack of implementation mechanisms (e.g. limited human resources, budget and commitment) after the end of the project period.
Possible measures to be taken	**[Planning stage]** Right from the start, design project activities to ensure that the model scheme developed under the project can be taken over and scaled up by local partners. **[Definition of the term “model”]** Define the term “model” so that all project team members can share a common understanding of its purpose, role, features and functions. **[Project period]** If it is essential to improve the awareness and behavior of residents in project target areas, secure sufficient time to do so and have project counterparts verify the feasibility of the model scheme to be applied. **[Selection of model sites]** Carefully select model sites by focusing on their adequate number, locations, accessibility and zoning in accordance with the Project Purpose. **[Model type]** Develop an economical model scheme, affordable for farmers in target areas (including introductory costs, mechanisms and technologies). **[Review and record the results]** Review and record the input and output of model schemes to analyze how to support their installation and deployment.

Lesson 7	Motivating local residents to participate in nature conservation activities
Applicable cases	Where local residents in the project target areas have little interest in forest conservation or few incentives to participate in such activities when a community-based participatory approach is adopted
Risks	・If visible outcomes cannot be achieved in a short timeframe, residents’ motivation may decline over time, failing to sustain their participation. ・In a country where local governments have control over activities implemented by residents, tensions may arise between them, which may result in a long time required to build mutual trust.
Possible measures to be taken	**[Shared understanding]** Explain the nature of the project to be implemented before it starts; promoting the understanding of local residents. Encourage them to develop and implement an exit strategy for self-support to raise their ownership. **[Benefits]** Conduct activities that can directly contribute to nature conservation (e.g. agroforestry, sustainable exploitation of forest resources and development of reservoirs). If a project includes activities to improve living standards, such activities are implemented in a way that can contribute to nature conservation (benefits and obligations). **[Secured financial resources]** Consider how to secure financial resources to meet the demands of each project (e.g. public finances, profit-sharing and payments for ecosystem services (PES)). **[Forest exploitation planning]** Obtain the understanding of local residents and enhance the practicability of project activities by jointly planning forest management (including rules and benefit-sharing arrangements) with local residents. **[Authorization]** Obtain the administrative authorization of community-based organizations and activities as well as documenting local residents’ obligations to ensure the continued participation of all concerned.

Lesson 8	Potential for increasing cash income
Applicable cases	Where project target areas produce agricultural, forestry and other products that can generate cash income
Risks	・Income-generating activities may be discontinued after the end of the project period due to limited market access. ・Environmentally friendly, income-generating mechanisms may not spark a drastic increase in earnings in a short timeframe. ・Some income-generating activities cannot benefit local residents as expected if those activities result in over-production or when affected by market price fluctuations.
Possible measures to be taken	**[Diverse perspectives]** Assess the sales potential of products that can generate income in a short time as well as contribute to forest conservation in the project planning phase. **[Target groups]** In addition to analyzing the potential to generate income, the roles and responsibilities of project target groups should be examined. It is also necessary to identify the attributes of people who may have impacts on forests. **[Risk management]** Provide local residents with explanation about the income-generating activities to be introduced, including their risks. Take measures to mitigate the risks.

Lesson 10	Criteria and selection of target groups
Applicable cases	Where target groups are selected at the planning or implementation stage
Risks	・If target groups are selected without clear criteria, some people may consider it unfair. ・There are many cases where even if a business model is established, only a limited number of people can use it, resulting in widening income inequalities and escalating tensions in the community. ・Some socially vulnerable people may be excluded from the process of organizing local residents for a joint management system.
Possible measures to be taken	**[Selection criteria, explanation and monitoring]** Set criteria to select direct beneficiaries and explain them clearly in advance. Monitor the progress to ensure the participation of all stakeholders and identify any negative impacts (e.g. the burden of compulsory participation). **[Core farmers]** Develop and effectively deploy core farmers to catalyze the success of business models. **[Selection of target groups]** Involve all stakeholders who may play an important role in forest conservation by investigating traditional patterns of use in advance. Focus particularly on social disadvantaged groups and gender equality. **[Support to ensure fairness]** Consider implementing activities to benefit wide-ranging people (e.g. training).

Lesson11	Using local human resources and knowledge
Applicable cases	Where it is considered more effective for Japanese experts to work not only with their counterparts but also with other local human resources Where it is difficult for project counterparts to implement or monitor project activities by themselves due to their limited capacity.
Risks	・It may take considerable time for Japanese experts to develop the capacity of their counterparts and they may lack time to take action for local residents before the end of the project period. ・Project team members, not only Japanese experts but also their counterparts, may be unfamiliar with local conditions and thus unable to adequately consider the sociocultural and structural characteristics of individual communities.
Possible measures to be taken	**[Clearly defining the roles of project counterparts]** Assess their capacity and define their roles and functions accordingly. Train facilitators, if necessary, in the project process. **[Use of other human resources than project counterparts]** Hire or train local human resources (e.g. community/farmer facilitators and NGOs) if the above-mentioned approach is difficult. -> Use local human resources to build trust and develop a sustainable mechanism to continue activities after the end of the project period.

Lesson12	Involving multiple organizations in a project
Applicable cases	Where it is essential to involve wide-ranging stakeholders, such as central and local governments, relevant ministries, NGOs and private entities in project activities
Risks	・It may take considerable time to make decisions at every stage of project activities because it is difficult to share information among all those concerned before decision-making. ・If excessive emphasis is placed on establishing project implementation mechanisms and coordinating relevant organizations, it may prove costly and obscure individual responsibility (e.g. the division of roles and the shares of contributions), which will delay the project schedule.
Possible measures to be taken	**[Clear division of responsibilities]** Identify relevant organizations through stakeholder analysis. Establish a project implementation mechanism by writing down (visualizing) the responsibilities of individual organizations and their relationships. **[Establishment of a platform]** Discuss and coordinate with relevant organizations to establish a project platform. Stipulate the roles of individual organizations as well as management procedures, including the decision-making process and achieve consensus on these points. Review and modify the platform flexibly according to the progress and achievement of the project.

Lesson13	Investigating the actual application of forest-related laws and regulations
Applicable cases	Where a legal system has been established for forest management at the national level but has not yet been fully applied at a local level
Risks	・Some projects cannot be realized as planned due to the gap between the legal system and reality. For example, even if laws and regulations restrict the exploitation of forest resources in conservation areas, local people make a livelihood from the forests. ・It may take considerable time for the outcomes of project intervention to take root in local society when national laws and regulations, if any, outline policies but do not provide detailed rules, implementation flow, or systems for forest management at field level.
Possible measures to be taken	**[Investigation into existing laws and regulations]** Examine the concreteness and effectiveness of relevant laws and regulations developed at the local/field level. Explore approaches to ensure their effectiveness. **[Clear division of activities]** Analyze the political and institutional foundations for project activities. Define the activities to be implemented by local governments and communities. **[Capacity development]** Develop and improve guidelines and manuals as well as organizing training programs to strengthen the capacity of local/field staff to implement policies and systems (practicability at the local/field level).

Lesson14	Land ownership and land-use rights
Applicable cases	Where land ownership and land-use rights have not been formalized or relevant information is not available in potential project target areas
Risks	・Some local residents cannot benefit from nature conservation unless land ownership and land-use rights are clearly defined.
Possible measures to be taken	**[Entitlement]** Ensure the allocation of land-use rights to villages as a precondition for project implementation or promote that process through project activities involving relevant organizations. Obtain information on the authorities in charge of registering land ownership and land-use rights and the administrative framework and procedures for formalizing these rights. **[Risk management]** Take measures for both statutory and customary land-use rights if there is any difference between them. Avoid implementing project activities in areas with land dispute issues.

“Knowledge Lessons” learned from irrigation, drainage and water management projects

In the irrigation, drainage and water management sector, the following 19 “knowledge lessons” were identified based on the analysis of relevant Technical Cooperation, ODA Loan and Grant Aid projects. The following tables outline the points to be considered and measures to be taken for the “knowledge lessons”, including the selection criteria for partner countries/regions, the needs of target farmers, the development and maintenance of irrigation facilities and the implementation and dissemination of agricultural models.

