Leading the world with trust

2021 JICA

JICA Annual Evaluation Report

Japan International Cooperation Agency

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JICA Annual Evaluation Report 2021 - INDEX

Relevant reports and other detailed information are available from QR codes on each page or by clicking the project name.

* This report uses a universal design font.

Preface

In line with our vision to “Leading the world with trust,” JICA has set out its missions, which are to promote “human security” and “quality growth” in accordance with the Development Cooperation Charter of the Government of Japan. Today’s global commitment to “leave no one behind,” a key pillar underpinning the Sustainable Development Goals (SDGs), encompasses the core essence of our missions.

The world remains deeply scarred by the consequences of the COVID-19 pandemic. There are concerns that further exposure of developing countries’ vulnerabilities in health and other sectors will exacerbate economic disparities within and among developing countries. Developmental issues have become increasingly convoluted as more and more countries see their political system in turmoil or experience humanitarian crises that shake up the international order. In response, JICA has striven to deliver development cooperation, even amid the constraints of the COVID-19 pandemic, by leveraging trust with various organizations and valuable partners in the world that has been fostered over many years.

Project evaluation is one of the key operations in development cooperation. JICA evaluates projects in line with the PDCA cycle; aiming to ensure accountability by publicizing evaluation results properly and promptly and further improving projects by applying lessons learned from evaluation results.

This annual evaluation report compiles an outline of JICA’s evaluation mechanisms and results. JICA has applied the revised project evaluation criteria to those projects that started their evaluation activities since fiscal year 2021 in accordance with the revised evaluation criteria of the Organisation for Economic Co-operation and Development (OECD) Development Assistance Committee (DAC) and other trends. We have also endeavored to deepen learning and enhance accountability by promoting thematic evaluations (comprehensive/cross-sectoral analyses) and carrying out impact evaluations and process analyses. This report highlights these efforts as well.

JICA also put in effort to conduct evaluation surveys remotely with utilizing local resources and other arrangements in response to the global COVID-19 pandemic and will continue to improve our evaluation activities.

We strongly hope this report will be widely shared and will help deepen your understanding of JICA’s activities. We would also like to request your further support and encouragement for JICA.

March 2022

KITAOKA Shinichi, President

Japan International Cooperation Agency (JICA)

JICA's Project Evaluations at a Glance

To improve its projects (learning) and **ensure accountability** to stakeholders, JICA evaluates each project and conducts comprehensive and cross-sectoral thematic analyses.

Project PDCA Cycle and Project Evaluation

JICA evaluates projects based on the four-stage PDCA cycle for project management, namely: pre-implementation (Plan), implementation (Do), post-implementation (Check) and feedback (Action).

Accountability

JICA ensures accountability via ex-post evaluation (refer to pp. 4-5).

Ex-post evaluation

JICA ascertains and evaluates especially whether the activities conducted through the project were appropriate for achieving the development effects and which effects were actually achieved by the project.

Feedback

JICA utilizes evaluation resu
as required and leverages th
formulate similar future proje
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At the feedback stage (Action), JICA shares feedback to improve projects (Learning) (refer to pp. 6-7).

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Ex-ante evaluation

At the planning stage, JICA confirms the priority/necessity and expected effects of the project and sets indicators and targets to measure the effects both during and after project implementation. At the same time, JICA makes sure that lessons learned from past projects are properly reflected in the project.

Project improvement (Learning)

Accountability System

Mechanisms to ensure accountability

Projects costing

200 million yen or more

JICA conducts ex-ante/ex-post evaluations on all projects costing 200 million yen or more. During the ex-ante evaluation (at the pre-implementation stage), JICA confirms the priority and necessity of the project and verifies its expected effects as well as confirming that lessons learned from past projects are properly reflected in the project at this stage. Meanwhile, during the ex-post evaluation, JICA verifies the effects achieved by the project, as well as their sustainability after the project completion.

International criteria for evaluation

During the ex-post evaluation, JICA evaluates projects in line with the international criteria for evaluating development assistance by OECD-DAC (DAC Evaluation Criteria, refer to p. 11) and utilizes the evaluation results.

Transparency

evaluation results are publicized on the JICA website.

Related link

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

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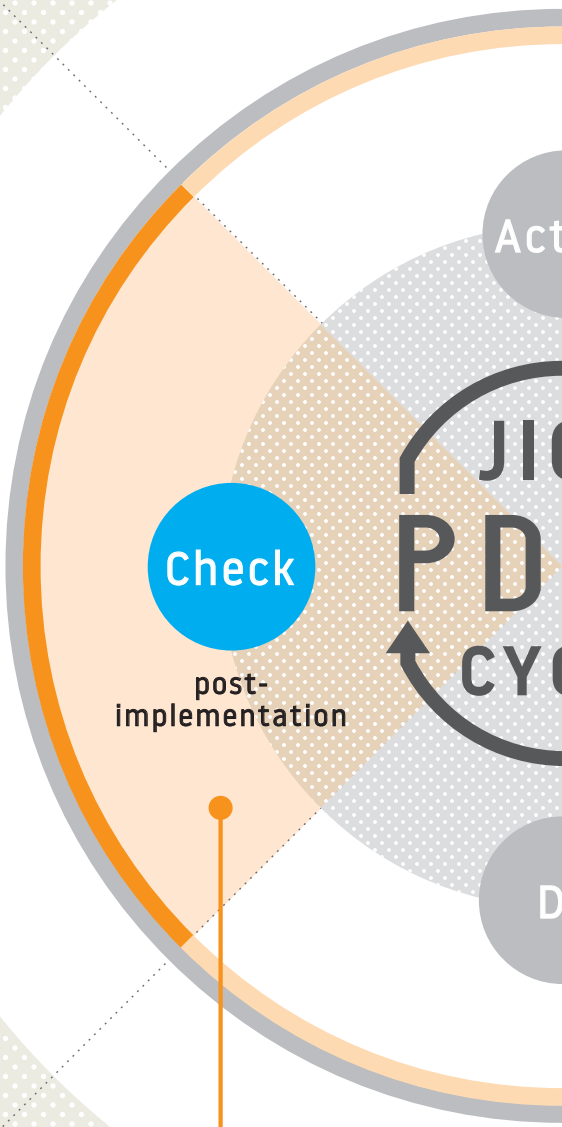

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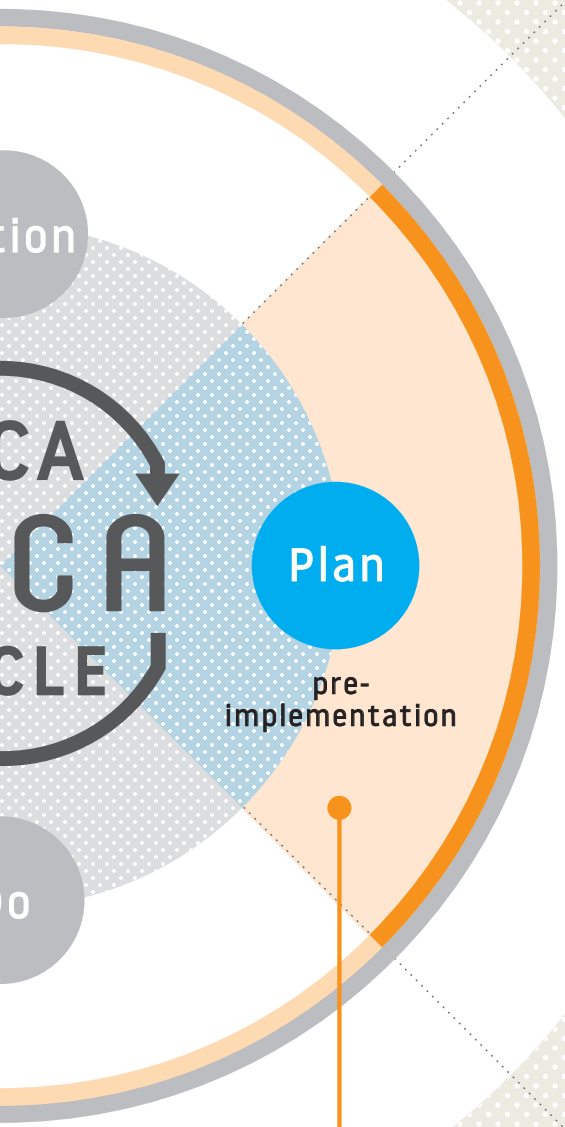


Evaluation Results

Project evaluation results in FY 2021

Ex-ante evaluation **155** projects

Ex-post evaluation **157** projects

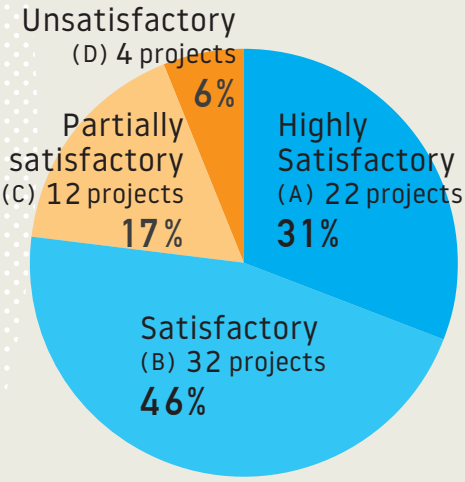
	External evaluation	Internal evaluation	Total
Technical Cooperation	17 projects	77 projects	94 projects
ODA Loans	25 projects	0 projects	25 projects
Grant Aid	31 projects	7 projects	38 projects
Total	73 projects	84 projects	157 projects

* The figures are current as of February 2022.

Overall rating (ex-post evaluation)

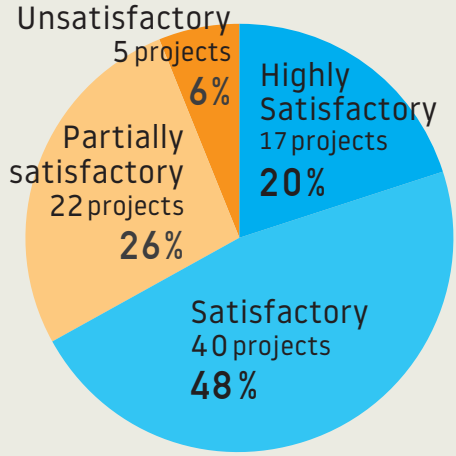
External evaluation

* A, B, C and D as shown in the pie chart show the ratings for external evaluations.
* As a general rule, projects costing one billion yen or more are subject to external third-party evaluations. (The number of projects shown on pie charts is for projects posted in the list of overall rating.)



Internal Evaluation

* Projects costing more than 200 million but less than one billion yen are subject to internal evaluations undertaken by JICA overseas office staff members or other personnel overseeing the countries and regions, where the projects were conducted.



For details of the ex-post evaluation results, refer to pp. 12-37.

Analysis

JICA strives to improve the quality of evaluation by focusing on theories and data relevant to development effects.

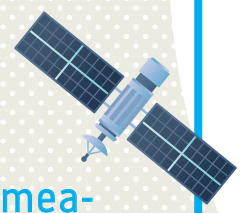
Focusing on theories

Development impact assessment using the Theory of Change (▶P.48)

JICA organized and considered how to apply a Theory of Change (ToC), which is a method to **visualize path towards project outcomes (causal relationships), strengthen project management and visualize and boost the mid- and long-term impacts.** JICA will continue to utilize ToC to check the validity of project design and theory, as well as to confirm its contribution to SDGs and other outcomes.

Process analysis (▶P.49)

JICA is working on "process analysis" to **clarify how the project process helped achieve the effects.** During a project implemented in education sector in Rwanda, as shown on p. 49, a voluntary and spontaneous training activity among teachers helped encourage information-sharing and other behavioral changes, clearly making them more aware of the need to design and provide classes that encourage students to think spontaneously.



Focusing on data

Promoting the usage of data to measure effects quantitatively (▶P.50)

Following the recent global trend of digital transformation (DX), JICA has advanced the use of satellite data in evaluating projects. As introduced in p. 50, using satellite data could quantitatively reveal economic revitalization in a project reinforcing power distribution networks.

Verifying cause and effect by applying a statistical method (▶P.51-53)

JICA conducts impact evaluations **to accurately verify the social change brought by a project via statistical methods.** The case of the impact evaluation introduced over pp. 51-53 confirmed that creating and distributing textbooks and ensuring teachers engage in reciprocal learning improved students' mathematical proficiency, while a series of maternal and neonatal health support initiatives helped reduce the maternal mortality ratio.

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Improvement

Evaluation results of individual projects are utilized for project improvement

Lessons learned from past projects

It was confirmed through ex-post evaluation that lessons learned from past projects were utilized for the improvement and success of the project.

Lessons learned from past projects have revealed that a pilot project gives local engineers the chance to experience actual inspection/repair work, which helps sustain the project effects and ensure project success. Following these lessons, transferring practical techniques to local site engineers via OJT during a bridge maintenance and management project in Sri Lanka led to success. (▶P.37)

New lessons learned through evaluations in FY 2021

Lessons newly learned will be utilized for the improvement and success of similar future projects.

The following lessons were drawn from the evaluation result of renewable energy development project in Bangladesh: in addition to raising users' awareness, encouraging suppliers to enter the market would be effective for creating a solar power market in rural areas. JICA will plan and implement similar future projects by promoting a further involvement of users and suppliers. (Bangladesh) (▶P.20-21)

JICA's Project Evaluation System and its Features

To improve its projects and ensure accountability to stakeholders, JICA conducts project evaluation and comprehensive or cross-sectoral thematic analysis. The evaluation system of JICA has five features: (1) consistent evaluation throughout the project's PDCA cycle; (2) coherent evaluation methodologies and criteria among three schemes of cooperation (for overview of the three schemes, refer to [➡ JICA Annual Report 2021 "About JICA: An Overview of Programs and Strategies"*1]); (3) comprehensive and cross-sectoral evaluation and analysis through a thematic evaluation; (4) ensuring objectivity and transparency; and, (5) emphasizing use of evaluation results. For details, refer to [➡ Project Evaluation in JICA | Evaluations | Our Work – JICA*2].

Project evaluation

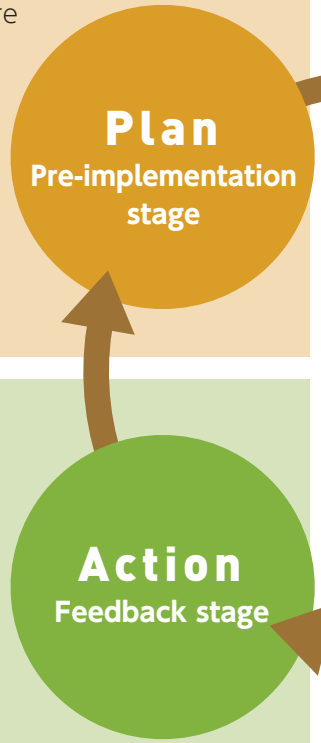
JICA's development projects are implemented in a continuous cycle of Plan, Do, Check, and Act. JICA evaluates its projects at each stage of this project cycle, from ex-ante to ex-post, and with coherent evaluation methodologies and criteria among three schemes of cooperation (Technical Cooperation, ODA Loans and Grant Aid).

Pre-implementation stage (ex-ante evaluation) <Plan>

At the pre-implementation stage, JICA conducts ex-ante evaluation and publishes the result in a form of "ex-ante evaluation sheet." During the ex-ante evaluation, JICA confirms the priority and necessity of the project, determines outcomes and purposes of the project, verifies the contents and expected effects of cooperation and defines indicators used to measure the effect before implementing the project, with the DAC evaluation criteria in mind (refer to P.11). The proper reflections on environmental and social consideration results and on lessons learned from past projects are also confirmed at this stage.

◎Utilization of results: Ex-ante evaluation results are reflected to the project plan while indicators and target values defined are used for subsequent monitoring and evaluation of the project.

For details of ex-ante evaluation and ex-ante evaluation sheet published, refer to [➡ About Pre Implementation Stage Evaluation (Ex-Ante Evaluation) | ODA Loan | Evaluations | Our Work – JICA*3]



Feedback stage <Action>

JICA promptly utilizes the lessons learned and recommendations obtained in the course from ex-ante to ex-post evaluations to improve ongoing projects and follow up on past projects as required, and leverage this information to formulate and implement similar projects going forward. In addition, JICA will further strengthen the provision of feedback to the JICA's basic cooperation policy. Moreover, JICA strives to reflect the evaluation results in its development policies, programs and the respective projects of recipient governments by giving feedbacks of the evaluation results to them.

Refer to P.37 for some good practices which implemented projects efficiently and effectively by utilizing lessons learned from past similar projects.

*1 https://www.jica.go.jp/english/publications/reports/annual/2021/fp4rrb000000sky0-att/2021_01.pdf
*2 https://www.jica.go.jp/english/our_work/evaluation/about.html
*3 https://www.jica.go.jp/english/our_work/evaluation/oda_loan/economic_cooperation/about.html

Results of the project evaluation are available on JICA's website

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

Comprehensive and cross-sectoral evaluation and analysis

JICA conducts a comprehensive or cross-sectoral analysis of particular themes, such as region-, issue-, sector-, and types of assistance-specific subjects, to identify trends and challenges that are common to a specific subject, or to compare and categorize projects to derive features or good practices. The purpose of this kind of analysis/evaluation is to extract lessons and recommendations that cannot be drawn from individual ex-post project evaluations. In FY2021, five thematic evaluations are outlined in this report: Nutrition Improvement through a Multifaceted Approach (P.38-39); Analysis of Evaluation Methodologies for Scholarship Programs (P.40-42); Extraction of Practical Knowledge Lessons in the Rural Water Supply Sector (P.42-43); Examination of Evaluation Methods for Mobilization of Private Financing (P.44-45); and, Impact from JICA's Cooperation in Health Sector (Infectious Diseases Control) and Socio-Economic Development in Developing Countries (P.46-47).

For details of comprehensive and cross-sectoral evaluations and analyses conducted in the past, refer to [➡ About Thematic Evaluation | Evaluations | Our Work – JICA*4].

Implementation stage (monitoring) <Do>

At the implementation stage, each project is monitored based on the evaluation plan and indicators set during the ex-ante evaluation. JICA confirms whether the project activity is progressing as planned and whether outcomes have been properly achieved and adjusts trajectory as required.

◎Utilization of results: The expected achievement of targets set during the pre-implementation stage, project progress and factors promoting or hindering progress are all analyzed via monitoring. The project plan is also reviewed as needed in line with any changes encountered during implementation.

For mid-term reviews and terminal evaluations conducted in the past, refer to [➡ About Implementation Stage Evaluation | ODA Loan | Evaluations | Our Work – JICA*5].

Do
Implementation stage

Post-implementation stage (ex-post evaluation <Check>

At the post-implementation stage, JICA conducts ex-post evaluation once the project is completed*6. From the perspective of the DAC evaluation criteria, JICA especially focuses on ascertaining whether the project activity was appropriate for achieving the development effects and which actual effects were achieved by the project. Ex-post evaluations are conducted externally by third-party evaluators or internally by JICA overseas office staff members (for details of external and internal evaluation systems, refer to P.10-11).

◎Utilization of results: To further improve future projects, useful recommendations, lessons learned and good practices are all extracted.

For details of ex-post evaluation and ex-post evaluation results, refer to [➡ About Post Implementation Stage Evaluation (Ex-post Evaluation and Ex-post Monitoring) | Ex-post Evaluation | Project-level Evaluation | Evaluations for Technical Cooperation and Grant Aid | Evaluations | Our Work – JICA*7].

Check
Post-implementation stage

*4 https://www.jica.go.jp/english/our_work/evaluation/tech_and_grant/program/index.html
*5 https://www.jica.go.jp/english/our_work/evaluation/oda_loan/review/about.html
*6 For projects costing less than 20 million yen, their outcomes are confirmed at the project completion.
*7 https://www.jica.go.jp/english/our_work/evaluation/tech_and_grant/project/ex_post/about.html

Overview of the Ex-post Evaluation System

JICA evaluates projects implemented under three schemes (Technical Cooperation, ODA Loans and Grant Aid), from the pre-implementation stage to after completion, applying coherent methodologies and perspectives (for overviews of the three schemes, refer to [➡ JICA Annual Report 2021 "About JICA: An Overview of Programs and Strategies]*[1]). Once the project is completed, JICA conducts an ex-post evaluation, either externally via third-party evaluators or internally, via overseas office staff. By adopting a basic framework that is commonly applicable to different schemes and evaluators, JICA strives to conduct evaluations and utilize the evaluation results coherently.

External and internal evaluation systems

Projects costing one billion yen or more are subject to external evaluations, which are conducted by third-party evaluators to ensure the transparency and objectivity of the evaluation results (see P.12 for evaluation results and pp. 16-27 for highlighted projects). Meanwhile, projects costing from 200 million up to one billion yen are subject to internal evaluations undertaken by overseas office staff and similar (JICA Overseas Office, Branch or Regional Department staff in the countries and regions where the projects are conducted) (see P.13 for evaluation results and P.34-36 for highlighted projects).

For a list of external evaluators of 73 projects with results confirmed in FY 2021, see [➡ List of external evaluators assigned in FY 2020*[2]].

As internal evaluations are conducted primarily by JICA' s overseas offices, the evaluation focuses on a "learning" perspective, such as drawing practical lessons based on the project background, to utilize them to improve subsequent project implementation or formulate future projects.

Overseas offices and similar allocate their staff to each project and determine the evaluation results by defining the evaluation framework, conducting a field survey, completing the evaluation based on information and data collected, discussing with the implementing/executing agencies of the partner countries and other activities. The number of staffs, their knowledge and experience in the evaluation varies among overseas offices. To ensure they can proceed smoothly throughout the internal evaluation process, the Evaluation Department develops evaluation criteria and manuals. Also, it provides various forms of support to improve the evaluation capacity of the relevant staff through training sessions and preparing documents used during the evaluation process. In addition, JICA monitors the quality of internal evaluation results using third parties to improve evaluations, make them more objective and impartial and enhance accountability. For details of third-party quality check systems, see [➡ External third-party Quality Check of internal ex-post evaluation results | Evaluations | Our Work – JICA*[3]].

Ex-post evaluation framework

While considering various features among each scheme and evaluator, JICA aims to conduct evaluations and utilize the evaluation results coherently by establishing a consistent framework. Specifically, the evaluation framework reflects: (1) an evaluation applying the evaluation criteria laid out by the Organisation for Economic Co-operation and Development/Development Assistance Committee (OECD/DAC) (DAC Evaluation Criteria), which constitute an internationally accepted ODA evaluation methodology; and (2) publication of evaluation results in uniform style, leveraging a rating system developed by JICA. With the adoption of the Agenda 2030 and Sustainable Development Goals (SDGs) in 2015, DAC started reviewing its evaluation criteria. In 2019, a new criterion (Coherence) was added and new six criteria (Relevance, Coherence, Effectiveness, Impact, Efficiency and Sustainability) were redefined. Following this revision, JICA has applied the new evaluation criteria from projects evaluated in FY 2021. Since the evaluation results on this report had evaluations conducted before FY 2020, those projects were evaluated based on the former criteria (Table 1). For details of new evaluation criteria applied by JICA, see [➡ P.54-55 of the JICA Annual Evaluation Report 2020*[4]]

How to search for and read ex-post evaluation results

JICA publicizes project evaluation results online and users can search for project results by [➡ Search Page for Evaluation Reports | Evaluations | Our Work | JICA*[5]]. This report also introduces those projects with evaluation results confirmed in FY 2021 (P.14-15 and 32-33 for external and internal evaluations, respectively). Click the project title shown to open its evaluation report/results.

JICA publicizes ex-post evaluation results either in a report or sheet format, usually 20 or 5 pages in length, respectively.

JICA evaluates each project in line with the DAC Evaluation Criteria: (1) Relevance (and Coherence), (2) Effectiveness and Impact, (3) Efficiency, and (4) Sustainability, to draw an overall rating, recommendation and lessons learned. In order of (1) to (4), perspectives are unified as required to score the criteria on the four-level sub-rating scale (revised from the former three-level scale). Combining sub-ratings from (1) to (4) to judge the overall rating on the four-level scale: highly satisfactory (external evaluation rating: A); satisfactory (B); partially satisfactory (C); and unsatisfactory (D). Since the rating is used as a means of indicating the effectiveness of the projects and applied to all projects uniformly, it does not reflect other aspects such as difficulties in implementing projects.

Recommendations refer to proposals for helping improve those projects evaluated. Most involve how to eliminate factors hindering optimal project results (such as a factor hindering a project from achieving its purpose and sustainability). Lessons refer to proposals drawn from those projects evaluated and which can be referred to in future or other ongoing projects.

Lessons can be learned from both successful and failure cases covering wide-ranging matters including project design, planning, supervision, monitoring and operation and maintenance. On P.37, this report introduces some good practices in which a project was implemented efficiently and effectively by utilizing lessons learned from past similar projects.

Table 1 Definition of the former JICA evaluation criteria based on the five DAC Evaluation Criteria (Evaluation results shown in this report are based on the former criteria)

Criterion title	Definition of former five evaluation criteria
Relevance	Examine the extent to which the cooperation objectives are suited to the priorities and policies of the target group, recipient and donor: Does the goal of the projects meet the needs of beneficiaries? Are the activities and outputs of the program consistent with the overall goal and the attainment of its objectives?
Effectiveness	Measure the extent to which the program or project attains its objectives.
Impact	Examine positive and negative changes as a result of the project. This includes direct and indirect effects and expected and unexpected effects.
Efficiency	Measure the outputs in relation to the inputs to determine whether the project uses resources effectively to achieve the desired results.
Sustainability	Examine whether the benefits of the project are likely to last after the completion of the project.

Table 2 Definition of new JICA evaluation criteria based on new six DAC Evaluation Criteria (applicable for project evaluation conducted from FY 2021)

Criterion title	Definition of new six evaluation criteria
Relevance	◆Validity with project implementation (with the recipient country's development plans, development needs, social needs, and beneficiaries' needs in the target area) ◆Whether the project is designed to focus on "beneficiaries", give consideration to vulnerable people, and ensure fairness and whether the project is adaptable enough to remain relevant if circumstances change during implementation ◆Appropriateness of the project plan and logic of approach
Coherence	◆Consistency with development assistance policies of the Japanese Government and JICA ◆Synergies effect/mutual relations with JICA's other projects (Technical Cooperation, ODA Loan, Grant Aid, etc.) ◆Complementarity, harmonization, and collaboration with other assistance/projects in Japan, other development organizations, etc.; consistency with global frameworks (e.g. SDGs and other international targets and initiatives) and international norms and standards; and producing expected achievement in the project plan
Effectiveness	◆The degree of achievement of target level in target year of expected project outcome (including the usage of facilities and equipment) and any differential results across the groups
Impact	◆Positive and negative indirect and long-term effects (systems and norms, people's well-being, human rights, gender equality, and the environment)
Efficiency	◆Comparison of planned and actual project inputs, project period, and project cost
Sustainability	◆Outlook on sustainability of effects that are realized by the project ◆Institutional/organizational sustainability (organizational structures and personnel assignment), technical sustainability, financial sustainability (availability of funds to cover the operation and maintenance costs), environmental and social sustainability, resilience to risks, and operation and maintenance conditions

*1 https://www.jica.go.jp/english/publications/reports/annual/2021/fp4rrb000000sky0-att/2021_01.pdf
*2 https://www.jica.go.jp/english/our_work/evaluation/reports/2021/iu2gj8000000ompj-att/list_2021.pdf
*3 https://www.jica.go.jp/english/our_work/evaluation/quality_check.html
*4 https://www.jica.go.jp/english/our_work/evaluation/reports/2020/index.html
*5 https://www2.jica.go.jp/en/evaluation/index.php

External Evaluation Results

Overall rating

The external evaluation was conducted for 73 projects: 23 ODA Loan projects; 31 Grant Aid projects; 17 Technical Cooperation projects; and two Private Sector Investment Finance projects*1. Their results are listed on pages 14 and 15. Most of the 70 projects receiving overall ratings*2 were carried out in Africa, South-East Asia and South Asia, in sectors such as water resources, transportation and natural resources/energy. The overall ratings for the 70 rated projects were: A for 22 projects (31%); B for 32 projects (46%); C for 12 projects (17%); and D for four projects (6%) respectively. A and B grades were awarded to 77% while the total of C and D comprised 23%*3.

Evaluation by criteria

Each of the criteria evaluated in the 70 projects that were rated are overviewed as below.

Relevance: All rated projects except one were aligned with Japan's development policy and the partner country's policies and development needs. For the project rated as fair, regarding to "appropriateness of the project planning and approach", issues on proper indicators in line with the project activity and collaboration with other projects were pointed out.

Effectiveness/Impact: 69% of projects were rated as high while the percentage of projects rated as fair and low was 30% and 1% (one project), respectively. The low-achieving project was attributable to the fact that "the plant has not been sufficiently operational due to the unapproved power supply agreement and damage to some parts of facilities, thus, no rice terrace conservation activities have been started using the income from electricity sales."

Efficiency: 80% of projects were rated as fair while 10% were rated as high and low, respectively. Factors behind the seven low rated projects included "procurement procedures," "land acquisition," "increased material and labor costs," and "changes to plan."

Sustainability: 43%, 54% and 3% of projects were rated as high, fair and low respectively. Sustainability issues in technical aspects were confirmed in two projects rated as low since their outputs were not maintained amid volatile political and social conditions, e.g. during two domestic conflicts.

JICA also analyzed "Performance" and determined areas on which to reflect and best practices for planning and supervising its projects. For example, the following cases were analyzed: The review of financing conditions to provide a long-term low-interest loan for retrofitting and reconstruction of garment factories in response to a tenant building with garment factories having collapsed during the project (Evaluation No. 23: Financial Sector Project for the Development of Small and Medium-sized Enterprises (SMEs) in Bangladesh); where achieving a higher tariff collection rate by improving the tariff payment system and organizational efforts in setting goals (Evaluation No. 29: Bangalore Water Supply and Sewerage Projects (II-1 and II-2) in India); providing tangible and intangible support focusing on developing the capacity of state forestry officials who represent a contact point for local communities in the forestry sector (Evaluation No. 30: Capacity Development for Forest Management and Personnel Training Project in India); dispatching administrative officials involved in reconstruction efforts from the East Japan Great Earthquake to optimally exploit their experiences and insights for project activities (Evaluation No. 6: The Project on Rehabilitation and Recovery from Typhoon Yolanda in the Philippines); and where JICA's efforts helped further motivate target countries to develop the corridor (Evaluation No. 63: The Project on the Corridor Development for West Africa Growth Ring Master Plan in UEMOA countries, Burkina Faso, Cote D'Ivoire, Ghana and Togo).

External ex-post evaluation policy going forward

New evaluation criteria will be applied for project evaluations starting from FY 2021. JICA will confirm whether assistance was coherent based on the environment surrounding projects, introduce an evaluation approach based on a subjective review which takes changes occured in the project phases into consideration and adopt a sub-rating system with a four-level scale as part of a great leap forward from former criteria.

JICA continuously focuses on ensuring an object and transparent project evaluation, which is third-party evaluated according to the project size as well as publicizing evaluation results on its website in a timely and appropriate manner. JICA will also strive to ensure impartial and objective judgements*4 when procuring an external evaluator.

*1 Since FY 2020, JICA has fully conducted ex-post evaluations of private-sector investment finance projects.
*2 For 73 external ex-post evaluation projects with results confirmed in FY 2021, the exception was "Financial Sector, Business Environment and Public Service Reform Development Policy Loan" (Evaluation No.48 on P.14-15), for which no overall rating was given, and "Viet Nam Coffee Value Chain Project" (Evaluation No.17) and "Emergency Life Saving Center Development Project" (Evaluation No.14), for which rating was not published since they are private-sector investment finance project.
*3 These results are within the normal range of fluctuation. The average proportion of overall ratings A and B for projects completed between FY2010 and FY2020 was about 77%, ranging from 68% (FY2014) to 91% (FY2015). The fluctuation of around 10% in the average ratio is attributable to the characteristics of projects (country, sector, scheme, etc.), which vary according to the fiscal year.
*4 To ensure the external evaluations are impartial and objective, JICA will take necessary measures such as applying the exclusion clause to prevent any conflict of interests when procuring external evaluator.

Internal Evaluation Results

Overall rating

The internal evaluation results confirmed in FY 2021 are as listed on pages 32 and 33. Evaluations were conducted for 84 projects: 77 Technical Cooperation projects and 7 Grant Aid projects.

Approximately 70% of the projects delivered expected results or exceeded the expected results at the time of ex-post evaluation. Among 84 projects, most were carried out in Africa and South-East Asia in the agriculture sector followed by social infrastructure, administration and health sectors.

Evaluation by criteria

Relevance: With some exceptions, almost all projects were consistent with the policies of partner countries and their development needs.

Effectiveness/Impact: Approximately 55% of projects achieved the expected outcomes, while the remaining 45% experienced some challenges when it came to achieving results. Challenges observed in some Grant Aid projects included the fact that: (1) the project effects helped increase demands while qualitative issues arose due to the lack of candidates capable of meeting the demands. With regards to Technical Cooperation projects, in some cases: (1) although outcomes were observed at the time of project completion, the factors needed to sustain said outcomes and achieve overall goals were not considered, which prevented implementing agencies from continuing their activities after the project; and (2) despite formulating a basic plan under a Technical Cooperation project for Development Planning, the approval process by implementing agencies of the recipient country was delayed and remained unapproved, meaning only part of the plan was utilized. Moreover, the project effects could not be fully verified due to the absence of appropriate indicators for goals set at the project planning stage and the lack of data and information at the time of the ex-post evaluation.

Efficiency: 19% of projects were completed within the planned period and cost. For Grant Aid projects, however, 70% were affected by extensions due to delays to facility construction, equipment procurement and customs clearance meant the project period had to be extended. As for Technical Cooperation projects, they went over the planned budget given the need for more activities to achieve the project purposes and with the progress in mind. Moreover, the project period was also extended due to changes in the plan or to achieve the project purposes.

Sustainability: 77% of projects were identified as having some challenges. One frequent issue included around 70% identified as being insufficiently financially sustainable, reflecting the difficulty faced by implementing agencies in securing the required budget, while, the second most frequent problem experienced was typically staff shortages in terms of institutional sustainability. Other frequently observed challenges occurred in technical-related areas, such as the retaining transferred technologies and the omission of routine inspections and repairs.

Internal ex-post evaluation policy going forward

In order to achieve the evaluation objectives (fulfilling accountability and learning lessons for improvement) more effectively and efficiently, JICA has made efforts to enhance its Internal Ex-post Evaluation function and capacity development of national staffs in oversea offices since introducing this evaluation system in FY2010. Meanwhile, JICA established evaluator's self-assessment systems to ensure the quality of Internal Ex-post Evaluation. From the perspectives of examining the appropriateness of the evaluation process, the validity of ratings for each of the evaluation criteria (relevance, effectiveness/impact, efficiency and sustainability), the validity of the conclusions, recommendations and lessons learned and the consistency of the overall evaluation report, these checklists allow the following requirements and procedures which should be involved in quality evaluation to be confirmed: whether the evaluators conduct tasks while fully aware of the evaluation framework; whether the evaluation report contains all the necessary information; whether evidence on the ground to underpin judgements and factors is stated; whether the descript ion is coherent; and whether evaluation constraints (if any) and their influence on the evaluation results are properly described. To improve their evaluation reports, the overseas offices (evaluators) try to tick off as many checklist items as possible during their evaluation process.