◆ List of “Knowledge Lessons”

Lesson	Title
1	Selection criteria for partner countries/target areas
2	Needs of target farmers to enhance agricultural productivity and generate income
3	Financial and technical sustainability of pump irrigation systems
4	Preconditions for developing new irrigation facilities
5	Irrigated agriculture projects in disaster-prone areas
6	Appropriate project implementation period and scope of activities (Technical Cooperation projects)
7	Clear definition of target groups
8	Disputes and conflicts between farmers in project target areas
9	Development of on-farm irrigation canals at the expense of partner countries
10	Activities and costs incurred by partner countries (financial cooperation)

Lesson	Title
11	Smooth acquisition of land for irrigation
12	Availability of irrigation water and water resource use plans
13	Establishing and developing the capacity of irrigation associations
14	Modifying water distribution methods and plans following changes in the pattern of agricultural production
15	Developing farming models which local farmers can apply
16	Deployment of farming models
17	Managing the project schedule in case of collaboration with other assistance schemes and donor organizations
18	Motivating project counterpart organization staff
19	Exploring the potential to provide medium- to long-term assistance by taking a program approach

The key “knowledge lessons” are as follows:

Lesson 1	Selection criteria for partner countries/target areas
Applicable cases	When assistance for irrigated agriculture is requested
Risks	・Irrigated agriculture may not be as sustainable and productive as expected if hard infrastructure (irrigation facilities) or soft infrastructure (facility maintenance systems and agricultural models) do not function well.
Possible measures to be taken	**[Investigating the natural conditions]** Assess the feasibility of irrigation and the appropriateness of irrigation methods by analyzing meteorological, hydrological and other related information. **[Examining the prerequisites for irrigation]** Investigate water sources, water rights, land ownership and land-use plans. **[Examining the needs and incentives of farmers for irrigated agriculture]** Survey target areas, including the economic conditions, income-generating activities of farmers, market and demand for agricultural products, market access and social conditions (e.g. the characteristics and education levels of communities). **[Examination of governmental systems and policies]** Analyze the positioning of irrigated agriculture in the policy arena, farming support systems.

Lesson 3	Financial and technical sustainability of pump irrigation systems
Applicable cases	When assistance for developing pump irrigation facilities is requested
Risks	・Pump irrigation may not be sufficiently profitable to offset maintenance costs. ・Some irrigation facilities cannot be maintained for technical reasons such as the lack of spare parts and repair expertise.
Possible measures to be taken	**[Assessing the sustainability and financial feasibility of pump irrigation]** Analyze profitability whether there is any demand for cash crops, barriers to market access, the availability of agricultural support systems, the technical skills of farmers, the presence of farmer-based organizations, the availability of spare parts, the availability of engineers who can repair pumps and similar. **[Assessing the technical feasibility of pump irrigation]** Examine the geographical conditions (where water pumping facilities should be located) and explore appropriate water pumping and irrigation systems.

Lesson 4	Preconditions for developing new irrigation facilities
Applicable cases	When assistance for new irrigation facility development is requested
Risks	・It may take considerable time for newly established irrigation associations to start working or for irrigated agriculture to take root. ・When a project is designed to assist immigrants with no experience in agriculture, if they lack any other income source, they may be unable to survive without welfare and may eventually abandon the irrigated land.
Possible measures to be taken	**[Confirmation of land ownership and land-use rights in project target areas]** If there is any other land-use plan, the land is highly likely to be sold or converted to other uses. **[Examination of how to use or plan to use water]** Assess the availability of water in terms of quality and quantity. **[Examining the agricultural needs of farmers]** Examine whether local farmers have incentives to adopt irrigated agriculture and skills to maintain it. **[Examination of agricultural support systems]** Examine whether there is any technical support system to help farmers introduce and maintain irrigated agriculture. **[Examination of farmer-based organizations]** Examine whether there is any farmer-based organization to maintain irrigation facilities. **[Analysis of agricultural markets]** Assess whether there is demand for agricultural products produced in local areas.

Lesson 6	Appropriate project implementation period and scope of activities (Technical Cooperation projects)
Applicable cases	When setting a project implementation period and scope of activities for a Technical Cooperation project to support irrigated agriculture
Risks	・A three- to five-year project cannot be expected to increase agricultural output or income by the end of the project period although these benefits are the best incentive for farmers.
Possible measures to be taken	**[Setting project components and targets]** Set project components and outputs in accordance with the circumstances of each target area (e.g. the presence of irrigation facilities, the experience of irrigated agriculture and the technical skills of irrigation engineers). **[Setting the time frame required to achieve the Project Purpose and Outputs]** A three- to five-year project cannot be expected to identify and solve the challenges facing project target areas. **[Capacity development activities and the time required for it]** Identify the skills to be learned and estimate the time required to master them based on analysis of the technical level of irrigation engineers in partner countries.

Lesson 7	Clear definition of target groups
Applicable cases	Where there is a need to develop the capacity of project target groups to use irrigation facilities and their agricultural skills
Risks	・When project target groups and their needs for capacity development are unspecified, efforts to strengthen their capacity may not be accomplished by the end of the project period and some problems may remain unsolved.
Possible measures to be taken	**[Identify the needs for capacity development and the narrowing down of target groups]** Conduct a detailed capacity assessment in the preparatory study phase to identify the issues to be addressed and narrow down the scope of cooperation activities and target groups. **[Strategically set targets and steps for capacity development]** Set targets for capacity development and steps to accomplish them after identifying target groups and their needs. Provide technical training support to target groups after all project team members reach consensus on the content and level of training, based on the results of a baseline survey to assess the capacity of target groups.

Lesson 9	Development of on-farm irrigation canals at the expense of partner countries
Applicable cases	Where an irrigation facility development project is implemented in a country/region where underdeveloped on-farm canals have become a bottleneck for the irrigation system as a whole
Risks	・Irrigation systems that do not work as a whole cannot efficiently supply water across project target areas. ・A delay in constructing main canals may discourage local farmers from developing on-farm canals and cause problems such as poor drainage of irrigated land and its surrounding areas.
Possible measures to be taken	**[Assessing the capacity of partner countries to develop irrigation facilities]** Assess the technical and financial capacity of partner countries when on-farm canals will be constructed at their expense. **[Setting realistic project outcomes]** Formulate a practical project implementation plan. And set outcomes that can be achieved only through project activities in target areas and exclude potential benefits to the irrigated land covered by the on-farm canals to be developed. **[Consideration of providing support for developing irrigation infrastructure, including on-farm canals]** Consider providing comprehensive support for developing irrigation infrastructure, including on-farm canals, if it is almost impossible for partner countries to do so. In this case, focus on the possibility of on-farm canal development entailing complex procedures for land acquisition and extend the project period.

Lesson 12	Availability of irrigation water and water resource use plans
Applicable cases	Where there are any other water use plans for the river from which water is to be taken for irrigation (e.g. other irrigation plans by upstream farmers and other intended uses of water such as water supply, power generation and commercial use of water).
Risks	・An adequate supply of water cannot always be ensured as planned, or the expected effects of irrigation development may not be obtained due to the time taken to coordinate water use. ・Water pollution may adversely affect irrigated agriculture.
Possible measures to be taken	**[Confirmation of water and land-use plans]** Confirm whether there are any other water or land-use plans, such as the water resource use plan and development plan, in the entire river basin, including project target areas. **[Examination of coordination mechanisms]** Examine coordination mechanisms such as laws and regulations regarding the use of water resources. **[Assistance/collaborative support to establish coordination mechanisms]** Support the establishment of coordination mechanisms, in collaboration with other donors as necessary, if no such mechanism exists. **[Review of the scope and scale of support for irrigation facility development]** When consensus cannot be reached among all those concerned, there is a need to review the scope and scale of support for irrigation facility development.

Lesson 13	Establishing and developing the capacity of irrigation associations
Applicable cases	Where on-farm irrigation facilities are maintained at the expense of beneficiaries (farmer participatory approaches)
Risks	・Unless roles or responsibilities for maintaining on-farm irrigation canals are clearly divided, the necessary efforts may not be made, hindering all or most of the irrigation system function as a whole. ・An unequal distribution of water may discourage some farmers from maintaining irrigation facilities and the area of irrigated land may become smaller than planned.
Possible measures to be taken	**[Establishing and developing the capacity of irrigation associations]** Build irrigation associations, develop maintenance manuals and train association staff to maintain on-farm canals. **[Equal distribution of water]** Establish a coordination mechanism to formulate and implement water distribution plans via a participatory approach. **[Setting irrigation service fees payable by beneficiaries]** Let beneficiaries set service fees at an affordable level.

Lesson 15	Developing farming models which local farmers can apply
Applicable cases	When designing a project to build farming models
Risks	・If the application of the developed model requires more resources than locally available (e.g. financial, technical and human resources), it is unlikely to spread beyond the pilot sites.
Possible measures to be taken	**[Assessing the input local farmers can afford]** Properly narrow down the package of techniques to be introduced so that local farmers can afford to apply them. **[Developing a farm management improvement model combined with techniques that incur no cost]** Develop a model combined with simple techniques that incur no cost to farmers, such as plowing fields. Provide guidance to farmers on water management methods suitable for their farming systems. **[Consensus on the definition and content of the model to be developed]** Reach consensus with the partner government during the project planning phase on the development concept of models that can be widely applicable. **[Involvement of the organizations concerned with model development]** Consider, as required, how to involve the organizations concerned, such as irrigation and agricultural agencies, in developing and deploying agricultural models. **[Selection criteria for pilot sites]** Select pilot sites that can serve as bases for model deployment. At this time, focus on their locations to ensure easy access and maximize demonstration effects.

Lesson 16	Deployment of farming models
Applicable cases	When considering whether to support the deployment of the farming model developed by a project
Risks	・Without support, productivity may decline due to performance degradation and incorrect application of cultivation techniques. ・Without support, deployment efforts may be limited. In such cases, the farming model will be unable to spread or take root in target areas. ・Without support, local farmers may be unable to continue the input required for the model.
Possible measures to be taken	**[Timely delivery of farming guidance and support to coincide with irrigation facility development]** Deliver farming guidance and technical support, including measures such as free distribution of seeds, immediately after the completion of irrigation facilities. [1] Where agricultural communities of a certain size are clustered within a relatively small area: develop the capacity of commune-level agricultural extension service providers, provide technical support by utilizing demonstration farmers/fields and reflect agricultural extension activities in policy and budget processes. [2] Where it is geographically and physically difficult for agricultural extension service providers to reach all farmers because they are scattered over a wide area: Apply a farmer-to-farmer extension approach.

“Knowledge Lessons” learned from fisheries projects (inland aquaculture / fishery resource management)

In the fisheries sector (inland aquaculture / fishery resource management), the following 19 “knowledge lessons” were identified based on analysis of Technical Cooperation projects for inland aquaculture and fishery resource management. The following tables outline the points to be considered and measures to be taken for the “knowledge lessons”, including aquaculture extension approaches, the production and supply of fish seed for the inland aquaculture sector, organizing fishermen and establishing consensus-building mechanisms for the fishery resource management sector.

◆ List of “Knowledge Lessons”

<Inland aquaculture>

Lesson	Title
1	Selection criteria for partner countries/areas
2	Objectives of introducing aquaculture
3	Small-scale aquaculture as an income driver
4	Selection of production systems
5	Effective aquaculture extension approaches (farmer-to-farmer extension training approaches)
6	Functions of an aquaculture center

Lesson	Title
7	Production and supply of fish seed 1 (securing and managing quality parent fish)
8	Production and supply of fish seed 2 (using hormones)
9	Production and supply of fish seed 3 (fish seed production bases)
10	Selection of fish type (foreign species)
11	Production and supply of aquaculture feed
12	Consideration of the socially vulnerable groups

<Fishery resource management>

Lesson	Title
13	Organizing fishermen
14	Motivation for participation
15	Consensus-building mechanisms
16	Consideration of socioeconomic impacts (the importance of baseline surveys)

Lesson	Title
17	Effectiveness of fishery resource management
18	Using local human resources for fishery resource management
19	Exploring the potential to provide long-term support by adopting a program approach

The key “knowledge lessons” are as follows:

Lesson 2	Objectives of introducing aquaculture
Applicable cases	When promoting aquaculture in non-Asian countries, particularly African countries
Risks	A introduction of “small-scale = low-input aquaculture” without careful consideration may not lead to income growth, which will discourage fish farmers, particularly in African countries, due to the high expectations of aquaculture as an income driver.
Possible measures to be taken	**[Market analysis]** Strategically select fish with high sales potential after assessing consumer needs and market trends for fishery products as well as the impact of competition from wild and imported frozen fish. **[Production systems]** Farmers can invest in producer goods if they can eventually make profits. Therefore, consider the possibility of introducing semi-intensive aquaculture instead of extensive one. **[Strengthening the management capacity of fish farmers]** Train fish farmers on business management so that they can keep accounts for their aquaculture business and monitor profitability. **[Aquaculture extension activities focused on profitability]** Emphasize “profitable aquaculture” in extension activities and provide necessary information.

Lesson 4	Selection of production systems
Applicable cases	When initially considering what type of production system to select as an aquaculture model to be extended
Risks	It is necessary to select an aquaculture production system that suits the local circumstances and meets the needs of target groups. Otherwise, the system will be unable to attract new participants and thus only applicable to limited areas. An appropriate aquaculture production system should be adopted, based on careful assessment of the needs and capacity of target groups.
Possible measures to be taken	**[Extensive aquaculture]** This production system stimulates the growth of plankton by fertilizing ponds. It can be applied by economically vulnerable farmers since they can start aquaculture production very economically. **[Intensive aquaculture]** Most business entities engaged in commercial aquaculture can operate independently. They are rarely included in the target group of JICA projects. **[Semi-intensive aquaculture]** This production system is relatively flexible in terms of production timing. With this production system, farmers can secure their income even during the off-season and diversify their production, which will allow the system to contribute to stable farm management. Note that it can also be applied by farmers who can invest a certain amount of money.

Lesson 5	Effective aquaculture extension approaches (farmer-to-farmer extension training approaches)
Applicable cases	Where effective aquaculture extension services are needed but cannot be fully provided due to weak public support systems for promoting and extending aquaculture
Risks	Many of the administrative organizations in partner countries lack [1] human resources and [2] financial resources for extension services as well as [3] the capacity of input in early time to produce or supply. These three problems mean an extension approach based on government intervention may not work and inland aquaculture would not develop as expected.
Possible measures to be taken	Considering the farmer-to-farmer extension training approach that incorporates the following features: **[Transfer of fish seed production prosecution to core farmers]** This extension approach will engage core farmers in business activities to produce and sell fish seed to trained farmers. **[Dispersive production of fish seed]** The most of core farmers would produce and sell fish seed. This means that fish seed production bases will be spread nationwide, allowing general farmers easy access to fish seed. **[Transfer of technical support functions from aquaculture extension service providers to core farmers]** This extension approach will encourage core farmers to train general farmers as a means of acquiring new customers. This can save administrative organizations from the labor of providing technical support.

Lesson 7	Production and supply of fish seed 1 (securing and managing quality parent fish)
Applicable cases	Where a stable supply of quality seed is required to promote and extend aquaculture
Risks	Various problems may occur, such as fish diseases and low productivity, unless parent fish are properly managed.
Possible measures to be taken	**[Import of parent fish]** It is essential for Japanese experts to discuss in detail with their counterparts about the import of parent fish, because importing fish without a proper quarantine process or system may result in the outbreak of fish diseases and because improper management of imported fish may damage genetic resources. **[Establishment of fish seed production networks]** It is important to support the creation of seed producer networks so that they can cooperate to renew parent fish and exchange information on know-how to manage parent fish.