By revising the evaluation criteria, JICA not only improves the overall evaluation, but also helps enhance the way projects are implemented and formulated going forward by organizing the content of an Internal Ex-post Evaluation manual that helps draw recommendations and lessons learned. Moreover, training opportunities for overseas office and in-house internship programs are utilized to improve evaluation capacities. Meanwhile, efforts to further streamline the way Internal Ex-post Evaluation are conducted are required concurrently, such as prioritizing evaluations while maintaining their quality. Accordingly, JICA will continue to evaluate multi-phase projects and those beyond the scope of Grant Aid, Technical Cooperation, etc.

List of Ratings for External Evaluations

In principle, external ex-post evaluation covers those projects costing one billion yen or more. Click on a project name to jump to see its ex-post evaluation report.

Country	*2 Evaluation No.	*3 Project No.	*4 Scheme	Project name	*1 Relevance	*1 Effectiveness/ Impact	*1 Efficiency	*1 Sustainability	*1 Overall rating
Indonesia	1	1	L	Development of Bandung Institute of Technology (III)	3	3	2	3	A
	2	2	T	The Project for Planning and Budgeting Reform for the Performance-Based Budgeting System Implementation (Phase 1)	3	2	2	3	B
		3		The Project for Planning and Budgeting Reform for the Performance-Based Budgeting System Implementation (Phase 2)					
	3	4	T	The Project of Capacity Development for Climate Change Strategies	3	3	2	3	A
Timor-Leste	4	5	G	Project for Rehabilitation and Improvement of Buluto Irrigation Scheme	3	3	2	2	B
Philippines	5	6	G	The Project for Enhancement of Coastal Communications Systems	3	3	2	2	B
	6	7	T	The Project on Rehabilitation and Recovery from Typhoon Yolanda	3	3	3	3	A
	7	8	G	Mini-Hydropower Development Project in the Province of Ifugao	3	1	2	2	D
	8	9	G	The Project for Improvement of Equipment for Disaster Risk Management	3	2	2	2	C
	9	10	T	Capacity Development in Public-Private Partnership (PPP) Project Formulation	2	2	2	3	C
Cambodia	10	11	G	The Project for Improvement of Svay Rieng Provincial Referral Hospital	3	3	2	3	A
	11	12	G	The Project for the Improvement of the National Road No.1 (Phase 1)	3	3	2	2	B
		13		The Project for the Improvement of the National Road No.1 (Phase 2)					
		14		The Project for the Improvement of the National Road No.1 (Phase 3)					
		15		The Project for the Improvement of the National Road No.1 (Phase 4)					
		16		The Project for Improvement of the National Road No.1 Urban Section					
		17		The Project for Construction of Neak Loeung Bridge					
	12	18	T	The Project on the Capacity Building for Water Supply System in Cambodia (Phase 2)	3	3	2	3	A
		19		The Project on the Capacity Building for Water Supply System in Cambodia (Phase 3)					
	13	20	G	The Project for Improvement of Equipment for Demining Activities (Phase VII)	3	3	3	2	A
	14	21	P	Emergency Life Saving Center Development Project	–	–	–	–	–*6
Viet Nam	15	22	L	New National Highway No.3 and Regional Road Network Construction Project (Section Hanoi-Thai Nguyen) (I)	3	3	2	3	A
		23		New National Highway No.3 and Regional Road Network Construction Project (Section Hanoi-Thai Nguyen) (II)					
	16	24	L	Thac Mo Hydropower Station Extension Project	3	3	2	3	A
	17	25	P	Viet Nam Coffee Value Chain Project	–	–	–	–	–*6
Thailand	18	26	T	ASEAN University Network/Southeast Asia Engineering Education Development Network (AUN/SEED-Net) Project Phase 3	3	3	3	3	A
	19	27	L	Eighth Bangkok Water Supply Improvement Project	3	3	2	3	A
Samoa	20	28	G	The Project for Improvement of Urban Untreated Water Supply Schemes	3	3	2	3	A
Pacific Region	21	29	T	Promotion of Regional Initiative on Solid Waste Management In Pacific Island Countries	3	3	2	2	B
Bangladesh	22	30	L	New Haripur Power Plant Development Project	3	3	2	3	A
		31		New Haripur Power Plant Development Project (II)					
	23	32	L	Financial Sector Project for the Development of Small and Medium-sized Enterprises (SMEs)	3	3	2	3	A
	24	33	L	Rural Electrification Upgradation Project	3	3	2	2	B
	25	34	L	Karnaphuli Water Supply Project	3	3	1	2	C
		35	(T)	Project for Institutional Improvement and Advancing NRW Reduction Initiative of Chittagong WASA					
	26	36	L	Renewable Energy Development Project	3	3	2	2	B
	27	37	G	The Project for Improvement of Airport Safety and Security Systems	3	3	2	2	B
India	28	38	L	Kerala Water Supply Project	3	2	2	2	C
		39		Kerala Water Supply Project (II)					
		40		Kerala Water Supply Project (III)					
	29	41	L	Bangalore Water Supply and Sewerage Project (II-1)	3	3	1	2	C
		42		Bangalore Water Supply and Sewerage Project (II-2)					
	30	43	L	Capacity Development for Forest Management and Personnel Training Project	3	3	2	3	A
	31	44	L	Amritsar Sewerage Project	3	3	1	2	C
	32	45	L	Tamil Nadu Urban Infrastructure Project	3	3	2	3	A
Sri Lanka	33	46	L	Greater Colombo Urban Transport Development Project	3	3	2	2	B
		47		Greater Colombo Urban Transport Development Project Phase 2 (I)					
		48		Greater Colombo Urban Transport Development Project Phase 2 (II)					
Pakistan	34	49	G	The Project for Energy Saving in Water Supply System in Lahore	3	3	2	3	A
	35	50	L	Lower Chenab Canal System Rehabilitation Project	3	3	2	2	B

*1 3 : High, 2 : Fair, 1 : Low / A: Highly Satisfactory, B: Satisfactory, C: Partially Satisfactory, D: Unsatisfactory
*2 Evaluation No.: the number of evaluations conducted.
*3 Project No.: the number of projects evaluated.
*4 T: Technical Cooperation, L: ODA Loan, G: Grant Aid, P: Private Sector Investment Finance

Country	*2 Evaluation No.	*3 Project No.	*4 Scheme	Project name	*1 Relevance	*1 Effectiveness/ Impact	*1 Efficiency	*1 Sustainability	*1 Overall rating
Azerbaijan	36	51	L	Shimal Gas Combined Cycle Power Plant Project (Second Unit)	3	3	1	3	B
Afghanistan	37	52	G	The Project for Construction of Hospital for Communicable Disease	3	3	2	2	B
	38	53	T	Tuberculosis Control Project	3	2	2	3	B
		54		Tuberculosis Control Project Phase 2					
	39	55	T	The Community Development Project for Returnees and Receiving Communities in Nangarhar Province	3	2	3	2	B
	40	56	G	The Project for Rehabilitation of Community Infrastructure in Nangarhar	3	3	2	2	B
Guatemala	41	57	L	ZONAPAZ Road Improvement Project	3	3	1	2	C
Ecuador	42	58	G	El Proyecto de Construcción y Equipamiento de las Unidades Operativas del Ministerio de Salud Pública en la Provincia de Chimborazo	3	3	2	2	B
Brazil	43	59	T	Project for Strengthening National Strategy of Integrated Natural Disaster Risk Management	3	3	2	2	B
	44	60	T	The Project on Nationwide Dissemination of Community Policing	3	3	2	3	A
Peru	45	61	L	Cajamarca Water Supply and Sewerage Improvement and Expansion Project	3	2	1	2	D
Paraguay	46	62	G	The Project for Improvement of the Drinking Water System for Coronel Oviedo City	3	3	2	3	A
Jordan	47	63	G	The Programme for Urgent Improvement of Water Sector for the Host Communities of Syrian Refugees in Northern Governorates	3	2	2	3	B
		64	(T)	Project for Formulating Water Supply Plan for the Host Communities of Syrian Refugees					
	48	65	L	Financial Sector, Business Environment and Public Service Reform Development Policy Loan	3	2	-	-	N.A.*5
Morocco	49	66	L	Sewage System Development Project (II)	3	2	2	3	B
	50	67	L	Urban Areas Living Environment Improvement Project	3	3	1	3	B
Moldova	51	68	G	Project for Effective Use of Biomass Fuel in the Republic of Moldova	3	2	2	2	C
Ethiopia	52	69	G	The Project for Water Supply Development to the Small Towns in Rift Valley Basin in Southern Nations, Nationalities, and Peoples' Regional State	3	2	3	2	B
	53	70	G	The Project for Construction of Secondary Schools in Amhara Region	3	3	2	2	B
Djibouti	54	71	G	The Project for the Improvement of Road Management Equipment in the Republic of Djibouti	3	2	2	3	B
Tanzania	55	72	T	The Capacity Development Project for Improvement of Dar es Salaam Transport (Phase 2)	3	2	2	2	C
	56	73	G	The Project for Reinforcement of Power Distribution in Dar es Salaam	3	3	2	2	B
Malawi	57	74	G	The Project for the Reconstruction and Expansion of Selected Community Day Secondary Schools	3	3	2	2	B
		75		The Project for the Reconstruction and Expansion of Selected Community Day Secondary Schools (Phase 2)					
		76		The Project for the Reconstruction and Expansion of Selected Community Day Secondary Schools and Conventional Secondary Schools (Phase 3)					
Rwanda	58	77	G	The Project for Rural Water Supply (Phase III)	3	3	2	3	A
Ghana	59	78	G	The Project for Fishery Promotion in Sekondi	3	3	2	3	A
Sierra Leone	60	79	G	Project for Urgent Improvement of Power Distribution System in Freetown	3	2	2	2	C
		80		Project for Urgent Improvement of Power Distribution System in Freetown (Phase 2)					
Guinea	61	81	G	The Project for Bridge Rehabilitation on National Route No. 1	3	3	3	2	A
Liberia	62	82	G	Project for Rehabilitation of Monrovia Power System	3	3	2	2	B
UEMOA, Burkina Faso, Cote D'Ivoire, Ghana and Togo	63	83	T	The Project on the Corridor Development for West Africa Growth Ring Master Plan	3	3	2	2	B
Mozambique	64	84	T	Project for Improving Research and Technology Transfer Capacity for Nacala Corridor Agriculture Development, Mozambique	3	3	2	2	B
	65	85	G	The Project for Construction of Bridges on the Road between Ile and Cuamba	3	2	2	3	B
Uganda	66	86	L	Upgrading of Atiak-Nimule Road Project	3	2	2	3	B
	67	87	G	Project for improvement of Queensway substation	3	2	2	3	B
Sudan	68	88	G	Project for Upgrading Food Production Infrastructure in the Republic of Sudan	3	3	3	2	A
		89	(T)	Capacity Development Project for Irrigation Scheme Management in River Nile State					
	69	90	G	The Project for Improvement of Solid Waste Management in Khartoum State	3	2	2	2	C
South Sudan	70	91	T	The Project for Improvement of Basic Skills and Vocational Training in South Sudan (Phase II)	3	2	2	1	D
	71	92	T	Strengthening Mathematics and Science Education in South Sudan (SMASESS)	3	2	2	1	D
	72	93	T	Livelihood Improvement in and around Juba for Sustainable Peace and Development	3	2	2	2	C
Democratic Republic of The Congo	73	94	G	The Project for Rehabilitation and Improvement of the Poids Lourds Avenue in Kinshasa (Phase 1)	3	3	2	2	B
		95		The Project for Rehabilitation and Improvement of the Poids Lourds Avenue in Kinshasa (Phase 2)					

*5 Overall rating is not drawn.
*6 Ratings for Private Sector Investment Finance projects are not disclosed as they are implemented by private sector.

External Evaluation: Highlights | Out of the 73 external evaluations, 6 external evaluations are selected based on geography, assistance scheme, sector, and rating.

Republic of Ghana

Grant Aid

The Project for Fishery Promotion in Sekondi

Contribution to the supply of fresh marine products by expanding fishing port facilities and improving their operation methods

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

External Evaluator: Keiko Asato, Foundation for Advanced Studies on International Development (FASID)

Grant limit／Actual Grant amount:
1,825 million yen (Amended 2,169 million yen)／2,102 million yen

Exchange of notes:
April, 2014 (Amended on December, 2015)

Project Completion: March, 2018

Implementing agency:
Ghana Ports and Harbours Authority (GPHA)
(Operating Agency is Sekonodi Fishing Harbour (SKFH))

Overall Goal:
To contribute the stable supply of marine products at SKFH

Project Purpose:
To reduce congestion at SKFH and improve the freshness of the caught fish

Output:
To extend the mooring quay and improve related facilities at SKFH

Fishing vessels returning to the port and waiting for landing (foreground) and vessels mooring and preparing at mooring quay (left back)

Effects of Project Implementation (Effectiveness, Impact)

The congestion rate, which is an indicator of the quantitative effect of this project, has improved comparing with that at the time of starting of the project. The fishing net occupancy rate and ice sufficiency have reached the target values. By ingenuity of facility operation, such as zoning (dividing the facility area subject to its purpose of use, and limiting unexpected use other than original purpose), fish landing is done efficiently and the congestion of the fishing port facility has been improved. In addition to these quick landing, the freshness of the catch is obtained by purchase and sales transaction of the catch under the roof of the handling shed. That's why the project objective was achieved. A positive impact was also seen, such as that the fresh catches are bought and sold at higher price. On the other hand, the fishery resources around Ghana have been decreasing in recent years due to illegal fishing, and this tendency can be also seen around the SKFH. As a result, although the unit sales price of catch has increased, only some fishermen and fishmongers could increase their income. The increased income is used for family clothes, children's education, and personal luxury purchases, and is also used for reinvestment in their business expansion, which might contribute to improve their lives.

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

Relevance

In Ghana, fishery is regarded as an important industry in terms of job creation, supply for vigorous marine products consumption, which is twice the world average, and provision of animal protein sources and etc. That's why the infrastructure improvement for this industry is in line with the development policy of the Ghana government. The SKFH confronted the problems such as congestion at the time of landing and insufficient capacity of the ice producing machine, so the development needs were also high. This project was also in line with the Japan's ODA policy. Therefore, its relevance is high.

Efficiency

Facility improvement (civil engineering work, facility construction / equipment installation, technical assistance for facility operation) was carried out as planned. The project cost was within the amount

of the Exchange Note (E/N), although its limit was increased to cover the additional cost attributed to the Ebola hemorrhagic fever that broke out in 2014, at the start of the project. The project period exceeded the plan due to failure of bidding, changes in procurement methods and others. The efficiency is fair.

Sustainability

The SKFH management office conducts daily inspections, cleaning, fee collection, and supervision of facility users. Problems beyond that range (problems that require civil engineering work, compensation for operating cost deficits, etc.) are supported by Takoradi Commercial Port, which is the supervisory entity, so no financial or technical problems are seen. The operation and maintenance status is generally good, and the effects of this project are expected to continue. The sustainability is high.

Conclusion, Lessons Learned and Recommendations

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

This project is a good example of effective utilization of the facilities and equipment of fishing port facilities, in a sense that fishing port facility is used by more number of vessels than originally expected by the ingenuity of operation methods. Specifically, (1) formulation of management policies for facilities and equipment involving users and related parties, by such as multi-stakeholder advisory committee (MSAC) and stakeholder (SH) meetings, and its thorough compliance, (2) efficient landing by zoning. As a result, the facility was operated efficiently and the freshness of the catch was improved. This improvement of (1) and (2) is the effect of soft component (technical assistance for facility operation). In order for facilities and equipment of the fishing port project to be effectively utilized, not only physically appropriate construction and procurement are conducted, but also useful soft components should be done to bring a good effect, even if its period is short. It is important to formulate the project so that both physical and soft approach would produce synergistic effects.

Table Achievement status of operational indicators

Indicator	Baseline (2013, Actual)	At the time of completion (2018)	Target (2021, 3 years after completion)	Actual		
				Response by executing agency		Re-calculation
				2019	2020	2021
Congestion rate of landing berths and preparation berths(%)	400%	200%	100% or less	100%	40%	257%*
Occupation ration by fishing nets behind preparation berth(%) (except short storage for preparation works)	70%	40%	10% or less	30%	10%	
Sufficiency ratio to ice demand SKFH (annual average) (making ice demand volume at the time of plan as standard)	45.5%	50%	70% or more	50%	60%	85%**

* Because the basis for calculating 40% in the response from the executing agency was different from that at the time of the ex-ante evaluation, this value was recalculated using the 2021 data. The calculation basis was applied at the time of the ex-ante evaluation.
** The responses from the executing agency of "50%" and "60%" are based on the demand for ice at the time of the ex-post evaluation. Subject to the indicator originally set, this value was recalculated using the data for 2021. The calculation basis was applied at the time of the ex-ante evaluation.

Fishermen pulling up the fishing net to the designated net stock area align with zoning

Key Point of Evaluation

Appropriate soft component might foster the ownership of the users and improve the way of facility operation

In this project, while the number of fishing vessels has increased owing to the easy use of the facility and the good access to ice at SKFH, there is no regulation to limit its number to use the facility, which could not stop congestion of the port facility due to the limited suppress of the vessels' use by the executing agency. However, this is a good example that under such situation, the facility is operated efficiently through fostering an ownership by involving users, and by complying usage rules, such as zoning. Participants who attended the MSAC and SH meetings praised that attendance to these meetings allowed them to promote the understanding of usage rules and to have opportunities to express their opinions. From the minutes of the meeting, we can see the deeper discussions held on the specific agenda by each SH, and the concrete discussions held to improve facility operation.

Behind this situation, the soft components, which were planned and implemented reflecting the needs of the executing agency, play a key role. The executing agency understood its usefulness and assigned the appropriate personnel, such as ex-fishing port manager, to the local counterpart for the technical assistance, which allowed to foster the groundwork so that the effect of the technical assistance would continue. Only when the facilities and equipment are properly operated, the effect of the project can be come out. Even for a short period of the implementation, if the soft components is planned appropriate and usefully, it can be very effective.

Kingdom of Cambodia

Technical Cooperation

The Project on the Capacity Building for Water Supply System in Cambodia (Phase 2) / (Phase 3)

Contributing to Stable Water Supply in Regional Cities of Cambodia by the Improvement of the Capacity for Water Supply Service

External Evaluator: Nobuyuki Kobayashi, OPMAC Corporation

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

Total cost: (Phase 2) 687 million yen
(Phase 3) 504 million yen

Period of cooperation: (Phase 2) May 2007 - March 2012
(Phase 3) November 2012 - June 2018

Partner contry's implementing organizations:
(Phase 2) Ministry of Industry, Science, Technology, & Innovation (MISTI), Public Waterworks in 8 cities (TPWs)
(Phase 3) Ministry of Industry, Science, Technology, & Innovation (MISTI), Public Waterworks in 8 cities (TPWs)

The number of experts dispatced:
(Phase 2) Long term: 4 persons
Short term: 20 persons
(Phase 3) Long term: 3 persons
Short term: 24 persons

The number of technical training participants:
(Phase 2) Training in Japan: 22 persons
(Phase 3) Training in Japan: 26 persons
Training in third countries: 22 persons

Main equipment provided:
(Phase 2) Equipment for water quality testing, water treatment equipment, equipment for electrical and mechanical facilities, equipment for a distribution facility and others
(Phase 3) Equipment for replacement and others

Overall Goal:
(Phase 2) Capacity to operate and maintain water supply facilities is improved in the urban areas of 14 cities which participate in "National Conference on Public Water Utilities" in the Kingdom of Cambodia.
(Phase 3) Water services provided by TPWs are enhanced.

Project Purpose:
(Phase 2) Capacity to operate and maintain water supply facilities is improved in the targeted TPWs utilizing the experiences accumulated during the Phase 1 Project.
(Phase 3) All TPWs are able to manage water supply more stable and sustainably.

Output:
(Phase 2)
Output 1: Capacity to analyze the water quality is improved in the TPWs.
Output 2: Capacity to treat water quality is improved in the TPWs.
Output 3: Capacity for operation and routine maintenance of electrical facilities is improved in the TPWs.
Output 4: Capacity for operation and routine maintenance of mechanical facilities is improved in the TPWs.
Output 5: Capacity to maintain water distribution facilities is improved in the TPWs.
(Phase 3)
Output 1: Capacity of managing the data necessary for Business Plan is enhanced at TPWs.
Output 2: Capacity of formulating Business Plans is improved at TPWs.
Output 3: Capacity of monitoring Business Plans is enhanced at TPWs.
Output 4: Capacity of monitoring, evaluating Business Plan, formulation policies and supporting TPWs for funding is strengthened at Ministry of Industry and Handicrafts
Output 5: Capacity of analyzing human resources development and improvement measures at TPWs is enhanced.

Effects of Project Impelementation (Effectiveness, Impact)

Through the implementation of this project, the capacity development of all TPWs (O&M capacity of water facilities, management capacity of water supply services) was mostly achieved. The project installed a Synergistic Utility Management System (SUMS), which enabled TPWs to control costs appropriately based on accurate water supply costs. As a result, the cost of water supply was lower than the unit cost of water supply in all TPWs at the completion of Phase 3.

In parallel with this project, TPWs improved water treatment plants and distribution networks with the financial supports from JICA and other donors. At the time of the ex-post evaluation, it was confirmed that water supply services were improved, and customer satisfaction increased in 7 TPWs, excluding Sihanoukville city where water supply services were commissioned to a private company. At the time of the ex-post evaluation, the treated water satisfied the water quality standards in Cambodia and 24-hour water supply has been achieved. In the beneficiary survey at the time of the ex-post evaluation, most respondents felt that water pressure was sufficient, and all respondents were "very satisfied" or "satisfied" with their water supply services. Therefore, effectiveness and impact of this project is high, as the project effects were shown as planned.

Results of Beneficiary Survey

For the beneficiary survey, a questionnaire survey was carried out and 47 beneficiaries (23 men and 24 women) in the project area excluding Sihanoukville replied to the survey. The responses to the questionnaire were collected via TPWs (6-8 people per TPW). TPWs divided their water supply areas into three zones (near / medium / far) along the distance from the water treatment plants

Table 1 Water Pressure at the Time of the Ex-post Evaluation (2021)

	Sufficient	Mostly Sufficient	Mostly Insufficient	Insufficient	Total
Respondents	34	9	2	2	47
%	72%	19%	4%	4%	100%

Source: the beneficiary survey at the time of the ex-post evaluation

Table 2 Customer Satisfaction at the Time of Ex-post Evaluation (2021)

	Very Satisfied	Satisfied	Neither of Satisfied nor Unsatisfied	Unsatisfied	Very Unsatisfied	Total
Respondents	22	25	0	0	0	47
%	47%	53%	0%	0%	0%	100%

Source: the beneficiary survey at the time of the ex-post evaluation

and selected an almost equal number of respondents from each zone. As percentages are rounded, the totals may not equal to 100%.

Relevance

From the planning of Phase 2 to the completion of Phase 3, the development policy aimed to improve the access to safe water in urban areas. During this period, the households with the water pipes to dwellings or on premises reached approximately 60% of total in the urban areas except Phnom Penh Capital City, making it important to enhance the capacity of public waterworks. The project is highly consistent with Japan's ODA policy at the time of planning. Therefore, its relevance is high.

Efficiency

For both Phase 2 and Phase 3, the scope of training was as planned. As many TPWs had malfunctions in the water treatment facilities in the Phase 2, the procurement of equipment was increased. This countermeasure led to an increase of the project cost and a delay in the project implementation. Both the project cost and project period exceeded the plan. Therefore, efficiency of the project is fair.

Target area of the project

Training provided by the project

Sustainability

The legislation was developed in the water supply sector, and staffing levels in the Ministry of Industry, Science, Technology, and Innovation and 7 TPWs except Sihanoukville city were adequate. Counterpart staff could maintain their technical level through training opportunities and daily work, and the water supply services of 7 TPWs were financially sound. Therefore, sustainability of the project effects is high.

Conclusion, Lessons Learned and Recommendations

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

As a recommendation, considering that the Cambodian Water Supply Association was established at the time of the ex-post evaluation, it would be desirable for Ministry of Industry, Science, Technology, and Innovation to promptly formulate a plan to effectively utilize this organization for the disseminating the effects of this project. For the lessons learned, there are three good practices: (1) to take advantage of the experience gained from the support to a preceding group and actively utilize the staff of the preceding group for supporting a subsequent group when a target group can be divided into multiple groups; (2) to utilize the human resources in a subsequent project for the dissemination of the project effects when a preceding project developed human resources; and (3) In the sector where both facility development and capacity building are important, to plan technical cooperation with effective collaboration of financial cooperation when facility development is needed.

Key Point of Evaluation

Improving the Water Supply Service through the Long-Term Coordination with the City of Kitakyushu and the City's Overseas Expansion

The long-term coordination with the City of Kitakyushu has played a significant role in the improvement of water supply services in Cambodia. The city of Kitakyushu dispatched officials to Phnom Penh Water Supply Authority as JICA experts from 1999 to 2003 and they provided guidance on the operation and maintenance of water supply facilities. In 2001, the city installed a water distribution monitoring system through the JICA Small-scale Development Partnership Project (now the Grassroots Technical Cooperation Project). Moreover, the city of Kitakyushu led the "the Project on Capacity Building for Water Supply System," which was the preceding phase of this project, from 2003 to 2006. As a result of this project, the non-revenue water rate of the Phnom Penh Water Supply Authority was halved from 17% in 2003 to 8% in 2006, and more than two hundred people participated in training on the operation and maintenance of water supply facilities. The human resources developed in the previous phase of the project were utilized in the subsequent projects of Phases 2 and 3, and they became the foundation for the water supply service throughout Cambodia. At the time of the ex-post evaluation, the city continues to cooperate with the Ministry of Industry, Science, Technology, and Innovation on human resource development through the "the Project for Strengthening Administrative Capacity of Urban Water Supply in Cambodia."

With the background of the long-term cooperation, Phnom Penh Capital City and the city of Kitakyushu signed a sister city agreement in 2016 and agreed on the memorandum on technical cooperation and exchanged on sewerage in 2017. This project has helped the city of Kitakyushu to build a cooperative relationship with the Cambodian government and has led to the overseas expansion of municipality.

Bangladesh

ODA Loan

The Renewable Energy Development Project

Contributing to the improvement of the people's living of local residents by financing the installation of renewable energy facilities in the rural area.

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

External Evaluator: Hisae Takahashi, Ernst & Young ShinNihon LLC

Loan amount／Disbursed amount:
11,335 million yen／ 10,849 million yen

Loan agreement: March, 2013

Terms and conditions:
Interest Rate: 0.01%
Repayment Period: 40 years (Grace Period 10 years)
Conditions for Procurement: General untied

Final disbursement date: March 2019

Excecuting agency:
Infrastructure Development Company Limited (IDCOL)

Overall Goal:
Contributing to the sustainable economic development, improvement of the people's living conditions and mitigation of climate change of Bangladesh.

Project Purpose:
To diversify the energy sources and increase the power supply as well as electrification.

Output:
Financing the Sub Projects (SPs) to install Renewable Energy (RE) facilities such as Solar Home Systems (SHS), Solar Irrigation Pumps (SIP) and Solar Mini Grids (SMG) in the rural area.

Effects of Project Impelementation (Effectiveness, Impact)

The operation and effect indicators of the project, i.e., the yearly power generation volume, the installed generation capacity, and effect of the reduction of CO_2 of the target SPs for funding of this project have all met thee targets. In rural areas where access to electricity is difficult, the installation of SHS, SIP, and SMG facilities has directly led to an increase in electricity supply, and RE power generation has led to a reduction in CO_2 emissions by reducing the use of kerosene oil, which has traditionally been used. In addition, the technical assistance for the implementation of SPs other than SHS led to opportunities for IDCOL staff with limited experience in implementing SIPs and SMGs to enhance their appraisal capacity and gain experience in implementing SIPs and SMGs.

In areas where access to electricity has been made possible by the installation of RE facilities, it was confirmed that the installation has contributed to the increasing children's study time, improving safety at night, improving the quality of life through the use of electrical appliances, reducing costs and improving health through the elimination of the use of kerosene lamps, increasing crop yields through the use of irrigation pumps, extending business hours in factories and markets, and stimulating local economies including the job creation. Moreover, the experience of SIPs and SMGs implemented in this project have been recognized as a success and have led to the introduction and implementation of large rooftop solar PVs photovoltaics and other advanced initiatives that IDCOL has supported following the implementation of the project. Therefore, effectiveness and impacts of the project are high.

Relevance

The implementation of this project is consistent with Bangladesh's development strategy, which emphasizes the roles of the power and energy sectors in contributing to economic development, sector plan which have specified the importance of increasing power generation capacity, diversifying energy sources and furthering RE adoption as well as development needs of developing power generation facilities in rural areas. The project is also consistent with the Japan's ODA policy. Therefore, the relevance of the project is high.

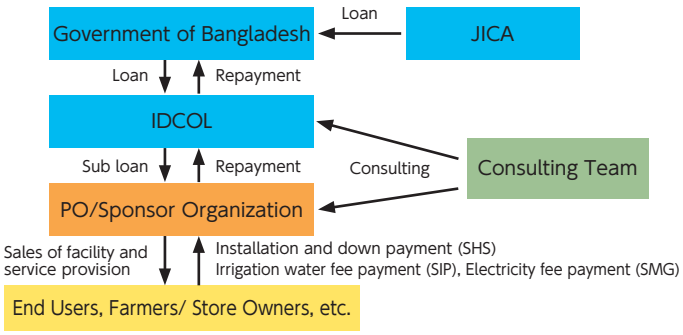
Efficiency

Funding for SHSs and consulting services were mostly implemented as planned. The number of SPs for SIPs and SMGs was slightly lower than planned due to the impact of electrification promotion, and biomass gasification and biogas-based power generation were not implemented since they were commercially unfeasible. Although the project cost was within the plan (81%) due to the decrease in the number of SPs, the project period exceeded the plan (159%). Therefore, efficiency of the project is fair.

Sustainability

Some of the local offices of the Partner's Organization (PO), which supports the maintenance of the SHS, have been closed, and there are some areas where the repayment of the installation cost from end users and follow-up by POs for the replacement of batteries have been hindered. This is a concern in terms of institutional/organizational aspects. The support can be provided by suppliers and regional offices of IDCOL, thus there are no particular concerns in terms of technical support from POs to end users. While the financial condition of the executing agency is sound, delays in loan repayment of installation costs from SHS end-users to POs have been reported in a few areas. While the operation and maintenance conditions of

SHSs and SIPs is good, the utilization rate of SMGs is about 30% due to high electricity prices. Some minor problems have been observed in terms of the institutional/organizational aspects, financial aspects and current status. Therefore, sustainability of the project effects is fair.



*Biogas-based Power Generation and Biomass Gasification assume a structure in which electricity is consumed in-house by the sponsoring institution and by-products are sold at local stores, etc.

Figure Scheme of This Project

Table Target and Actual Data for Indicators

Indicators	Target	Actual				Achievement rate (%)
	2021	2017	2018	2019	2020	
	2 Years After Completion			Completion Year	1 Year After Completion	
(1) Yearly power generation volume (MWh)	41,178 Note 1	22,449	23,793	33,230	41,085	99%
(2) Installed generation capacity (MW)	41.4 Note 1	26.0	28.0	36.0	41.0	99%
(3) Effect of the reduction of CO_2 (CO_2 conversion tons/year)	27,782 Note 2	12,987	14,040	21,795	28,001	101%

Source: Documents provided by JICA, questionnaire responses from the executing agency
Note 1: The proportion of biomass gasification and biogas-based power generation in the total components at the time of the appraisal was excluded from the target and targets were revised.
Note 2: The emissions reduction targets by the SHSs at the time of appraisal were calculated by emissions reduction related to the replacement of natural gas consumption. However, IDCOL pointed out that the fuel used before project implementation was not natural gas, thus the emissions reduction factors should be calculated based on kerosene oil and diesel oil, which were actually used. Accordingly, the target was revised.

Conclusion, Lessons Learned and Recommendations

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

As a recommendation to the executing agency, it is desiable that IDCOL works with POs and suppliers to strengthen efforts to reiterate to end-users about collection of expired batteries and correct disposal methods, as SHS batteries have been required to be disposed of properly after use to avoid environmental pollution and health hazards.

The rapid on-grid expansion in rural areas and a free SHS distribution program during the implementation of the project affected the implementation of the project and the repayment of SHS installation costs.

As lessons learned, it is necessary for the executing agency and other stakeholders involved in the project to keep in close communication with the government and the relevant authorities during the appraisal and implementation of the project, to discuss information on similar projects implemented in the target area and electrification plans, and to cooperate in the implementation of an integrated plan.

In addition, during the implementation of this project, not only awareness-raising activities on RE for the beneficiaries, but also events encouraging the related partied including the suppliers to promote market entry were conducted. Subsequently, in addition to the SHSs, SIPs and SMGs have been recognized for their achievements and RE facilities have proven to be effective in areas with limited access to electricity, contributing to the spread of PV technology and industry in the country. When introducing new schemes and technologies that have not been used in the past, it is most effective to carefully prepare not only for the users but also the suppliers to ensure the spread and sustainability of the schemes and technologies after implementation.

Key Point of Evaluation — Contribution to the promotion of the growth of solar PV industry

Bangladesh was dependent on domestically produced natural gas for more than 80% of its total power generation capacity, however, diversification of its energy supply sources was required due to sluggish gas production growth. Furthermore, the disparity in electrification rates between urban and rural areas was significant at the time of the appraisal, thus it was necessary to promote rural electrification while diversifying energy sources, including the introduction of RE.

In this project, in addition to the inslltation of SHSs, which have been deployed in the country prior to the implementation of this project, SIPs and SMGs, which could be serve as future case examples, have been introduced. Technical assistance was also provided to IDCOL staff for the implementation of SPs other than SHSs, leading to opportunities to enhance their capacity to evaluate SIPs and SMGs and to gain experience in their implementation. Moreover, IDCOL organized activities to promote the growth of solar PV industry in different parts of the country, including reaching out to sponsor organizations through awareness-raising activities, implementing awareness raising events for farmers to enhance their understanding of RE, and organizing events to encourage suppliers to enter the market to strengthen the supply chain. These experiences have contributed to the spread of solar power in the country.

Furthermore, in addition to generating electricity from solar power, the introduction of SIPs and SMGs has demonstrated the importance and advantages of solar power generation in rural areas, which can provide a stable source of water for irrigation even during the dry season. It has been demonstrated that solar power can be an effective tool for electrification even in remote rural areas, islands and areas which have limited access to power grids, leading to the subsequent introduction and implementation of solar power and other advanced initiatives. According to IDCOL, had these projects not been implemented, the successful demonstration of larger scale solar PV projects would not have been possible.

Republic of Malawi

Grant Aid

The Project for the Reconstruction and Expansion of Selected Community Day Secondary Schools, The Project for the Reconstruction and Expansion of Selected Community Day Secondary Schools (Phase 2), and The Project for the Reconstruction and Expansion of Selected Community Day Secondary Schools and Conventional Secondary Schools (Phase 3)*1

Complex school facilities contribute to quality education, girls' enrollment, and COVID-19 prevention

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

External Evaluator: Haruo Ito, ICONS Inc.

Grant limit/Actual Grant Amount:
1,198 million yen (Phase 1), 1,085 million yen (Phase 2), 1,756 million yen (Phase 3)

Exchange of Notes:
August 2010 (Phase 1), March 2012 (Phase 2), March 2014 (Phase 3)

Project Completion:
August 2013 (Phase 1), September 2014 (Phase 2), May 2017 (Phase 3)

Implementing Agency:
Ministry of Education, Science and Technology (MoEST)*2

Overall Goal:
Contribute to the improvement of the quality and accessibility of secondary education in the target areas.