Lesson 9	Production and supply of fish seed 3 (Fish seed production bases)
Applicable cases	Where a stable supply of quality seed is required to promote and extend aquaculture
Risks	・The poor road access and long distance between fish seed production bases and buyers (fish farmers) may threaten the lives of young fish. ・A limited number of fish seed production bases may restrict the extension of aquaculture.
Possible measures to be taken	**[Selection of fish seed producers]** Establish criteria to select fish seed producers while focusing on accessibility between suppliers and buyers. **[Integrated support to establish a fish seed production system]** Develop farmers who can produce fish seed to ensure a stable supply of quality seed for neighboring small-scale farmers. Provide technical training and support for motivated farmers who have been chosen as model fish seed producers. Assist fish seed producers in all stages, from spawning and hatching to fry rearing, while taking into account the characteristics of target areas and farmer groups.

Lesson 11	Production and supply of aquaculture feed
Applicable cases	Where economical and efficient feed is required to promote and extend aquaculture
Risks	Although economical and efficient feed is hardly available in partner countries, expensive feed may undermine the sustainability of aquaculture, no matter how effective.
Possible measures to be taken	**[Identifying and adopting locally available feed resources]** Produce feed from local resources (e.g. rice bran, corn bran, waste rice, termites, insects, earthworms, water plants and vegetables) to ensure a stable supply of low cost feed. **[Joint purchase]** Form networks of fish farmers for joint purchase of feed. Commercial feed vendors may offer a discount for joint purchase. If neighboring countries produce commercial feed, consider the possibility of jointly importing the same.

Lesson 13	Organizing fishermen
Applicable cases	When implementing projects in countries/regions where fishermen have not been organized to manage fishery resources
Risks	Without fishermen organizations, selfish and indiscriminate fishing activities may continue, which may undermine fishery resource management measures. When a fishermen organization needs to be created from scratch, it may take considerable time for it to start working properly.
Possible measures to be taken	**[Baseline survey]** Conduct a baseline survey to collect the information required for organizing fishermen, such as whether there are any group activities. Analyze this information when considering how to organize fishermen. **[Relevance of organization]** Select the form of organization that fits local circumstances. **[Authorization of organizations]** The organizational functions of fishery resource users can be strengthened when authorized by administrative organs. **[Development of leaders]** Actively support the selection and training of leaders. Consider the possibility of giving them official status.

Lesson 14	Motivation for participation
Applicable cases	Where a project requires the wide participation of fishermen in fishery resource management activities
Risks	Only some of stakeholders may be involved in fishery resource management when many remain unaware of its importance and if there is no economic or social incentive for participation. This will hamper efforts to continue effective management.
Possible measures to be taken	**[Promoting understanding and awareness]** Create an environment conducive to facilitating the active participation of resource users in fishery resource management by promoting their understanding of the severity of resource depletion and the need for countermeasures. **[Effectively combining management and support measures]** Because introducing aquatic resource management may impose extra economic burdens on fishermen in the short term, measures must be taken to alleviate that negative impact (e.g. by offering incentives). **[Presenting benefits from organization activities]** If a fishermen organization has been established, clearly present the benefits of joining the organization (e.g. access to jointly purchased materials) to encourage continued participation.

Lesson 15	Consensus-building mechanisms
Applicable cases	When establishing a mechanism to coordinate interests and build a consensus for aquatic resource management
Risks	Without any effective autonomous mechanism to coordinate interests and build a consensus among all stakeholders, the effects of fishery resource management measures may be undermined in the medium- to long-term.
Possible measures to be taken	**[Establishing a mechanism to coordinate interests and build a consensus]** In countries/areas where local communities are traditionally entitled to use specific marine resources and have established social mechanisms to exploit the same (e.g. Oceanian island countries), it is effective to incorporate the functions of resource management into existing mechanisms. If no such mechanism exists, it must be established using project management frameworks, such as project steering committees, as well as legal authorization. **[Involvement of stakeholders]** It is important to ensure the participation of all major stakeholders. Facilitate their participation by appointing them as official meeting members and securing budget for the meetings.

Lesson 18	Using local human resources to manage fishery resources
Applicable cases	Where fishery resource management is performed in remote islands and rural areas that are not staffed by public service workers (e.g. fisheries extension service providers)
Risks	If project target areas are limited to where fisheries extension service providers are allocated (or areas easily accessible for Japanese experts and their counterparts), the areas most in need of fishery resource management may not receive the required support.
Possible measures to be taken	**[Active involvement of local human resources]** Recruit and train community leaders so that they can serve as community-based extension service providers instead of public service providers. Clearly define criteria to select these community-based service providers. Consider the possibility of human resource development using JICA's thematic training courses. **[Authorization of the local human resources involved]** Strengthen the effectiveness of community-based extension service by properly authorizing them. There are three main ways to give them authority: [1] appointing them as legally authorized representatives; [2] appointing them under the administrative jurisdiction of state fisheries authorities; and [3] appointing them with community approval.

“Knowledge Lessons” learned from disaster management projects

In the disaster management sector, the following 15 “knowledge lessons” were identified based on the analysis of Technical Cooperation, ODA loan and Grant Aid projects for disaster management administration, community-based disaster management and disaster education. The following tables outline the points to be considered and measures to be taken for the “knowledge lessons”, including developing the capacity of disaster management agencies, developing disaster management models to be extended and establishing community-based disaster management systems.

◆ List of “Knowledge Lessons”

Lesson	Title
1	Strategic approaches to disaster management support
2	Points to be considered in supporting efforts to develop the capacity of disaster management agencies
3	Establishing disaster management models to be extended
4	Enhancing coordination mechanisms among central government agencies
5	Role of central government agencies in promoting disaster management activities at a local level
6	Identifying disaster risks
7	Reflecting disaster risk assessment in disaster management policies and plans
8	Operation and maintenance of disaster prevention structures

Lesson	Title
9	Operation and maintenance of disaster forecast and warning systems
10	Effective mechanisms for disseminating disaster forecast and warning information
11	Community-based disaster management approaches that can contribute to community development
12	Establishing community-based disaster management systems
13	Disaster management in communities with underdeveloped community organizations
14	Collaboration among schools, communities and local governments
15	Regional approaches (support for multiple countries)

The key “knowledge lessons” are as follows:

Lesson 2	Points to be considered in supporting efforts to develop the capacity of disaster management agencies
Applicable cases	When designing a project supporting efforts to develop the capacity of central-level government agencies responsible for disaster management
Risks	Disaster management plans may not be fully implemented due to disaster management agencies’ limited financial and human resources, expertise in fields related to disaster management and the power of influence in government.
Possible measures to be taken	**[Disaster management plans, laws and regulations]** Examine whether there are disaster management plans, laws and regulations and, if any, how effective they are. **[Authority and the chain of command]** Design a project implementation framework by examining the chain of command and the authority of relevant ministries (including their regional branches) based on the results of stakeholder analysis. **[Capacity assessment]** Assess the capacity of disaster management agencies and identify the baseline level (e.g. their authority and positioning in government, the number and capacity of their staff and the budget allocation). Subsequently, set targets so that project team members, both JICA and partner country sides, can share a vision on the outcomes to be achieved by the project.

Lesson 3	Establishing disaster management models to be extended
Applicable cases	When promoting disaster management measures, such as community-based disaster management and disaster education, in countries where disaster management measures have not yet been established at local and community levels.
Risks	・If a project places excessive focus on disaster management at a local level, it cannot fully involve the central government or reflect the results of activities in national disaster management policies, which means the disaster management model developed through the project cannot be extended. ・Without strong initiative and commitment on the part of local governments, project activities may be frustrated, failing to develop a disaster management model.
Possible measures to be taken	**[Selection of pilot sites]** Upon selecting pilot sites for developing disaster management models, prioritize areas where people have significant disaster awareness, where local governments have a strong commitment and where JICA has provided support for structural measures **[Support for securing financial resources]** Investigate the budget systems of local governments and examine how to secure budgets for disaster management activities at a community level. **[Verification of disaster management models]** Verify the feasibility of a series of community-based disaster management activities (e.g. hazard mapping, disaster risk mapping by local residents, evacuation drills). Reflect the results in national-level disaster management policies.