Project Purpose:
Solve the shortage of classrooms and improve the learning environment in the target schools.

Output:
Expand and upgrade existing secondary education facilities and procure education-related equipment, including science laboratory equipment.

Effects of Project Impelementation (Effectiveness, Impact)

The indicators of the quantitative effects of the project, such as the "number of enrolled students" and the "capacity of new students" at the target schools, are far exceeded by the target values. The "average number of students per classroom" is 56, which did not reach the target value (50 students per classroom) due to the increase in the number of students in the target schools. However, it decreased significantly from the baseline of 85 students per classroom. Students' satisfaction with the learning environment and teachers' satisfaction with the school and classroom management environment were also high, indicating that the project purpose of "solve the shortage of classrooms and improve the learning environment in the target schools" has been achieved.

Concerning the overall goal, the dropout and repetition rates in the target schools were lower than the national average, and the Gender Parity Index (GPI) and the passing rate of the Malawi School Certificate of Education (MSCE) were higher than the national average. In particular, the high pass rate of the MSCE in the target schools can be attributed to the retention of qualified teachers by improving the school environment, the provision of opportunities for night study with lighted classrooms, the improvement of student performance owing to the procurement of science laboratories and equipment, the availability of textbooks as a result of upgrading the library, and securing learning opportunity by construction of girls' hostels to ensure study time for girls who are normally in charge of household chores. The synergistic effect of in-service teacher training for science and mathematics teachers through JICA technical cooperation has also been identified. In addition, the project's impact on the prevention of the COVID-19 pandemic in the schools and surrounding areas and the contribution to inclusive education for students with disabilities through barrier-free facilities were also confirmed. Therefore, the effectiveness and impact of the Projects are high.

Relevance

The Projects are in line with Malawian development policy to improve access, quality and equity in secondary education. The construction of girls' hostels, flush toilets for girls, toilets for the disabled, and application of barrier-free standards, are also in line with the goals of the "National Inclusive Education Strategy" and the "National Girls' Education Strategy". The Projects are also relevant to the Japan's aid policy and the development needs in Malawi, such as the shortage of secondary school facilities due to the growing demands for secondary education. Therefore, the relevance of the Projects is high.

Efficiency

The facilities of the Project were generally constructed as planned. Although the project cost was as planned (100%) in all phases, the project period exceeded the plan (Phase 1: 130%, Phase 2: 100%, Phase 3: 120%) due to rebidding in Phase 1 and Phase 3, the disruption of imported materials, the delays in material procurement and construction process caused by heavy rains during the rainy season, and financial and management problems with some contractors. Thus, the efficiency of the Projects is fair.

Sustainability

Although problems have not been observed in terms of the institutional/organizational aspect, there are minor issues in the technical aspect regarding

the maintenance of the procured science experiment equipment. The financial aspect such as the inability to secure sufficient funds for the renewal of equipment, and the purchase of consumables and reagents are also concerns. Therefore, the sustainability of the Projects' effects is fair.

Conclusion, Lessons Learned and Recommendations

The Projects are evaluated to be "satisfactory," considering the above.

Lessons learned for future projects include; (1) An approach to complex facility development, such as teacher housing, girls' hostels, science laboratories, libraries, and flush toilets, in addition to classrooms, will improve the quality of education and girls' enrollment, (2) since walls in schools have a significant impact on the quality of facility operation and maintenance, the inclusion of walls in the project scope or the provision by the recipient government as a prerequisite should be considered, and (3) support by technical cooperation projects and Japan Overseas Cooperation Volunteers (JOCV) will promote effective use of the facilities of Grant Aid, and at the same time, it may make it easier to obtain the support for activities of technical cooperation and the JOCV in the schools targeted by the Grant Aid.

As for recommendations, the government should install electricity and city water supply to some target schools that have not been serviced, install school walls, and promote the prioritized admission of students with disabilities in the target schools which have been equipped with barrier-free facilities. For JICA, the assignment of JOCVs (science and mathematics teachers) to target schools on a priority basis should be considered for the effective use of facilities and equipment as well as for setting up of their operation and maintenance system.

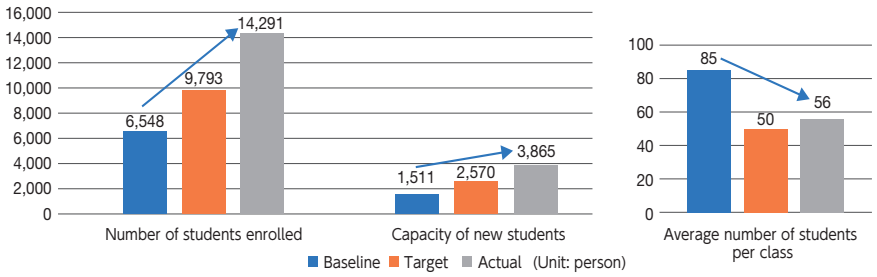


Figure 1 Students enrolled, capacity for new students, average number of students per class in target schools (Effectiveness)

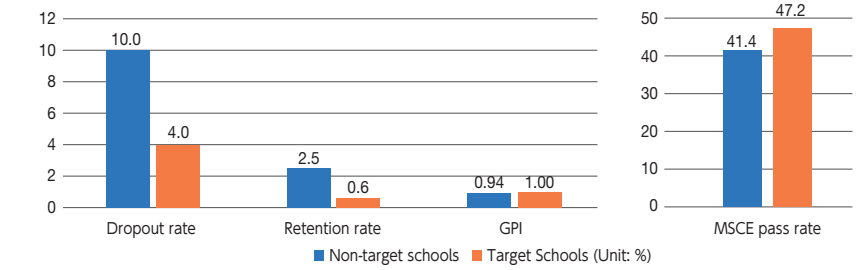


Figure 2 Comparison of dropout, retention, Gender Parity Index, MSCE pass rate between national average and target schools*3 (Impact)

Non-target school (Classrooms are overcrowded)

Target school (40 students/class recommended under COVID-19 has been realized)

*1: Hereinafter referred to as "Phase 1, Phase 2, and Phase 3," respectively. All phases are referred to as "the Projects" in this paper.
*2: After the new government came to power in June 2020, MoEST was renamed the Ministry of Education (MoE).
*3: Figures are for the 2019/2020 school year. Only the GPI uses the latest figures for the 2020/2021 school year. The 2019/2020 school year was marked by an eight-month school closure across Malawi due to COVID-19, and these indicators of that school year deteriorated due to the closure.

Key Point of Evaluation

Contribution of the Projects to the educational activities under the COVID-19 pandemic and its prevention measures

The COVID-19 pandemic in 2020 forced secondary schools in Malawi to close a long period of eight months. As a result, students' learning was greatly affected due to a decline in the pass rate of the MSCE and enrollments, as well as especially due to early marriage and pregnancy of girl students staying at home. In this context, the Projects have contributed to minimizing the negative impact of the COVID-19 on educational activities by ensuring quality education by not only improving classrooms but providing science laboratories, equipment, and textbooks, and minimizing the number of girl students dropping out by securing female teachers through teacher housing and providing girl student accommodation. Moreover, it was identified that the Projects have led to the prevention measures for the infection within target schools and their neighboring areas by ensuring social distance within the school, water supply, and sanitary toilets, and by providing a place to hold infection prevention seminars for residents.

Jordan

Grant Aid

"Project for Formulating Water Supply Plan for the Host Communities of Syrian Refugees" and Grant Aid Project "The Programme for Urgent Improvement of Water Sector for the Host Communities of Syrian Refugees in Northern Governorates"

Supporting the improvement of water supply services in northern Jordan, where the population has increased due to the influx of Syrian refugees

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

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

Project for Formulating Water Supply Plan for the Host Communities of Syrian Refugees (Technical Cooperation Project)

Total cost (Japanese side): 649 million yen

Project Period: December 2013 - May 2017

Implementing Agency:
Water Authority of Jordan (hereinafter referred to as "WAJ")
Supervisory organization: Ministry of Water and Irrigation
Organization for operation and maintenance: Yarmouk Water Company (hereinafter referred to as "YWC")

JICA Experts: 31 persons

Training in Japan: None

Equipment:
Materials and equipment for the implementation of pilot activities (welding machines for pipe jointing, high-pressure sewer cleaning units, TVs for sewer diagnosis, pipe materials for sewer connections, etc.)

Overall Goal:
Water supply and sewerage services in the host communities of Syrian refugees are improved.

Project Purpose:
- A grant aid project is implemented immediately according to the outline design for the prioritized projects.
- The water supply and sewerage service development plans developed by this project are utilized by the WASH Task Force*1 functioning under the Host Community Support Platform, formulated by the Jordanian government and development partners as a tool for prioritizing and selecting projects, and are implemented.

Output:
Component A: Formation of short-term priority projects; and development of outline design of the priority projects that are to be implemented through Grant Aid assistance.
Component B: Formulation of master plans necessary to maintain water supply and sewerage sector services for the host communities.
Component C: Technology transfer through pilot activities such as leak detection and repair and cleaning of sewage pipes.

The Programme for Urgent Improvement of Water Sector for the Host Communities of Syrian Refugees in Northern Governorates (Grant Aid Project)

Grant amount: 2,501 million yen

Exchange of notes: March 2014

Project Completion: May 2017

Implementing agency: WAJ

Overall Goal:
The living environment of the local community is improved.

Project Purpose:
Water supply services are improved to meet the increasing water demand

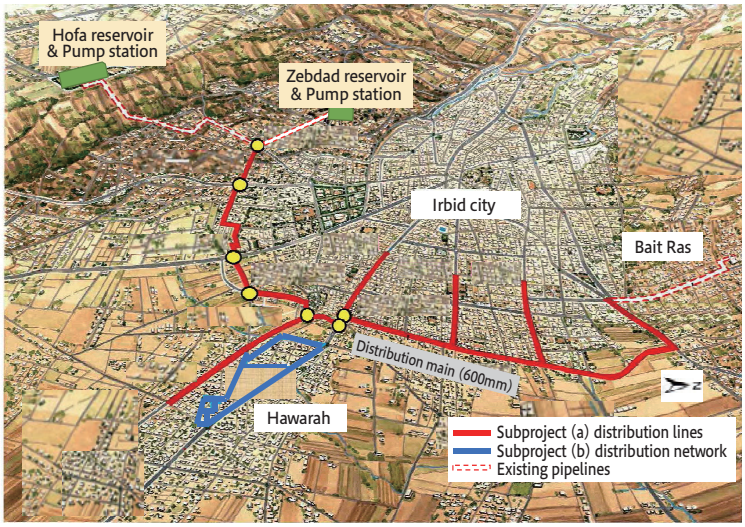
Output:
Water supply facilities in Irbid City, Bait Ras and Hawaarah areas in Irbid governorate are upgraded and renewed.

Effects of Project Impelementation (Effectiveness, Impact)

In this ex-post evaluation, the above-mentioned two projects are evaluated in an integrated manner. The projects formulated and proposed under Component A of the technical cooperation project was implemented as the “The Programme for Urgent Improvement of Water Sector for the Host Communities of Syrian Refugees in Northern Governorates” (this Grant project) and is implemented as Phase II of the project (hereinafter referred to as the Grant Aid Project Phase II). In addition, two projects proposed in the master plans for water supply and sewerage sectors developed under Component B are being implemented with support from other donor agencies. In this manner, the proposed and developed plans have been utilized and the purposes of the technical cooperation project have been achieved. In the Grant Aid Project, the construction of a new distribution main and distribution pipelines between the southern part of Irbid Governorate and Bait Ras area, and the rehabilitation and renewal of the distribution pipe network in Hawaarah area of the same Governorate, were implemented. The flow rate in the distribution main, which is the operation indicator of the Grant Aid Project, is lower than the target due to changes in the water transmission plan. However, there was a certain degree of improvement in water supply service in the target areas, and there was also an impact in terms of improving the living environment and reducing a disparity in conditions of water supply. Therefore, the effectiveness and impacts of the projects are fair.

Relevance

Improving water supply and sewerage services was a priority for Jordan at the time of both the planning and ex-post evaluation of the projects. The purpose of the projects, improving water supply and sewerage services, was consistent with development policies and plans, and sector strategies of Jordan throughout from the time of the planning to the ex-post evaluation of the projects. The northern part of the country was experiencing population growth due to the influx of Syrian refugees, and there was an urgent need to improve the services. The projects were consistent with Japan's aid policy. Therefore, relevance of the projects is high.

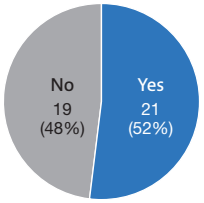


Layout of the distribution pipelines and network constructed by the Grant Aid Project
- The distribution main and a pressure reducing valve installed by the Grant Aid Project
- They no longer have a shortage of water for washing hands as amount of water supply was increased by the Grant Aid Project (A primary school in Irbid city)
- Layout of the distribution pipelines and network constructed by the Grant Aid Project

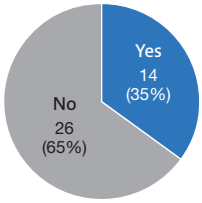
Table Target and actual values of the operation indicator "Flow rate of the distribution main" of the Grant Aid Project

Flow rate of the distribution main	At the time of planning In 2014	Target value (One year after project completion)	Actual values			
			Target year: 2018	2019	2020	2021*
Daily average (m^3/day)	0	30,000	11,125	11,601	10,924	10,754
Annual total (MCM/year)	0	11.00	4.06	4.23	3.99	3.93
Target achieved (%)			37	39	36	36

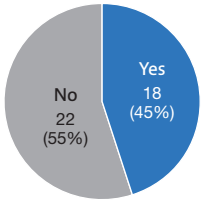
Source: Planned and target values are from the preparatory survey for the Grant Aid Project (P.4-3), actual values are the responses from the WAJ to the questionnaire.
Note: The flow rate at the time of planning was zero because this distribution main was newly constructed by the Project.
The daily averages and annual total of the figure for 2021 were calculated from data for the period from January to May 2021.



Water pressure or volume improved?



Frequency and duration of water supply increased?



Water-outages decreased?

Source: Questionnaire survey of beneficiaries conducted at the time of the ex-post evaluation (n=40)

Efficiency

In the Technical Cooperation Project, in addition to the planned activities, the outline design of the Grant Aid Project II, and the design and cost estimation of the project proposed in one of the master plans, were carried out. In the Grant Aid Project, the planned construction and the rehabilitation of the facilities were implemented almost as planned. The cost of both projects was within the plan, but the duration of the projects was longer than planned. Therefore, the efficiency of the projects is fair.

Sustainability

No major problems have been observed in the institutional/organizational, technical, financial aspects and current status of the operation and maintenance system. Therefore, sustainability of the project effects is high.

Conclusion, Lessons Learned and Recommendations

In light of the above, these projects are evaluated to be satisfactory.

The implementing agency is recommended to conduct measures to improve water supply services in the project areas, including the Grant Aid Project Phase II, without delay and make effective use of the distribution main developed by this Grant Aid Project; and that JICA should monitor the progress of these measures and ensure that the facilities developed by the Grant Aid Project are used effectively.

Regarding lessons learned from the projects, the application of appropriate support schemes based on the urgency of the assistance as well as the flexible management of the project to meet needs, facilitated the prompt implementation of effective assistance. These projects can also be refered to as a good example of how JICA has coordinated with other development partners in providing effective support in emergency assistance.

Key Point of Evaluation: Effective delivery of assistance in coordination with other development partners

In view of the urgency of the assistance, JICA applied the fast-track system*2 to launch the technical cooperation project at an early stage and dispatched a Japanese consultant team with extensive experience of working in the water sector of Jordan to the country. The team shared information on projects under consideration with other development partners in the WASH Task Force and learned that the EU, AFD (French Development Agency) and KfW (German Finance Corporation for Reconstruction) were planning to provide financial support for part of the master plan developed by the team. In response, JICA additionally carried out the basic design, detailed design and preparation of reference materials for bidding documents in this technical cooperation project, in order to facilitate the implementation of those activities. During the ex-post evaluation, an interview with an official from the AFD Jordan office indicated that JICA's preparation of the aforementioned design and materials had led to steady and early preparation of their financial support.

As described above, in this technical cooperation project, emergency assistance was provided in effective coordination with other development partners through the early dispatch of a Japanese consultant team to the country, the sharing of information on projects under consideration with other development partners through a task force and the flexible operation of the technical cooperation project.

*1: The WASH Task Force is an internationally coordinated working group formed by the Jordanian government and UN agencies to provide humanitarian assistance in the field of water, sanitation and hygiene against the backdrop of the influx of Syrian refugees into Jordan. "WASH" stands for Water, Sanitation and Hygiene.
*2: JICA identifies projects that require urgent action, such as disaster reconstruction assistance, as projects eligible for the fast-track system, to speed up the decision-making process for project planning and implementation, and to simplify the process of selecting and contracting experts necessary for project implementation.

Republic of Guatemala

ODA Loan

ZONAPAZ Road Improvement Project

Contributing to peace and the socioeconomic development of the area through transportation

Overall	
C	
Effectiveness and Impact	3
Relevance	3
Efficiency	1
Sustainability	2

External Evaluator: Hajime Sonoda, Global Group 21 Japan, Inc.