Lesson 4	Enhancing coordination mechanisms among central government agencies
Applicable cases	Where there is a need to improve coordination between the central government ministries responsible for disaster management
Risks	Central government ministries responsible for disaster management may have strong jurisdictional awareness, which may prevent them from close collaboration and hinder the progress of disaster management plans.
Possible measures to be taken	**[Analysis of the capacity of disaster management agencies]** Strengthen the capacity of disaster management coordination agencies to analyze their own status quo (e.g. their organizational structure, staff strength, authority and the current situation of collaboration with other organizations concerned) and develop proper approaches to enhance cooperation with other organizations concerned. **[Establishing coordination mechanisms among central government agencies]** Establish a committee involving all organizations concerned. Strengthen coordination mechanisms through the committee and other activities (e.g. regular meetings and exchange of disaster-related information). Define the role of each organization. **[Promoting understanding of disaster management systems and plans of central government agencies]** Enhancing the understanding and awareness of the organizations concerned through workshops and seminars.

Lesson 5	Role of central government agencies in promoting disaster management activities at a local level
Applicable cases	Where disaster management plans cannot be properly formulated or implemented by local governments and are thus supported by central government
Risks	Some disaster management activities cannot be properly implemented due to lack of awareness on the part of local governments of the disaster management plans and central government measures or due to budget shortfalls.
Possible measures to be taken	**[Enhancing mechanisms to assist local governments in their disaster management activities]** Facilitating collaboration among the organizations concerned at a local level by strengthening the capacity of regional branches of national disaster management agencies and enhancing cooperation among central government agencies. **[Improving disaster management activities of local government and promoting their implementation]** Assisting the central government in [1] monitoring, evaluating and supporting improvement; [2] providing incentives to local governments (e.g. allocating budget to disaster management plans); [3] sharing information among local governments; and [4] deploying disaster management measures at the local government level (e.g. organizing seminars).

Lesson 7	Reflecting disaster risk assessment in disaster management policies and plans
Applicable cases	Where the central government has a low level of disaster awareness and has not initiated disaster management measures or developed disaster management policies or plans
Risks	・Disaster risk assessment activities may be hindered by the lack of capacity of evaluators or staff shortages, particularly at a local level. ・The results of the disaster risk assessment may not be properly reflected in disaster management policies or plans due to a lack of understanding on the part of policy makers.
Possible measures to be taken	**[Establishing implementation mechanisms to assess disaster risk and map hazards]** Identify individuals who can assess disaster risks and make hazard maps. Define their roles in these activities. **[Promoting awareness of the need for disaster risk management]** Increase awareness of the need for disaster risk management among central ministries and government agencies responsible for disaster management through workshops and similar. **[Developing the capacity to formulate disaster management policies and plans based on the results of disaster risk assessment]** Strengthen the capacity to formulate disaster management policies and plans based on the results of disaster risk assessment after examining the accuracy and validity of the assessment as well as the practicability of disaster management measures.

Lesson 8	Operation and maintenance of disaster prevention structures
Applicable cases	Where disaster prevention structures are not properly operated and maintained
Risks	・Due to the lack of technical and financial capacity for maintenance, disaster prevention facilities may not function as required during disasters, failing to reduce risks to residents. ・Disaster prevention facilities may not be maintained or function properly because their management has not been transferred to responsible local governments.
Possible measures to be taken	**[Developing the capacity of national disaster management officers]** Develop human resources of national disaster management agencies to provide technical guidance to local technical officers. **[Developing the capacity of local disaster management officers]** Assist instructors from central government agencies in training and supervision on a pilot basis. **[Secured budget for maintenance]** Investigate the budget framework and allocation mechanism of countries where projects are to be implemented. Support efforts to secure a budget for maintenance.

Lesson 9	Operation and maintenance of disaster forecast and warning systems
Applicable cases	Where disaster forecast and warning systems are not properly maintained
Risks	・Due to limited technical capacity and knowledge of disaster management agency staff, appropriate flood forecast and warning information cannot be provided to local residents, failing to reduce risks to them. ・Some disaster forecast and warning systems cannot function during disasters due to insufficient budget for system maintenance. ・If there are regional differences in the design and specifications of disaster forecast and warning systems, the limited financial and human resources may not meet the needs for human resource development or maintenance.
Possible measures to be taken	**[Developing the capacity of national disaster management officers]** Strengthen the capacity of technical officers of central government agencies in charge of disaster forecast and warning services (e.g. meteorological agencies) to collect and analyze data and forecast disasters. **[Developing the capacity of local disaster management officers]** Analyze budget frameworks and allocation mechanisms. Support efforts to secure budget. **[Integration of warning systems]** Introduce standard disaster forecast and warning systems after investigating existing systems.

Lesson 10	Effective mechanisms for disseminating disaster forecast and warning information
Applicable cases	When introducing disaster forecast and warning systems
Risks	Warning information cannot be properly or promptly received by those who need it, which may delay their evacuation.
Possible measures to be taken	**[Strengthening the capacity of officers who issue evacuation alerts]** Identify what information should be given to municipal governments and train responsible officers on how to make such information easy to understand. **[Diversification of information delivery methods]** Develop a mechanism comprising multiple reliable means of delivering information after examining and trying out several ways (e.g. notification by siren, phone, radio, television, wireless communication and SMS). **[Practical exercises to deliver information from emergency alert stations to local residents]** Organize training programs and seminars on information delivery, involving all organizations concerned with disaster forecast and warning information delivery. **[Community-based disaster monitoring and enhancement of disaster awareness]** Establish a mechanism where local communities monitor disaster risks, inform the residents of alerts and evacuate them as required. To this end, promote disaster awareness in the community.

Lesson 12	Establishing community-based disaster management systems
Applicable cases	When establishing disaster management systems at a community level
Risks	・It may take considerable time to improve awareness and understanding of the importance of disaster preparedness and the need for disaster management activities, which may prevent those activities from taking root. ・Without community leaders, disaster management activities may be discontinued.
Possible measures to be taken	**[Points to be considered in implementing community-based disaster management activities in pilot sites]** Investigate [1] existing community-based organizations, including their activities, community centers and other facilities; [2] disaster experiences and countermeasures; [3] promotion of disaster awareness by involving local residents in hazard mapping; and [4] emergency information delivery methods. **[Developing the capacity of disaster management officers of local governments to assist communities in disaster management]** Establish a mechanism for local disaster management officers to supervise and monitor community-based disaster management activities. Strengthen their capacity to reflect the lessons learned from their activities in the disaster management plans of their local governments. **[Target groups to be trained to maintain disaster management facilities]** Train not only local government staff but also community leaders and volunteers.

Lesson 14	Collaboration among schools, communities and local governments
Applicable cases	When supporting disaster education in communities with little experience in disaster education
Risks	Disaster education only to students at schools may have a limited effect, failing to increase disaster awareness in society.
Possible measures to be taken	**[Collaboration between communities and schools in disaster education]** Establish a mechanism where schools promote disaster education in collaboration with communities. **[Horizontal collaboration at the local government level]** Ensure that projects include activities to establish collaboration/coordination mechanisms between local disaster management agencies and education administration authorities. Enhance the perception of decision-makers, such as local education administration leaders and school principals, of the need for collaboration with community-based disaster management activities. **[Vertical collaboration between central and local governments and communities]** Implement pilot projects at a local level and develop national-level guidelines, in cooperation with central government (e.g. disaster management agencies and the ministry of education), to widely disseminate the results of the pilot activities.

Analysis for Enhancing the Evaluability of JICA's Cooperation Programs

Operational consultant: Foundation for Advanced Studies on International Development

Background to this study

To maximize the effect of development efforts with finite resources, it is essential to make aid efforts more strategic and effective. To this end, JICA has promoted the "Program Approach", whereby independent projects are integrated and managed collectively as part of "JICA's Cooperation Programs" (hereinafter referred to as "Cooperation Programs") to achieve collaborative and synergistic benefits in specific sectors in developing countries. JICA has also evaluated 11 Cooperation Programs*1, while applying the concept of contribution*2, with which the plausibility of causal relationships between JICA's interventions and the development results achieved in developing countries was indirectly analyzed.