Loan amount／Disbursed amount:
7,357 million yen / 7,349 million yen

Loan agreement: February 2006

Terms and conditions:
Interest Rate: 0.75%
Repayment Period: 40 years (Grace Period: 10 years)
Conditions for Procurement: General untied

Final disbursement date: February 2006

Excecuting agencies:
Direction General of Road (DGC) of Ministry of Communication, Infrastructure and Housing, Institute of Municipal Development (INFOM)

Overall Goal:
Improvement of the standard of living of local residents as well as the establishment of peace and reduction of poverty through revitalization of the local economy

Project Purpose:
To ensure a means of transportation in the ZONAPAZ (Peace Area)

Output:
Improvement of National Road No.7 East (RN-7E): Concrete pavement 161km (partially uncompleted)
Improvement of an access road to Senahú: Concrete pavement 22km
Rehabilitation of rural roads: gravel pavement, 24 sections, 112km

National Highway No.7 East (Section 4)

Effects of Project Impelementation (Effectiveness, Impact)

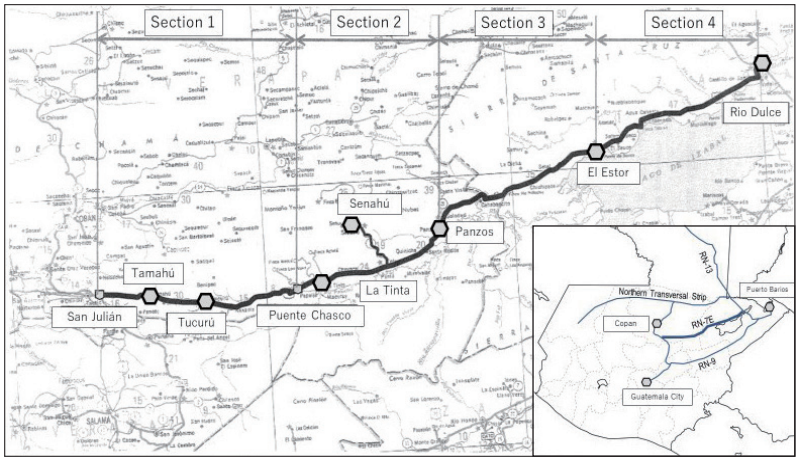
The National Road improved by the Project, while some of the pavement is incomplete, it is possible for a vehicle to pass at a certain speed, and its expected outcomes such as an increased traffic volume, shorter travelling time, reduction in the number of road closures due to natural disasters have been achieved. The access road to Senahú and the rural roads are also being utilized, and an increase in traffic volume and reduction in travel time were reported. Thus, the objective of ensuring means of transportation for the target area was achieved. According to interviews with the city governments and residents along the route, the Project has stimulated the economy by attracting new stores along the route, expanding sales channels and markets for agricultural product and reducing transportation costs, and expanding the commuting area. Social impacts such as easier access to government, health care, and education services were also reported. In the target areas, the crime rate is lower than the national rate and the return of displaced persons is progressing, and peace is considered to be well established. This project is considered to indirectly contribute to the strengthening or maintenance of peace through the promotion of socio-economic exchanges and regional integration between the areas along the National Highway No. 7 East Route and other areas. Therefore, effectiveness and impacts of the Project are high.

Relevance

The Project is highly relevant with Guatemala's development policy and development needs, which call for the development of ZONAPAZ based on post-civil war peace cooperation and the promotion of poverty alleviation through economic growth and regional integration. The Project is in line with Japan's aid policy in Guatemala, which focuses on "assistance for poverty reduction," "infrastructure development for sustainable growth," and "assistance for peace building." Therefore, the revelvance of the Project is high.

Efficiency

Three of the four construction sections of the National Highway No. 7 East have been completed. However, in the Section 3, construction was temporarily suspended due to the delay in payment by DGC against the background of elevated project costs. Even after payment was made, the contractor did not resume construction and abandoned the contract, leaving some unpaved sections. On the other hand, the access road was completed as planned and the rural roads were completed with some changes in the targeted section. The project cost was much higher than planned, and the project period was much longer than planned. Therefore, the efficiency of the Project is low.



Sections of RN-7E and the Relationships with Other Arterial Roads

Table Planned and Actual Average Annual Daily Traffic

(Unit: vehicles / day)

Section	Baseline (2004)	Planned (2021)	Actual (2021)	Planned / Actual Ratio
Section 1	802	2,208	2,598	118%
Section 2	637	1,723	2,030	118%
Section 3	309	1,121	1,528	136%
Section 4	402	1,145	821	72%
Average	562	1,614	1,846	114%

Sustainability

There are no technical problems in the operation and maintenance of the Project. However, as for the institutional / organizational aspect, the transfer of the access road to the Road Maintenance Executing Unit needs to be arranged. From the financial point of view, there are restrictions on the financial resources for the maintenance of rural roads. The condition of road maintenance is not necessarily good. Therefore, the sustainability of the Project is fair.

Rural roads rehabilitated by the Project

Conclusion, Lessons Learned and Recommendations

The Project is evaluated as partially satisfactory. DGC needs to re-contract the construction of the Section 3 of the National Highway No. 7 East, the construction of which has been suspended, and complete it as soon as possible to accomplish the transfer to the Road Maintenance Executing Unit. In addition, it is necessary to coordinate with the Road Maintenance Executing Unit to complete the transfer of the Section 1 of National Highway No. 7 East and the access road to Senahú to the Road Maintenance Executing Unit as soon as possible. INFOM should secure the budget for the Rural Road Rehabilitation Program and make the necessary repairs on the rural roads covered by the Project. The experience of the Project, in which the project cost increased far beyond what was planned, leading to delays in implementation, has provided an important lesson on Points to keep in mind for proper planning of project costs (see below).

Key Point of Evaluation — Lessons Learned: Proper estimation of the project cost

The substantial increase in the project cost over the planned cost led to the significant delay of the work implementation. Although the accuracy of the survey on which the project cost estimate was based was questionable at the time of planning, it had been decided that a study, including topographical survey to improve accuracy, would be conducted during the detailed design after the loan agreement. The road specifications and work volume were revised in the detailed design to reflect the actual ground bearing capacity and topographical features. The project cost was increased because of such revision as well as the rehabilitation and improvement of bridges damaged by a hurricane. After the commencement of the works, project cost further increased by the change of the pavement from asphalt to concrete based on a judgement made by the executing agency, increased work volume due to the existence of an unexpected bedrock formation, suspension of the works due to natural disasters and works to restore and improve damaged infrastructure. On the other hand, some construction contracts were cancelled because there was a cap on the increase in the amount of public works contracts under the regulations of the recipient country.

In view of the above, it is important to properly plan the project cost prior to the loan agreement at the time of planning. Necessary additional surveys should be conducted based on the accuracy of the information used as the basis for calculating the project cost. In those areas prone to natural disasters, the possibility of an increase due to damage should be considered. In addition, if there are institutional restrictions on the increase in the contract amount of public works projects, it is necessary to further improve the accuracy of project cost estimates at the time of contracting to ensure that no increase over the limit occurs.

Measures for Projects Evaluated as Having Issues

JICA has utilized recommendations and lessons learned from ex-post evaluations to improve ongoing projects and follow up on those already completed as required. In this section, we outline evaluation results and the countermeasures taken in the case of four projects with unsatisfactory overall ratings out of a total of 73 externally evaluated.

Peru Cajamarca Water Supply and Sewerage Improvement and Expansion Project (ODA Loan)

1 Overview of evaluation results and issues observed

This project was implemented to improve the water supply and sewerage services in the Cajamarca Region by rehabilitating and expanding the water supply and sewerage facilities in eleven local cities in the Region. The project was highly relevant as it was highly consistent with the development policies, plans and development needs of the Republic of Peru (hereinafter referred to as "Peru"). Thanks to this project, in the target region, the number of water and sewer connections soared, and the duration time of water supply also increased. Many residents with newly connected to the water supply and sewerage services reported a decline in malodors, flies and contamination, and they become able to use water to clean thoroughly and washed hands more frequently in response to the COVID-19 pandemic. Accordingly, it was confirmed through this ex-post evaluation that the project helped improve the water supply and sewerage services in the target regions.

Meanwhile, at the time of ex-post evaluation, the project did not complete some of the facilities in target cities and went far over budget. Construction of sewage treatment plants (STPs) in some cities had to be suspended due to opposition from residents while some STPs constructed lacked sufficient treatment capacity, rising concerns over the risk of direct discharge of untreated sewage around residences or into rivers, as occurred before STPs were constructed. Moreover, despite the initial plan to operate and maintain the water supply and sewerage facilities under the project by the Water Supply and Sewerage Public Corporation, which was technically and financially considered to have higher operational capacity, more residents were opposed to transferring the service to the Corporation, amid concerns that its service would affect the service fee as the project implementation period was extended. This has caused the transferring process in some cities to be delayed. Under such circumstances, ongoing issues still remained, including the maintenance and management of STPs given the lack of proper maintenance and operation under the municipal government with limited technical capacity and the fact that some facilities have already become inactive.

Based on this evaluation result, the project efficiency is low, and some sustainability issues remained. Therefore, the overall rating of the project was unsatisfactory.

2 Recommendations and lessons learned

The Cajamarca Region Program Implementation Unit, the executing agency, was recommended to complete the project as early as possible while the need to proceed with transferring the operation of the completed facilities under the cooperation with each of the relevant organizations. It is also requested to look into reasons why some sewerage facilities among those constructed have not achieved the functional capacity and to take measures against it. As for lessons learned, in case the project sustainability is directly related with municipal authorities, such as transferring the right of facility operation, it is important to assess and take measures to ensure arrangements remain feasible, even if the political conditions change.

3 Measures to be taken by the JICA department overseeing the project

JICA continues to encourage the executing agencies to complete construction earlier as well as following up on the efforts of the Peruvian government to improve policies and systems in the water supply and sewerage sector and striving to develop sustainable systems.

Water Treatment Plant in Jaén

The Philippines Mini-Hydropower Development Project in the Province of Ifugao

1 Overview of evaluation results and issues observed

This project aimed to promote the use of domestically produced renewable energy by developing a mini-hydroelectric power plant in Ifugao Province in northern Luzon Island, thereby contributing to the conservation of rice terraces as a regional tourism resource and the reduction of greenhouse gas emissions.

As a consequence of the project, the Likud Mini-Hydro Power Plant was constructed with power generation capacity as planned. However, the plant has not yet become sufficiently operational due to the unapproved power supply agreement and damage to civil engineering facilities like the headrace due to heavy rain. As a result, the amount of generated electrical energy at the generating end, which indicates the quantitative effects, was far below the target value during the period from the target year to that when the ex-post evaluation was conducted. Meanwhile, the plant was stably operated for a certain period, during which the amount of generated electrical energy at the generating end exceeded the target value and helped realizing the project impacts (i.e. boosting the stable supply of electricity to Ifugao Province and reducing greenhouse gas emissions) to a certain extent. The project has also helped raise awareness of and demand for small-scale hydropower in the province and the Department of Energy (DOE) has issued 11 Hydropower Service Contracts in the province, with construction prepared. In addition, some positive secondary effects were confirmed among the target population including: the rehabilitation of the irrigation facilities which made it possible for rice to be cropped in two seasons and for additional water intake from the plant to be used in vegetable fields. The water turbines and generators used in the project were made using the products of an SME in Fukushima Prefecture, Japan, which has been highly evaluated by the DOE. Moreover, the power generation company in Hyogo Prefecture, employing an engineer who was tasked with managing the project, jointly invested to the construction of the new mini-hydro power plant in Ifugao Province with Ifugao Electric Cooperative, Inc. and a local construction company, and the project was launched in 2021.

However, revenue from electricity sales has not yet been collected, since the power supply agreement has yet to be approved. Accordingly, no rice terrace conservation activities got underway using electricity sales income as expected. Accordingly, despite some positive impacts observed, the effectiveness of the project was deemed limited compared to the project plan, and its efficiency and impact were deemed low.

2 Recommendations and lessons learned

The executing agency was recommended to optimally leverage follow-up cooperation currently implemented by JICA to obtain approval for the power supply and other agreements as early as possible, promptly repair the damaged headrace and get the plant back into operation as soon as possible.

The circumstances explaining why the power supply agreement was not approved by the Energy Regulatory Commission, which is the largest issue in this project, were also analyzed as lessons to be utilized for similar projects in the future. Although requirements for approval were listed along with the period required in a preliminary survey report, it could not be confirmed during the ex-post evaluation whether or not risks were analyzed in case there is delay to each procedure. Regarding the power supply agreement, although the report focused on the process up to the point at which the agreement was concluded between the Ifugao provincial government and the Ifugao Electric Cooperative, Inc., subsequent approval by the Energy Regulatory Commission, which is a biggest issue in this project, was not clearly anticipated.

Since local governments are deemed to take the initiative to obtain plant approvals, the following lessons were learned: it is important to estimate the realistic time and risks required for each procedure considering the capability of implementing agencies during the planning stage while the recipient government and JICA should monitor and advise accordingly, based on risk factors during the implementation stage.

3 Measures to be taken by the JICA department overseeing the project

Under follow-up cooperation, JICA is currently formulating a facility repair plan to ensure the mini-hydro power plant operates steadily and will consider specific restoration assistance soon after the plan is formulated. As for the power supply agreement, JICA has also supported approval procedures by the Energy Regulatory Commission. As soon as the Commission approves the power supply agreement, electricity sales revenue until now will be collected and allocated to the rice terrace conservation fund. Accordingly, JICA continues to support efforts to achieve the originally intended impacts.

Constructed Likud Mini-Hydro Power Plant

South Sudan The Project for Improvement of Basic Skills and Vocational Training in South Sudan (Phase II) (Technical Cooperation)

1 Overview of evaluation results and issues observed

In South Sudan, where reconstruction has proceeded apace since its separation and independence from Sudan in 2011, In response to the need to train a skilled workforce capable of supporting national reconstruction, economic development and efforts to improve livelihoods, implemented capacity-development activities to increase training opportunities and boost training quality, the project involved work to develop the training capacity of public vocational training centres (VTCs), develop the organizational capacity of the Ministry of Labour, Public Service and Human Resource Development (hereinafter referred to as 'MLPSHRD'), the higher authorities, and develop the training capacity of private vocational training centres, thereby improving the chance and the quality of the vocational training. The project approach features support for upskilling candidates via VTCs as part of efforts to train skilled workers from mid- and long-term perspectives and support of NGOs which provides a short-term livelihood improvement training program that has an immediate effect on creating employment opportunities for youth and the socially vulnerable in the capital and local cities as well as concurrent efforts to establish vocational training systems. This approach was suitable, given the circumstances in South Sudan, which was facing an unstable governmental system immediately after independence and had various needs during the initial reconstruction phase. Thanks to the project, the Multi-Service Training Centre (MTC) in Juba and NGOs have continued operating in a self-reliant manner; leveraging income-generation activities introduced in the project. Given a growing number of trainees and a high level of satisfaction, it was confirmed that the opportunity and level of the vocational training had improved to a certain extent. The project impact was also confirmed in terms of scope for graduates, including females, to improve their livelihoods. However, the quantitative impact was limited because VTCs in two local cities did not function due to external factors, such as two domestic conflicts that occurred after the project completion. Operational issues were also observed in the Juba MTC in the form of a lack of instructor motivation due to delayed salary by the government, which could affect training quality. Moreover, any improvement in the MLPSHRD's VTC assistance capacity was limited and sufficient staff could not be appointed due to financial constraints. Accordingly, the overall rate of the project was deemed low. Training suspension in two VTCs and a budgetary shortage for training activities are attributable to external factors affecting the project, such as the domestic conflict in South Sudan, adversely affecting the impact and sustainability of the project.

2 Recommendations and lessons learned

In South Sudan, work from international organizations and assistance from other donors is planned to repair the Juba MTC and VTCs in Malakal and other local cities to promote vocational training services for youth, female and veterans and assistance from the MLPSHRD for VTC is expected. Given the overall unstable financial situation of the government and the budgetary limitations for vocational training expected going forward, it was recommended that each VCT plan and implement income-generation activities which would be capable of allowing the training center to subsist after the project completion while determining the status of candidates receiving capacity development support during the project to prepare for resuming training courses. As for lessons learned, in conflict-affected countries, where both emergency support and mid- to long-term institutional support are needed, it was suggested that responding to different needs by not only developing skilled candidates for national reconstruction, but also including activities that would directly benefit citizens at a local level would be effective.

3 Measures to be taken by the JICA department overseeing the project

In South Sudan, since the MLPSHRD and the Ministry of General Education and Instruction have worked to develop the South Sudan vocational training policy, the need to develop the capacity of the Juba MTC, which presumably underpins the MLPSHRD and vocational training services, has become increasingly urgent. Leveraging experience from the project, the South Sudanese government has high expectations of JICA's follow-up cooperation. Accordingly, JICA will seek out new areas of potential cooperation based on lessons learned and recommendations from the ex-post evaluation. In other JICA projects relevant to livelihood improvement, activities implemented by Juba MTC to help organize resources are being considered. The project outcome will be effectively utilized in collaboration with other donors.

South Sudan Strengthening Mathematics and Science Education in South Sudan (SMASESS) (Technical Cooperation)

1 Overview of evaluation results and issues observed

In South Sudan, lack of the teacher's knowledge and the capability was tangible, the project aimed to establish a system for Strengthening Mathematics and Science Education in South Sudan (hereinafter referred to as SMASESS), by establishing a training implementation structure at national and state levels, enhancing the capacity of state trainers, strengthening the training implementation system in model states and consolidating support systems for teacher training policy and training. The project achieved the stated purpose of "Teaching skills of Model Teachers in mathematics and science are improved" by meeting standards for training methods for model teachers having participated in training. Meanwhile, despite delays in disbursing the South Sudanese budget and other difficulties, training sessions were implemented nationwide and the project outputs were integrated into educational sector planning and policy. Accordingly, the project effect up to the point of project completion was evaluated as high. After the project completion, however, SMASESS training sessions at national and state levels had to be suspended due to the external factors of the two domestic conflicts. Eventually, at the time of ex-post evaluation, despite reported cases having helped elicit impacts, such as improving "teaching skills of primary teachers in mathematics and science" and "competence of primary school pupils in mathematics and science", since the sustainability of the project effect on in-service teacher training was limited, the effectiveness and impact of the project were judged as fair. While institutional and organizational structures are in place from policy/political, institutional/organizational and financial aspects, it has difficulties to function due to the external factors such as domestic conflicts and the state reorganization, there was a need to work on maintaining and improving technical levels. Accordingly, the sustainability of project effects was deemed low.