To make Cooperation Programs more strategic and objectively evaluate their development effects to further enhance their management and publicize the lessons and knowledge learned, it is becoming increasingly important to improve program planning and design, including the program purpose and scenario setting.

This thematic evaluation study was conducted while focusing on the "evaluability" of Cooperation Programs to clarify the requirements to be met in formulating Cooperation Programs ("Requirements for Evaluability").

Outline and methodology of this study

This study commenced with a cross-sectional analysis of Cooperation Program Plans formulated by JICA and the existing program evaluation done by other donors. Based on this analysis, the first version of "Requirements for Evaluability" of Cooperation Programs was drafted. The practicability of these requirements was then tested and improved by trial application to actual Cooperation Programs through a literature survey and field studies. Ultimately, the following three outputs were proposed: (1) a draft list of Requirements for Evaluability of the Cooperation Programs, or an evaluability assessment checklist, to be used through the stages of formulation, implementation, and evaluaction of the Cooperation Programs; (2) a draft of the evaluation criteria and evaluation questions for the Cooperation Programs; and (3) a draft of the tools/formats for evaluation of the Cooperation Programs.

Results of the review of cooperation program plans and a list of requirements for evaluability (draft)

A cross-sectoral review of 26 Cooperation Program Plans prepared by JICA from 2008 to 2012 from an evaluability perspective identified the following problems (refer to the left column in Table 1).

Based on these results, a list of Requirements for Evaluability of Cooperation Programs was created (refer to the right column in Table 1). This is a checklist to be used throughout the formulation, implementation and evaluation stages of Cooperation Programs to enhance their evaluability, including points to be considered when setting their program purpose, indicators, scenario and implementation system and when assessing their relevance to policies.

*1 "Support to the Victims of Armed Conflict and their Coexistence and Reconciliation Program" in the Republic of Colombia was evaluated in fiscal 2013.

*2 The concept of contribution means an idea to distinguish between progress in terms of improving development issues in a developing country (e.g. access to basic education in Bangladesh) and the results achieved by an organization through its development program and to indirectly assess the plausibility of causal relationships between them.

Table 1. Major problems in program planning and requirements for evaluability of cooperation programs

Major Problems	Draft Requirements for Evaluability (excerpt)
The program purpose is ambiguous (not concretely defined).	●The positioning of the Cooperation Program in the development policies of the partner country should be clearly defined. ●The partner country government should have a shared understanding and strong commitment toward achieving the purpose of the program.
The program purpose is set at too high/low a level.	●The program purpose should be set appropriately (practical target setting) ●The targets (at the Outcome and Impact levels) should be set properly to facilitate their achievement through integrated implementation of multiple projects.
The causal relationship between the program purpose and outcomes is weak.	●The scenario to achieve the program purpose should be set properly. ●The positioning and role of each sub-component project should be clearly defined in the Cooperation Program scenario.
Some indicators are set improperly.	●The indicators should be set properly so that they can be used to assess the program purpose. ●The program purpose should be set properly so that it can be used to assess the achievement of the development goals (or subordinate strategic targets) of the partner country.
Analysis of external factors is insufficient.	●A wide range of risks should be analyzed. ●The program period should be set properly along with a clear exit strategy. ●A shift in the direction of the Cooperation Program caused by the addition of core projects and other drastic changes should be reflected in its plan (e.g. the program purpose, scenario and indicators).
The selected target area deviates from the objective.	●The program purpose should be set properly so that it can be achieved through activities within the target area by the end of the program period.
Measurable development targets are not set when determining the cooperative scope.	●The indicators of the program purpose should be set properly so that they can provide concrete measures to assess the achievement of the program purpose.
The monitoring system and methodology have not been planned in advance.	●The implementation system of the Cooperation Program should be defined in its plan / a monitoring system for centralized monitoring of the progress made toward the program purpose and outcomes of the Cooperation Program as well as sharing of the monitoring results should be established by agreement among JICA members, their counterparts and other people concerned. The methodology, timing, frequency and actors of monitoring should be also specified and agreed by those concerned.

Source: JICA Evaluation Department

Evaluation criteria, questions, tools and formats (draft)

(1) Evaluation criteria and questions (draft)

The abovementioned list of Requirements for Evaluability is expected to enhance the evaluability of each Cooperation Program. The following table shows the focal points in an actual evaluation study. The significance and planning of Cooperation Programs should be assessed at the ex-ante evaluation stage. In addition to these two evaluation criteria, the process and results (degree of achievement of the program purpose) should be evaluated on completion of the program.

Table 2. Evaluation criteria and questions for cooperation programs (draft)

Evaluation criteria	Evaluation questions (main questions)	Evaluation questions (sub-questions)	Ex-ante evaluation	Ex-post evaluation
I. **Significance of the Cooperation Program**	1. Is the program purpose aligned with the development policy or plan of the partner country and the Japanese aid policy?	1-1. Is the Cooperation Program consistent with the development policy and plan of the partner country?	○	○
		1-2. Is the Cooperation Program consistent with the prioritized development needs of the partner country?	○	○
		1-3. Is the Cooperation Program consistent with the country / thematic assistance policies of Japan?	○	○
II. **Planning of the Cooperation Program**	2. Is the scenario to achieve the program purpose appropriate?	2-1. Is the program purpose clear?	○	○
		2-2. Can the program purpose be examined based on the data or facts?	○	○
		2-3. Can the program purpose (its target value) be achieved within a program period?	○	○
		2-4. Is the logical sequence from the each sub-component project to the program purpose clear?	○	○
		2-5. Was the Cooperation Program structured by considering the endeavors of the partner country, other donors and international organizations in order to effectively achieve the program purpose?	○	○
III. **Process of the Cooperation Program**	3.Were the sub-component projects implemented properly to achieve the program purpose?	3-1. Did collaboration among sub-component projects generate scale-up and synergy effects to achieve the program purpose?	×	○
		3-2. Was there any collaboration or coordination with the partner country and other donors and international agencies to achieve the program purpose?	×	○
		3-3. Was the purpose of the Cooperation Program managed as necessary (e.g., monitoring, communication among stakeholders, risk management, and program revision)?	×	○
IV. **Results of the Cooperation Program**	4. Was the program purpose achieved?	4-1. To what extent was the program purpose achieved?	×	○
		4-2. What kinds of impact did the implementation of the Cooperation Program generate to achieve the development goal of the partner country?	×	○
		4-3. What other impact was generated by the implementation of the Cooperation Program?	×	○

Source: JICA Evaluation Department

(2) Formats and tools (draft)

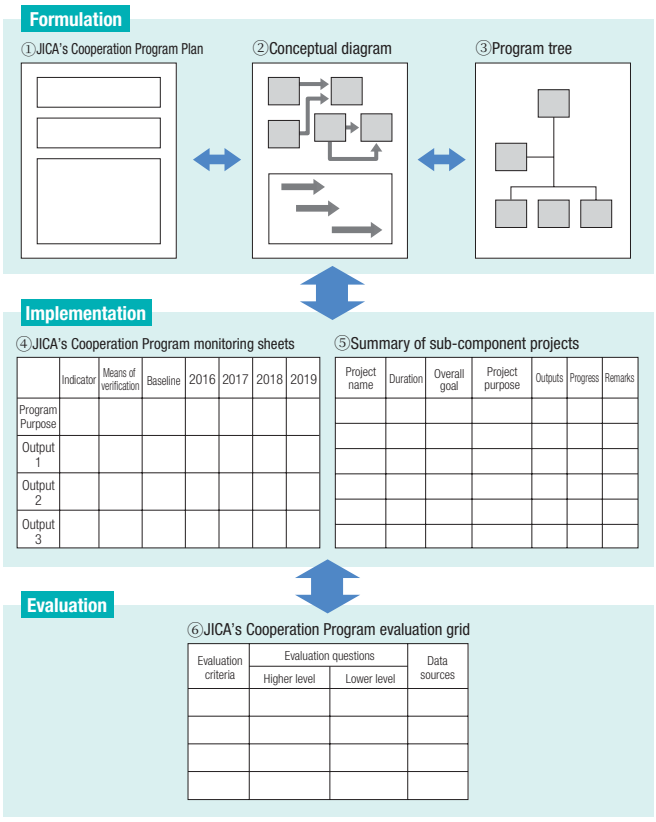
Draft formats and tools were developed based on the following principles:

- Refine the number of common tools and formats.
- Ensure the consistent utilization of tools through the program management cycle.
- Make simple tools to be utilized easily.
- Take into consideration the psychological reluctance to the matrix and logic tree.
- Pay attention to the limitation of the conceptual illustration (they are useful for understanding the main points but less so for illustrating scenarios).