2 Recommendations and lessons learned

Although contacts with the trainers and model teachers trained by the project were lost because evacuating from the conflicts and personnel shuffles, they remain valuable assets. The implementing agency is expected to reconstruct their network after conflicts, personnel shuffles and state reorganization. As for recommendations, as well as JICA utilizing such network for disseminating maths and science education as targeted by subsequent projects, there is a need to provide information to further consolidate such candidates. In conflict-affected countries, events identified as external factors (impact caused by teacher turnover, personnel shuffles in government, budgetary shortfalls due to decreased government revenue and elections and referendums) may occur at a level or scale exceeding that normally expected. Accordingly, lessons were learned that if external factors were to emerge at a level unexpected enough to constitute an unstable project factor, it is more important than for other ordinary projects at the project planning stage to consider how best to minimize their impact and boost sustainability, despite various constraints.

3 Views from the Department overseeing the project

Although the project outputs did not emerge as initially planned, conflicts occurred after the project completion and subsequent refugee issues and humanitarian crises had not even been anticipated by the international community. Accordingly, it was largely attributable to serious external factors like these, which had not been envisaged.

Despite the exceptional external factors, however, the implementing agencies of the project strove to maintain and enhance the project outputs to succeed and leverage technology and candidates as optimally as possible. Based on such efforts, the Department overseeing the project has a different perspective on its sustainability and effects after the project completion. (The difference of opinion between the evaluator and the department overseeing the project is described in the [➡ Individual Report])

4 Measures to be taken by the JICA department overseeing the project

Although the project purpose was achieved, trainers were trained and a training system had been established by the time of project completion, unexpected security deterioration caused by subsequent conflicts hindered continuous activities. Currently, a human recourse network has been reestablished in readiness for resuming training courses, particularly with the remaining core candidates in mind. While monitoring local political and security situations, JICA will confirm the progress of activities to resume the training courses.

Moreover, in taking impacts such as those of conflicts having occurred after the project completion into account and any associated external factors which were not expected or planned for, developing clearer standards is an issue requiring improvement. As the project indicated, for ex-post evaluations conducted in conflict-affected countries, external factors may go beyond expectations, such as unexpected national independence during the project or a conflict arising after the project. Since this may occur in other countries, there is a need to consider reviewing the evaluation system.

List of Internal Ex-post Evaluations

In principle, internal ex-post evaluation covers those projects costing 200 million yen or more and less than one billion yen. Click on a project name to jump to see its ex-post evaluation report.

Country	*1Evaluation No.	*2Project No.	*3Scheme	Project name
Indonesia	1	1	T	Capacity Development for Trade-Related Administration
	2	2	T	Project on Small and Medium Industry Development based on Improved Service Delivery in Indonesia
	3	3	T	Project on Enhancement of Metalworking Capacity for Supporting Industries of Construction Machinery
Cambodia	4	4	T	Science Teacher Education Project (Phase 2) (STEPSAM2)
		5		Project for Educational Resource Development in Science and Mathematics at the Lower Secondary Level (STEPSAM3)
Thailand	5	6	T	Project for the Development of Basic Schemes for PRTR System
	6	7	T	Innovation on Production and Automotive Utilization of Biofuels from Non-Food Biomass
Philippines	7	8	T	Enhancing the Competitiveness of Fresh and Semi Processed Agricultural Product Through the Application on Appropriate and Sustainable Packaging Technology
	8	9	T	Strengthening Maternal and Child Health Services in Eastern Visayas
	9	10	T	Project for Comprehensive Etiological and Epidemiological Study on Acute Respiratory Infections in Children: Providing Evidence for the Prevention and Control of Childhood Pneumonia in the Philippines
Viet Nam	10	11	T	The Project for Strengthening Medical Services in Northwest Provinces
	11	12	T	Enhancing Corporate Finance Management Capacity to Implement SOE Restructuring
Myanmar	12	13	G	The Project for Mangrove Rehabilitation Plan for Enhancement of Disaster Prevention in Ayeyawady Delta
Laos	13	14	T	Supporting Community Initiatives for Primary Education Development in the Southern Provinces (CIED)
		15		Project for Supporting Community Initiative for Education Development (Phase 2)
	14	16	T	Strengthening Integrated Maternal, Neonatal and Child Health Services in Lao PDR
		17	(G)	Project for Strengthening Health Service Network in Southern Provinces
Papua New Guinea	15	18	T	The Project for Formulation of Ramu System Power Development Master Plan and Lae Area Distribution Network Improvement Plan
	16	19	T	The Project for Capacity Development of Department of Transport in Port Policy and Administration
Fiji	17	20	T	The Project for the Planning of the Nadi River Flood Control Structures
Mongolia	18	21	T	Capacity Development Project for Internal Audit Phase 2
China	19	22	T	The Project for Development of the Capacity in rural waste water treatment
Armenia	20	23	T	Landslide Disaster Management Project
Uzbekistan	21	24	G	The Project for Improvement of Equipment of Navoi Regional Multidisciplinary Medical Center
Afghanistan	22	25	T	Reproductive Health Project
		26		Reproductive Health Project Phase 2
	23	27	T	The Project for Capacity Development and Establishment of Road Maintenance and Management System
	24	28	T	Project for Socio-economic Activation of Rural Afghanistan
India	25	29	T	Project for Information Network for Natural Disaster Mitigation and Recovery
	26	30	T	UASB-DHS Integrated System - A Sustainable Sewerage Treatment Technology
Sri Lanka	27	31	T	The project for development of pollution control and environmental restoration technologies of waste landfill sites taking into account geographical characteristics in Sri Lanka
	28	32	T	The Project for Capacity Development on Bridge Management
	29	33	T	The Project for Monitoring of the Water Quality of Major Water Bodies
Pakistan	30	34	T	Capacity Development of Technical and Vocational Centers in Khyber Pakhtunkhwa
	31	35	G	The Project for Upgrading of Mechanical System for Sewerage and Drainage Services in Gujranwala
	32	36	T	The Project for Capacity Development of Agriculture Extension Services in Khyber Pakhtunkhwa Province
Bangladesh	33	37	T	Project on Revision and Updating of Strategic Transportation Plan for Dhaka
	34	38	T	Project for Development of Economic Zones and Capacity Enhancement of Economic Zones Authority
Bhutan	35	39	G	The Project for Improvement of Machinery and Equipment for Construction of Rural Agricultural Road (Phase 3)
	36	40	T	Project for Capacity Development of GLOF and Rainstorm Flood Forecasting and Early Warning
Maldives	37	41	T	Project for the Formulation of Master Plan for Sustainable Fisheries (MASPLAN)
Cuba	38	42	T	Project for reinforcement of certified seed production and extension system for popular rice
		43		Project for extension and diffusion of technologies for certified rice seed production in the central zone of Cuba
	39	44	T	Project for Fish Culture in the Republic of Cuba
Costa Rica	40	45	T	Project for Promoting Participatory Biodiversity Conservation
Colombia	41	46	T	Project on Capacity Development on Information Security Management of Land Information System for Land Restitution Policy Promotion

*1 Evaluation No.: the number of evaluations conducted.
*2 Project No.: the number of projects evaluated.
*3 T: Technical Cooperation or G: Grant Aid. Project implemented under several schemes and integrally evaluated is counted as the scheme of non-parentheses.

Country	*1Evaluation No.	*2Project No.	*3Scheme	Project name
Saint Lucia	42	47	G	The Project for Improvement of Fishery Equipment and Machinery
Dominican Republic	43	48	T	Project for Strengthening Primary Health Care for Pregnant Women and Newborns in Health Region III
Nicaragua	44	49	T	Project for Urban Development Master Plan for Managua City
Paraguay	45	50	T	Rural Development Project for Strengthening of Territorial Management System in Itapúa and Caazapá
	46	51	T	Project for Strengthening Primary Health Care System in the Republic of Paraguay
	47	52	T	Project for Strengthening Integrated Management of Yguazú Lake Watershed
Bolivia	48	53	T	Project of Capacity Development for Agriculture with Irrigation
Iran	49	54	T	Participatory Forest and Rangeland Management Project in Chaharmahal-va-Bakhtiari Province
Palestine	50	55	T	Technical Assistance and Capacity Building Project for the Jericho Sanitation Project
Albania	51	56	T	Project for the Support of Waste Minimization and 3R Promotion
Ukraine	52	57	T	Project for Creation of a National Geospatial Data Infrastructure of Ukraine
Kosovo	53	58	T	The Project for Enhancement of the Capacity for Waste Management toward Sound Material-cycle Society
Serbia	54	59	T	The Project for Assistance of Enhancement of Energy Management System in Energy Consumption Sectors
Turkey	55	60	T	Capacity Development toward Effective Disaster Risk Management
Algeria	56	61	T	Sahara Solar Energy Research Center Project
Uganda	57	62	T	National Wetlands Management Project
Ethiopia	58	63	T	The Project for Strengthening of Agricultural Pesticide Residue Analysis System
	59	64	T	Project for Rural Water Supply, Sanitation and Livelihood Improvement through Dissemination of Rope Pumps (RPs) for Drinking Water
Ghana	60	65	T	Financial Management Improvement Project of the Ministry of Food and Agriculture
	61	66	T	The Project for Supporting Institutionalization of the Pre-Tertiary Teacher Professional Development and Management Policy
Kenya	62	67	T	The Project for Strengthening of Capacity on Road Maintenance Management through Contracting (Phase 2)
Cote d'Ivoire	63	68	T	The Project for Supporting Formulation of Industrial Sector Policy Focused on Technology Innovation and Dissemination
Zambia	64	69	T	The Project for Support in National Roll-out of Sustainable Operation and maintenance Programme (SOMAP3)
	65	70	T	The Food Crop Diversification Support Project Focusing on Rice Production
Sudan	66	71	T	Project for Human resources Development for Water Supply
		72		Project for Human resources Development for Water Supply Phase 2
Senegal	67	73	T	Capacity-building Project for the control of land degradation and the promotion of land recovery in degraded soil areas
Solomon Islands	68	74	T	The Project for Improvement of Non Revenue Water Reduction Capacity for Solomon Islands Water Authority (SIWA)
Tanzania	69	75	T	Project for Formulation of Power System Master Plan in Dar es Salaam and Review of the Power System Master Plan 2012
	70	76	T	T in Supporting Service Delivery Systems of Irrigated Agriculture in The United Republic of Tanzania (TC-SDIA)
Tunisia	71	77	T	Project for Sustainable Management of Coastal Fisheries Resources in the Republic of Tunisia
		78		The Project for Co-Management of Coastal Fisheries in the Gulf of Gabes
Niger	72	79	T	Project on Effective Utilization of Reservoirs and Auto-Promotion of Local Communities in the Sahel
	73	80	T	School for All: The project on support to educational development through community participation
Burkina Faso	74	81	G	Project for Improvement of Teaching and Training Capacities of l' École Nationale des Eaux et Forêts (ENEF)
	75	82	T	Improving Sustainable Water and Sanitation Systems in Sahel Region in Africa: Case of Burkina Faso
Burundi	76	83	T	Project for Community Development for Improvement of Livelihood in the Conflict-Affected Areas in the Gitega Province
Malawi	77	84	G	The Project for Selected Market Centres and Rural Water Supply in Mchinji and Kasungu District
	78	85	T	The Project for Capacity Enhancement in Public Sector Investment Programming Phase II
	79	86	T	Project for Strengthening of Mathematics and Science in Secondary Education (SMASSE) in Malawi
		87		Strengthening of Mathematics and Science in Secondary Education (SMASSE) INSET Malawi Phase II
Mali	80	88	T	Digital Topographic Mapping Project for the Bamako Metropolitan Area
Mozambique	81	89	T	Project on Promoting Sustainability in Rural Water supply, Hygiene and Sanitation in Niassa Province
Morocco	82	90	T	The Project for Improvement of Irrigation System at the Abda Doukkala Irrigated Area
Rwanda	83	91	T	Project of Strengthening School-based Collaborative Teacher Training (SBCT)
South Africa	84	92	T	The Project for Studies of Seismic Hazard Mitigation in Deep Level South African Mine

Internal Evaluation: Highlights | This section introduces three internally evaluated projects; selected from a total of 85 and with the balance of their regions, sectors and ratings in mind.

Morocco The Project for Improvement of Irrigation System at the Abda Doukkala Irrigated Area

The Government of Morocco addressed the "National Programme of Water Saving Irrigation" (2007-2020) as part of efforts to shift away from the current surface irrigation and sprinkler system to drip irrigation for an area covering 550,000 ha by 2020. For the dry or semi-dry Abda-Doukkala region which has suffered frequent drought, regional policy was set out in with a goal of reducing the 96,000 ha requiring drip irrigation to 50,000 ha.

In support of this goal, JICA implemented the "Project for Improvement of the Irrigation System at the Abda Doukkala Irrigated Area" (Technical Cooperation) within the Abda Doukkala region as a pilot site from July 2011 to July 2016. Aiming to extend the project outcomes elsewhere, the project initially focused on ensuring water-saving irrigation over an area of 180 ha and consolidating maintenance, management and other intangible components.

In order to provide farmers profitable farming advises regarding how best to manage drip-irrigation systems and water facilities, promote high-valued agricultural crops and deploy fertilizer, the project boosted the capacity of the government staff and farmers' associations. It also bolstered farmers' income by adding further value to their agricultural products through support of promoting high-valued agriculture. In fact, at the time of completion, the project was highly acclaimed by the Moroccan government as having achieved a great result as a benchmark drip-irrigation project for the region.

The evaluation at the project completion confirmed that the project had achieved all indicators, including improving the ratio for the dry season cropping intensity, meaning it excelled quantitatively. JICA also confirmed the success of this project in terms of agricultural resilience in a drip-irrigation context. Since 2019, however, after a terrible drought blighted the region, on a scale thought only to occur once every thirty years, the farm ponds in the pilot site dried up and even the drip irrigation, which can save the water, was unable to offset the resulting scarcity of water. Accordingly, during the ex-post evaluation, given that indicators of the overall goal ("expanding the areas equipped with drip irrigation" and "increase cultivation areas of highly profitable agricultural products") were not achieved, the overall project effectiveness and impact were judged as fair.

The project sustainability was also judged as fair given that the Agricultural Water Users' Association (AWUA) faced certain financial issues. This, in turn, was attributable to the difficulty of collecting water charges from farmers after the drought impacted agriculture. Given the severe drought which affected agriculture, and due to the limited information available since the field survey could not be conducted because of the COVID-19 pandemic, the evaluation judgement was not as good as expected. The ex-post evaluation was conducted remotely, but the national staff member overseeing this project evaluation patiently interviewed the implementing agency and stakeholders and collected quantitative and qualitative data. Accordingly, although the target value was not achieved, it was confirmed that agricultural product sales did not decline as expected. The percentage area covered by drip irrigation was 19.2%, and the area of highly profitable agricultural products increased by 21.3%.

As a finding from this ex-post evaluation, since farmers found that the relatively expensive electricity rate when pumping water for drip irrigation is particularly burdensome, the lessons learnt had been withdrew "as one of the solutions to secure sustainability in anticipation of the system utilization after project completion, prior to project implementation, it is recommended that JICA should hold in-depth discussions regarding the financial aspect of the planned system, then seek a possibility of financial support of the state government to fund users of the system (e.g. AWUA) in order to facilitate effective management of drip irrigation in a self-sustaining way."

Amid growing expectations of the Moroccan government with regard to JICA's irrigation projects under this project, JICA has explored the feasibility of extending this successful irrigation project nationwide with the Government of Morocco.

Irrigation reservoir (Original: irrigation water storage basin) during the project (20011-2016)

Irrigation reservoir (Original: irrigation water storage basin) of today (2021)

Nicaragua Project for Urban Development Master Plan for Managua City
- A basic policy and plan for urban development highly acclaimed by the recipient government -

The population in Managua City, the Nicaraguan capital, grew at an annual average rate of 3.87% from 2005. This prompted concerns that the disorder expansion of urban areas would end up hampering progress of urban functions due to an increasing financial burden on developmental and operational needs and maintenance of urban infrastructure, meaning transport and travel in the area take longer.

In response, JICA implemented a technical cooperation project for development planning* "the Project for the Urban Development Master Plan for Managua City" from January 2016 until May 2017. It aims at formulating a basic policy and plans for urban development in the Municipal Council by strengthening the institutional capacity of Managua Municipality through activities that include analyzing the situation of Managua City, setting out a vision, formulating action plans and issuing recommendations for the investment plan and others.

Thanks to the project, the basic policy and plans in the area of urban development for Managua City were formulated, whereupon the municipal staff could develop their capacity for urban and transportation planning via a training program in Japan and OJT. The basic policy and plans were then approved by the Municipal Council in 2018 as the "Urban Development Master Plan for Managua City for 2040". Moreover, the ex-post evaluation this time revealed that two out of thirty short-term priority projects proposed in the master plan were completed and seven projects, plus four mid- and long-term priority projects were all being implemented. These projects have helped improve and strengthen urban functions, such as developing and extending new roads and expanding the sewerage coverage in the City. To meet substantial urban infrastructure needs commensurate with the soaring population, however, there is a need to further promote the remaining projects proposed in the plan.

The ex-post evaluation also confirmed that gender mainstreaming has been promoted by the project. Most of the members of the technical team for developing the master plan of the Municipality were female participants, and many female members comprised the project Steering Committee. This gender structure allowed them to incorporate various views into projects proposed in the master plan and proceed with the project execution rapidly and unhindered.