Based on these principles, the following six formats and tools were drafted. It is desirable to use them selectively according to the level of evaluability. As guidelines for the application of these formats and tools, the “Monitoring and Evaluation Reference for Cooperation Programs” was drafted based on the “Classification of Cooperation Programs according to their evaluability” mentioned below (For more details, refer to the Thematic Evaluation Report on the Analysis for Enhancing Evaluability of JICA’s Cooperation Programs).

<Formats and tools (draft)>

① JICA’s Cooperation Program Plan
② Conceptual diagram
③ Program tree
④ JICA’s Cooperation Program monitoring sheets (for annual and program-period monitoring)
⑤ Summary of sub-component projects
⑥ JICA’s Cooperation Program evaluation grid



Recommendations

Based on the results of this study, the following recommendations are made to enhance the evaluability of Cooperation Programs:

Recommendation 1 Utilize the evaluation assessment checklist for JICA's Cooperation Programs

The evaluability of Cooperation Programs represents two things: a determinant of the success or failure of evaluation (practical evaluability) and a requirement for valuable programs (evaluability in principle). It should be recognized as a key factor for the planning, implementation and evaluation of Cooperation Programs. High evaluability can be achieved by improving program design to meet specific requirements. It is also crucial to use the checklist of Requirements for Evaluability to make Cooperation Programs more strategic.

Recommendation 2 Select the method of program evaluation according to the level of evaluability

It is more effective to classify Cooperation Programs into the following four types (see Table 3) and select evaluation methods according to the evaluability of each Cooperation Program than evaluating all Cooperation Programs in the same way, which is mainly intended to draw lessons and recommendations using the concept of contribution, as has been done conventionally.

Recommendation 3 Define the objectives of program evaluation

Previously, the program evaluation objectives were limited to improving the Cooperation Program in question and drawing on lessons learned for subsequent Cooperation Programs. Accountability to the public was not emphasized, despite being an important evaluation objective, as much so as the improvement of Cooperation Programs. Moreover, given that Cooperation Programs should aim to assist the partner countries in tackling development challenges and that such programs must be aligned with the actions of partner countries and other donors, it is also significant to publicize the progress and results of Cooperation Programs. Accordingly, the objectives of program evaluation (on completion of Cooperation Programs) and monitoring should be clearly defined by including the abovementioned three concepts, while determining how to use the evaluation results. To ensure accountability, JICA must objectively and quantitatively assess the contribution of its Cooperation Programs to development in developing countries. Assessing the plausibility of causality based on the concept of contribution, as has been done conventionally, is insufficient.

Recommendation 4 Review the concept of "contribution" used in the evaluation of JICA's Cooperation Programs and make clear a difference between "formative evaluation" and "summative evaluation"

In the current guidelines, Cooperation Programs are evaluated to assess the causal relationships between progress made toward the development goals of the partner countries and the results achieved by Cooperation Programs based on the concept of contribution. However, in practice, it is difficult to accurately assess the plausibility of causality.

Accordingly, it is essential to selectively use formative evaluation (to assess the process to draw lessons and recommendations for improvement) and summative evaluation (to assess the direct effect of interventions) according to the maturity and evaluability of the Cooperation Program to be evaluated. Cooperation Programs with high evaluability are fit for summative evaluation, but those with lower evaluability are fit for formative evaluation, which can be done through ex-ante evaluation using part of the evaluation criteria and annual monitoring. At the same time, particularly for the Type 3 Cooperation Program, strengthening their strategic value is important.

Recommendation 5 Link the evaluation of a JICA's Cooperation Program to the evaluation of projects and sub-components composing the JICA's Cooperation Program

An evaluation system should be established for Cooperation Programs with high evaluability (Type 1) by linking together project and program evaluations. For example, the achievements of sub-component projects can be assessed collectively as the middle/high-level target (outcome) of the Cooperation Program through its summative evaluation instead of being assessed separately through their respective ex-post evaluations.

The program evaluation that collectively assesses the achievements of sub-component projects must satisfy the objectives of the ex-post evaluation for projects, such as ensuring accountability to the public, improving the projects in question and drawing lessons for future projects. Based on these points, the following recommendations are

Table 3. Classification of cooperation programs and evaluation methods according to their evaluability

Type of Cooperation Program	Evaluability	Evaluation method
Type 1. Cooperation Program with high evaluability	●High	●Conduct an ex-ante evaluation. ●Conduct an evaluation at the completion of the program.
Type 2. Cooperation Program under a multi-donor framework.	●Evaluability is low as the program itself. ●This type of Cooperation Programs can be jointly evaluated against the targets jointly set with the government of the partner country and/or other donors.	●Conduct a joint evaluation with the partner country and/or other donors.
Type 3. Cooperation Program, or a group of standalone projects, whose strategy is to be strengthened.	●Evaluability is low, but it can be improved in future.	●Enhance evaluability while remotely monitoring progress.
Type 4. A group of standalone projects	●Low	●This type is not subject to monitoring or evaluation as a Cooperation Program. ●Evaluate and monitor individual projects.

Source: JICA Evaluation Department

made.

The sub-component projects of Cooperation Programs should be separately evaluated on the achievement of their project purposes and overall goals at the time of their completion. The results of these evaluations should then be recorded in the terminal evaluation reports of the projects for future reference when the relevant Cooperation Program is evaluated. Where implementation of sub-component projects was significantly hindered and such projects failed, or were likely to fail, to achieve their project/program purposes and overall goals at the time of their completion, they should be subject to individual ex-post evaluations, apart from the evaluation on completion of the Cooperation Program.

Recommendation 6 Build a common understanding among JICA staff of the JICA's Cooperation Program approach, and build the implementation system of Cooperation Programs

To enhance the effectiveness of Cooperation Programs, it is imperative to ensure all those concerned with the Cooperation Program share a common understanding of it by deepening understanding among JICA staff on efforts to introduce and promote the Cooperation Approach, its effectiveness and necessity and an effective means of managing the Cooperation Program.

At the same time, a cross-sectional system to manage Cooperation Programs is needed to promote the Cooperation Approach. In addition, a certain level of investment may be required, such as assigning program managers and offering them tailor-made pre-assignment training. Without these efforts, Cooperation Programs cannot realize their potential. It may be also effective to broadly share best practices of the Cooperation Approach within JICA to foster a common understanding of Cooperation Programs.

Recommendation 7 Accept the option of not formulating a JICA's Cooperation Program

Certain groups of projects for which a common aim is not strategically targeted can be carried out separately, instead of being integrated into a Cooperation Program. Some projects also have to be managed on a standalone basis due to constraints in terms of budget, project period, security and other factors. Even in such cases, if several projects target similar objectives in the same sector, it should be possible for them to collaborate with each other in their planning and implementation phases. Such indirect collaboration facilitated by loosely grouping projects while managing them on a standalone basis would not result in any specific inconvenience. Rather, this would be better than integrating them into a Cooperation Program and imposing the unnecessary burden of managing them as a whole.

The abovementioned recommendations, as well as the results of this study such as the Requirements for Evaluability, evaluation criteria and questions and other tools and formats for Cooperation Programs, will be integrated into JICA guidelines through subsequent revisions and used by the Evaluation Department and project management departments.

Column

Assessment of Draft List of Requirements for Evaluability of the "Programme for Strengthening Rice Production Capacity" in Tanzania

The Study applied a draft list of Requirements for Evaluability of the cooperation program, a draft set of evaluation criteria and questions and a draft set of tools and formats, which were prepared based on a literature survey, on a trial basis to an actual cooperation program, the "Programme for Strengthening Rice Production Capacity" in Tanzania (Table 4) and implemented a "field trial" to assess the effectiveness and revision of these items.

Table 4 Outline of the Programme for Strengthening Rice Production Capacity in Tanzania

Cooperation program title	Programme for Strengthening Rice Production Capacity in Tanzania
Program period	FY2011 to FY2018
Program purpose	Support for increasing the rice production (from 0.899 million ton in 2008 to 1.963 million ton in 2018: the goal of NRDS which is to be achieved in collaboration with the support by other donors)
Program outputs	1. Promotion and dissemination of Irrigation Development 2. Increase of the productivity of irrigated rice cultivation

As well as identifying the effectiveness of the draft list of Requirements for Evaluability, the Study found that ① the cooperation program was aligned with the Tanzanian policy to improve access to knowledge and technologies, etc. to increase farmers' productivity, profitability and income as the program is positioned as part of the Agricultural Sector Development Programme (ASDP), the aid framework of which supports the Agricultural Sector Development Strategy (ASDS) of the Government of Tanzania; ② achievement of the program purpose is anticipated; ③ synergic effects with the efforts of other projects and donors are high; and ④ the cooperation program corresponds to Type 2 of cooperation program as shown in Table 3. Conversely, a few improvements were pointed out as recommendations, including difficulty in strictly assessing the contribution level of the cooperation program due to the fact that the program purpose sets the same targets as the policy goal of the Tanzanian Government; namely, the National Rice Development Strategy.

JICA ś Impact Evaluation

To further enhance the effectiveness and quality of its projects, JICA has facilitated evidence-based project implementation. As part of this effort, JICA has promoted the use of impact evaluation methodologies in its projects. In particular, in cases where evidence to assess the effects of projects (interventions) is lacking and where there is a plan to scale up existing projects (interventions), impact evaluation is crucial to accurately assess their effects.

Because statistical and econometric methods are used to measure impact, a certain understanding of these methods is required to plan and perform evaluation as well as apply its results in practice. Accordingly, JICA has also trained internal and external personnel.

Against this backdrop, the number of impact evaluations conducted by JICA, as well as the range of sectors covered, has increased year by year. In 2014, around 20 impact evaluations were conducted in different sectors, including health, education, industrial development, infrastructure, public services, environment, community development sectors, by the JICA Research Institute, Evaluation Department and project management departments.

The results of these evaluations are presented in academic journals and at conferences within and outside Japan to contribute to the accumulation of evidence and knowledge as international public goods.

Example 1. Project to Strengthen the Development of Human Resource for Health in Tanzania

JICA has conducted the Program of Total Quality Management for Better Hospital Services in 15 African countries, including Tanzania, since 2007. This Program introduced a Japanese quality management method known as the 5S-KAIZEN approach (" 5S " stands for sort, set, shine, standardize and sustain) into pilot hospitals to enhance the quality of their medical services. Because the effects of this method had not been accurately assessed, impact evaluation was conducted in the Technical Cooperation Project to Strengthen the Development of Human Resources for Health, launched in 2010, to rigorously assess the effects of the 5S-KAIZEN approach using a cluster randomized controlled trial (CRT) methodology.

A CRT is one of the most accurate assessment methods used to measure impact. This is a type of randomized controlled trial (RCT), in which multiple similar groups are formed by randomly assigning clusters of potential subjects (clustered by hospital in this project) to participant and non-participant groups (i.e. random assignment) before interventions commence (i.e. measures and activities performed in the project) to compare differences between them some time after interventions get underway. In this project, three types of activities were carried out at pilot hospitals (the intervention group): (1) training of trainers (TOT) on the 5S-KAIZEN approach; (2) visits to the pilot hospitals for guidance; and (3) progress report meetings. The effects of these activities were assessed by questioning outpatients at the pilot and other hospitals about (1) the cleanliness of outpatient wards, (2) the waiting time at outpatient wards, (3) the patient experience in diagnosis and treatment and (4) general satisfaction scores and ratings; and asking hospital staff about (1) the cleanliness of hospitals, (2) motivation and satisfaction with their work and (3) the conditions of their working environments at three points in time (before and six and 12 months after interventions respectively).

The results of this statistical analysis revealed that pilot hospitals had significantly improved in terms of the cleanliness of hospitals; the perceived waiting time; the actual waiting time in the treatment room and medical record department; the general ratings by patients; and the working environment conditions. Based on these results, suggestions will be made on how to improve and apply the 5S-KAIZEN approach more effectively.

Patient satisfaction survey

Example 2. Project to Promote Sustainable 3R Activities in Maputo in Mozambique

The ongoing Technical Cooperation Project to Promote Sustainable 3R Activities in Maputo, Mozambique, is one of the projects aimed to enhance project quality through evidence-based implementation.

As one of its outcomes, a pilot project to promote separate waste collection is being implemented to develop a model that can be scaled up and eventually improve the capacity to collect and transport solid waste. What is the most effective approach to encourage citizens to separate their waste for recycling? After field studies and discussions with their counterparts, Japanese experts suggested three approaches that would be capable of changing citizens ' behavior, which were proposed based on the experience of experts in similar projects, although neither had been tested for effectiveness. Therefore, the impact evaluation is being performed in the pilot project to assess the effects of the approaches. This evaluation is to compare the effects of the three approaches using a RCT methodology, which is considered the most objective means to assess impact and this will be the first JICA project in the waste management sector to use the methodology. This impact evaluation is expected to identify the most effective approach to changing citizens ' behavior. The approach selected through the evaluation will then be scaled up and applied to surrounding areas.

Development models proposed based on detailed deliberation by experts are not necessarily effective. Accordingly, it is crucial to identify the most effective approach via accurate assessment in the pilot project phase. This process can reduce the risk of scaling up ineffective development models.

Weighing the waste collected

Example 3. Share of experience at international conferences

JICA has been very active in sharing its knowledge learned from impact evaluation with other donors on occasions such as international conferences. In 2014, JICA made two presentations at the International Conference " Making Impact Evaluation Matter: Better Evidence for Effective Policies and Programs " held at the ADB headquarters in Manila from September 3 to 5 (cosponsored by the ADB and 3ie*) as follows.

The first presentation outlined JICA ś experience in impact evaluation as well as its future policies and strategies for evidence-based project implementation. This presentation was positively acclaimed by other donor agencies, some of which also commented on the practical difficulties in evaluating impact accurately (experimental approaches) as well as the time and technical constraints on a field level, which sparked discussion on a wide range of issues.

The second presentation described a Technical Cooperation project for maternal and child health in Bangladesh, focusing on research concerning the impact of the model developed through the project on the national antenatal care rate. This presentation suggested a simple method to measure impact using secondary data published from other donor agencies. This suggestion obtained favorable comments, such as " It will be a useful approach as an increasing volume of data is becoming available worldwide. "

This conference was attended, not only by donor agencies but also other development partners such as NGOs, as well as researchers from universities and other institutions, worldwide. More than 100 presentations were given over the three days of the conference. Against a backdrop of international trends that increasingly emphasize the importance of impact evaluation, JICA will continue to share its experience at international conferences and use the knowledge learned there to make improvements and promote evidence-based evaluation and project implementation.

* 3ie (International Initiative for Impact Evaluation) is an international NGO promoting evidence-based development.

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http://www.jica.go.jp/english/index.html

Evaluations
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☐ Operations evaluations (Ex-post Evaluation Reports after 2008)
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➡ **Find out more on JICA's evaluation system**

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☐ Pre implementation stage (Ex-ante Evaluation)
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☐ Implementation stage (Mid-term review and Terminal Evaluation)
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http://www.jica.go.jp/english/our_work/evaluation/tech_and_grant/project/term/index.html

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