The then Foreign Minister and other Nicaraguan ministers, and the Mayor of Managua City, expressed their appreciation to the Japanese Government for formulating the master plan. As a follow-up project, an advisor on enhancing capacity and revising the land use regulation was dispatched since FY 2021 to pass on expertise in the area of revising land use regulations and zoning to municipal staff for use in high-density land, based on the disaster risks proposed in the master plan and for the improvement of the environment for introducing public transportation going forward.

*: Technical Cooperation projects for Development Planning transfer technologies including how to conduct survey/analysis and formulate plans to the recipient government by supporting planning policy and formulating public project plans in developing countries.

The master plan was unanimously approved by the Nicaraguan participants

A traffic circle and elevated roads developed by an elevated roads/intersection development project

Comment from local staff conducting the evaluation

Due to COVID-19, we could not visit the implementing agency; however, we established frequent online communication throughout the evaluation process. At some point, they probably felt we were digging requesting a lot of information. Nevertheless, it was important to remind them that the ex-post evaluation is about grasping as much information as possible in order to provide valuable recommendations and lessons learned via evaluation.

Ghana Project for Supporting Institutionalization of the Pre-Tertiary Teacher Professional Development and Management Policy

In Ghana, despite steady progress in the quantitative expansion of education, improving the quality of education remained a major challenge. The Government of Ghana has emphasized the crucial need to improve the abilities of teachers, as reflected in its "Education Strategic Plan (ESP) 2010-2020" formulated by Ghana's Ministry of Education in 2011 and the "Primary and Secondary Teacher Professional Development and Management (PTPDM)" policy it established. This aims to ensure appropriate personnel management according to their careers or capacities, rather than simply in line with qualifications and years of experience.

JICA launched a project to contribute to the realization of the PTPDM policy. Aiming to expand the policy nationwide in the future, the project initially established a system of appraising and promoting teachers in line with the PTPDM policy through trial introducing in five pilot districts. Specifically, the project activities included: (1) Developing teacher appraisal and promotion mechanism based on competencies (capability and behavioral characteristics), (2) developing a mechanism for data collection and management of teacher training record to reflect the training participation to the evaluation, and (3) Revising the policy documents and developing policy framework guidelines to expand the PTPDM policy nationwide.

It was found that many pilot districts continued to use a system of appraising and promoting teachers based on PTPDM policy rolled out, and that the evaluation of teachers has been carried out when teachers renew their licenses or promote in non-pilot districts. Training sessions have also been conducted regularly and reference has been made to the Teacher Training Logbook. Overall, it was confirmed that the project effects have been steadily integrated into the system. Meanwhile, even though the project aimed to expand the policy nationwide, teacher appraisals were conducted only when renewing licenses and promoting, particularly in non-pilot districts, suggesting the need for strict instruction and supervision at central and district levels.

A field survey (in the Shai-Osudoku District)

Learning from the internal ex-post evaluation during overseas OJT

Normally, internal ex-post evaluations are conducted by overseas office staff members. However, the internal ex-post evaluation of this project was conducted by new JICA staff from the Evaluation Department utilizing oversea OJT.

Before conducting this evaluation, I was mainly engaged in managing the quality of external and internal ex-post evaluations as a staff of the Evaluation Department and considered how best to collect evaluation information from the implementing agency and evaluate such projects objectively. However, through the internal ex-post evaluation of this project as an evaluator, I noticed that the field survey is not only a means of collecting data but also a valuable opportunity to discuss with the implementing agency how best to expand and sustain project outcomes and what project(s) should be implemented in the future.

As well as conducting an ex-post evaluation of the project, I organized an internal ex-post evaluation seminar for staffs mainly responsible for ex-post evaluations at the overseas office while the OJT. The purpose of this seminar was to deepen the understanding of the process and purpose of internal ex-post evaluations by sharing experiences of overseas office staff members who have overseen many such evaluations with those who will do the same task in the future. Through the seminar, I recognized that conducting internal ex-post evaluations would accumulate lessons unique to the country and sectors, and help forge relations of trust with the implementing agency. Moreover, I realized again that the subsequent success of the project and relations of trust between the partner countries and JICA are underpinned by overseas office staffs who have mission to improve the country and engage in implementation and evaluation of projects by persistently communicating with the implementing agency.

Throughout my time as an evaluator, I learned how challenging it is to accumulate information from a range of perspectives to conduct objective evaluations, and understood from experience what it is like and how important it is to "extract useful lessons and utilize them for projects", which I prioritized in the Evaluation Department. Going forward at the Evaluation Department, I would like to strive to conduct evaluation and design evaluation systems imagining the actual project scenes at all times. When I formulate or implement projects in the future, I would also like to forge relations of trust with implementing agencies, like the officers I met in Ghana did, and create better projects by having a bird's-eye view of projects I have cultivated in the Evaluation Department and by utilizing lessons learned from past projects.

*: The Overseas OJT refers to a training program for new JICA staff which entails On-the-Job Training (OJT) for one to three months overseas, aiming to "form values as a springboard for working as a development assistance professional in future.

Examples of Applying Lessons Learned

Application of Lessons Learned from Past Similar Projects to Ongoing Projects

In order to address increasingly complicated development issues, JICA needs to utilize lessons learned from its past projects to improve the effectiveness and efficiency of project implementation. With this recognition, JICA attaches great importance to the application of lessons learned from past project experiences and evaluation results to ongoing and future similar projects to improve the quality of actions in the PDCA cycle.

Below are representative examples of applying experiences and lessons learned from past projects to project implementation.

Project for Strengthening National Strategy of Integrated Natural Disaster Risk Management in Brazil (external evaluation)

This project was implemented to support capacity building for the risk assessment on sediment disasters, formulating and implementing, based on such risk assessment, urban expansion plans and disaster prevention/rehabilitation/reconstruction plans, issuance of early warning and dissemination of risk information, and research and development on disaster monitoring as well as forecast and early warnings. Through these capacity building activities, the project aims to improve Brazil's preparedness for disaster response and thereby contributes to strengthening its integrated national strategy for natural disaster risk management. The lesson* learned from the past similar project pointed out the importance of "developing a long-term roadmap to function as a social system, adopting a strategic support approach to take the fullest advantage of Japan's knowledge/expertise, and making project design (inputs, project period and phasing) for capacity building in a manner that ensures the achievement of project outcomes. The above mentioned lesson learned of the past similar project were reflected to this capacity building project and an activity plan was developed to provide comprehensive support to different implementing agencies in order to take a consistent approach across three stages of pre-disaster, during disaster, and post-disaster as follows.

1) Understanding (disaster-related) phenomena, taking non-structural measures (e.g. observations, forecasts, and warnings), and taking structural preventive measures (e.g. sand control dams and retarding basins): Ministry of Science, Technology, and Innovation
2) Understanding and analyzing how preventive measures work during a disaster: Ministry of National Integration
3) Reflecting the results of the activities mentioned in 1) and 2) above to make the country and communities resilient to natural disasters: Ministry of Cities, Federal Government

The support structure of the Japanese side was established involving experts and experienced coordinators with technical knowledge and skills required to meet the needs of these different implementing agencies. As a result, the project for strengthening the national strategy for disaster risk management completed successfully.

* This lesson was also included in the knowledge lesson sheet of the disaster management sector. JICA Report "Thematic Evaluation- Cross-sectional analysis of evaluation results: Extraction of practical knowledge lessons in the field of disaster prevention" (2014) https://www.jica.go.jp/activities/evaluation/tech_ga/after/ku57pq00001cdfnb-att/201412_01.pdf (As of September, 2021). Only Japanese version is available.

Project for Capacity Development on Bridge Management in Sri Lanka (internal evaluation)

JICA has combined on-the-job training through ODA loan projects for bridge construction and reconstruction and technical cooperation such as training to improve maintenance and management skill, to provide comprehensive support to Sri Lanka. Among them, this project was aimed to improve institutional capacity of Road Development Authority (RDA) on bridge management through revision and development of bridge management manual and guidelines, preparation of bridge management strategy/plan, enhancement of basic engineering knowledge by seminars and on-the-job training, thereby improving operation and maintenance of bridge around the country.

According to lesson learned from the past similar project, pilot projects should be implemented to provide opportunities for field engineers to experience inspections and repair works (Project on Improvement of Quality Management for Highway and Bridge Construction and Maintenance in the Philippines (2007)). Another lesson learned was that document for institutional development and engineer suited to the needs and technical level of the implementing agency would be effective in improving operational processes and daily tasks (Project for the Capacity Building of Road Maintenance in Kyrgyz (2011)).

Therefore, in this project, model provinces were selected, and practical technologies were transferred to provincial field engineers. Moreover, the project was designed to match with the technical level of RDA by giving RDA staff examinations to measure their competencies and holding discussions to identify problems in the existing manuals. As a result, this project was found to have successfully strengthened the bridge management capacity of RDA and improved bridge management around Sri Lanka.

The concept of a bridge management cycle adopted in this project was also applied to other project but not put into full practice due to limited financial resources and impractical planning. The fact indicates the importance of learning lessons from past projects. This project is a good example of drawing on lessons learned from past projects to increase the effectiveness of project implementation.

One of the bridges inspected using a bridge inspection vehicle

JICA conducts not only individual project evaluations but also thematic evaluations on specific subjects, such as region-, issue-, sector-, and methodology-specific topics. The objectives of thematic evaluations include identifying common trends in specific regions, issues, and sectors, extracting lessons learned, and developing new evaluation methods based on the review of existing methods. Among them, the following five thematic evaluations are featured this time.

Nutrition Improvement through a Multifaceted Approach (Specific issue/sector)

[Purpose of Evaluation]

Almost half of deaths of children under five worldwide are caused by undernutrition, while there is an increasing trend in child overnutrition around the world, including developing countries. This prevalence of undernutrition and overnutrition is the result of complicated combinations of various factors, ranging from immediate factors, such as diseases and inadequate dietary intake, to economic factors, customs, education, and living conditions. This makes it essential to integrate interventions from different sectors into a single multisectoral strategy (See the figure below).

In order to improve nutrition in developing countries, JICA has taken different approaches from different sectors, including health, WASH (water, sanitation, and hygiene), agriculture and food, and education. For example, in Ghana, JICA started to incorporate nutrition interventions into its projects in different sectors, introducing a nutrition counseling service using combined maternal and child health record books through a health sector project and promoting processed foods as value-added, nutritious products through an agricultural sector project.

However, despite all these attempts, JICA had not comprehensively analyzed or evaluated its multisectoral nutrition interventions and therefore conducted a thematic evaluation, consisting of (i) a quantitative analysis of factors that made multisectoral nutrition interventions effective and (ii) a qualitative, transversal analysis of multisectoral nutrition projects implemented by JICA and other development partners, to establish quantitative and qualitative indicators and compile lessons learned for the nutrition sector to facilitate the formulation, implementation, monitoring, and evaluation of future nutrition projects and visualize their results.

[Evaluation Method]

(i) The quantitative analysis was conducted, based on a previous study by the World Bank*1 and data from the Demographic and Health Surveys (DHS) Program,*2 to assess the quantitative impact of multisectoral nutrition interventions (mainly through the three sectors of agriculture, WASH, and health) to reduce child stunting and other forms of malnutrition in 24 African and Asian countries. In addition, a comparison was made between multisectoral interventions and focused interventions in sectors that had caused bottlenecks in nutrition improvement to identify conditions for effective multisectoral interventions. More specifically, in order to validate the hypothesis that interventions focused on bottleneck sectors most in need of support in the region would be more effective than unfocused, multisectoral interventions, the study compared the differences in improvements in nutrition indicators made by sector-focused interventions between countries with good and poor indicators for the focused sectors.

(ii) The qualitative analysis was performed, based on data from literature and field studies, to review multisectoral nutrition interventions made by JICA and other development partners, especially in countries selected for detailed analysis (Ghana, Nigeria, Mozambique, and Bangladesh), to examine successful and unsuccessful cases to identify factors that made multisectoral nutrition interventions effective and extract lessons learned.

[Evaluation Results]

The results of the quantitative analysis (i) showed that stunting prevalence among children under two years of

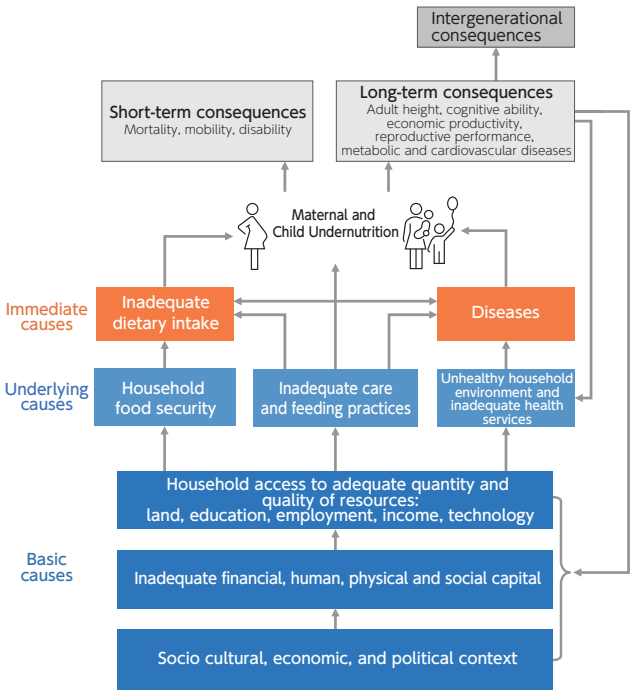


Figure Conceptual Framework of Malnutrition (The nutritional state of individuals is affected by various factors, including food security, care and nutrition practices, sanitary environments, and health services)

age tended to decline as more sectors were involved. The same tendency was found in wasting prevalence. According to the quantitative analysis of combinations of interventions for children with undernutrition through the three sectors of health, WASH, and agriculture, interventions only through the agriculture and WASH sectors did not reduce stunting prevalence but reduced it when combined with interventions through the health sector. It was also found that stunting prevalence tended to decrease as more sectors were involved.

Moreover, the analysis of conditions for effective multisectoral interventions provided the quantitative evidence that interventions focused on sectors most in need of support would be more effective in all the three sectors. For example, interventions from the health sector were found to be more effective in countries with poor health indicators, on average, than in those with good health indicators. Thus, this study quantitatively demonstrated that detailed sectoral analysis would be required to identify bottleneck sectors when considering multisectoral interventions. In addition to these findings, the quantitative analysis established the importance of multisectoral interventions for nutrition improvement and, in particular, the effectiveness of interventions from a wide range of sectors.

Next, the qualitative analysis (ii) reviewed multisectoral nutrition interventions made by JICA and other department partners in countries selected for detailed analysis, finding that these countries had established or planned to establish coordinating bodies for relevant ministries and sectors at the national and local levels, taken part in the Scaling Up Nutrition (SUM) movement,*3 and developed fundamental frameworks and comprehensive nutrition policies or strategies involving all the relevant sectors to promote multisectoral interventions. These frameworks and policies or strategies placed increasing importance on the need to take a collaborative approach combining multisectoral nutrition interventions focused on the health sector and those related to the agriculture and WASH sectors. On the other hand, there were many challenges to overcome to promote multisectoral interventions, including financial challenges (e.g. limited financial resources for nutrition interventions and the lack of financial incentives), practical challenges (e.g. the limited abilities of coordinating bodies and the limited experience of local governments to coordinate cooperation and collaboration among different organizations), and problems with evaluation systems (e.g. inappropriate indicators). The analysis of successful and unsuccessful cases in different countries implied that fundamental frameworks and strategies would be required for multisectoral interventions to succeed. Moreover, the analysis provided the lessons learned that the geographic concentration of interventions is effective in reducing coordinating costs when the capacity and experience of coordinating bodies are limited.

Combined, the above-mentioned quantitative analysis (i) and qualitative analysis (ii) indicated that multisectoral interventions would play an important role in improving nutrition. It was also found that nutrition interventions through the agriculture and WASH sectors would be more effective when combined with those through the health sector. On the other hand, resources are limited in many cases, making it difficult to make interventions from all the relevant sectors. Therefore, guidelines are needed to focus resources in the most effective way. For example, it will be effective to concentrate interventions in a bottleneck sector, as indicated in the quantitative analysis, or in a specific geographic area, as suggested in the qualitative analysis. As there remain challenges to overcome in multisectoral nutrition interventions, JICA is expected to use the results of this study to formulate more effective and efficient nutrition interventions.

[Findings by Evaluation Department Staff]

This study made a comprehensive, cross-sectoral analysis of nutrition interventions with special focus on multisectoral interventions. The quantitative and qualitative analyses based on interviews with various stakeholders and information and data collected from different countries revealed the importance of multisectoral nutrition interventions and offered insights into future challenges and new project formulation. In December 2021, the Tokyo Nutrition for Growth Summit 2021 was held to discuss different fields of nutrition, with special emphasis on the impact of the COVID-19 pandemic, to promote international interventions to solve malfunction problems. This study also provided quantitative and qualitative evidence and support for the multisectoral approach advocated by JICA as discussed at the summit. Going forward, JICA will disseminate relevant information to ensure that the results of this study will be applied to the multisectoral approach promoted by JICA and the international community to improve nutrition.

Training held through the Project for Improving Continuum of Care for Mothers and Children through the Introduction of Combined MCH Record Book in Ghana (2018-2021)*4
Photo by Yusuke Abe

*1 World Bank. All Hands on Deck: Reducing Stunting through Multisectoral Efforts in Sub-Saharan Africa. 2018. https://openknowledge.worldbank.org/handle/10986/30119
*2 The DHS Program collects and disseminates data on birthrates, family planning, maternal and child health, gender, HIV/AIDS, malaria, and nutrition in more than 90 countries around the world.
*3 This refers to a movement/framework to strengthen political commitment and accountability to improve nutrition. It involves the Member States (55 countries as of June 2015), donors, international organizations, civil society organizations, and private companies.

Analysis of Evaluation Methodologies for Scholarship Programs (Development of evaluation methodologies)

[Purpose of Evaluation]

JICA supports human resources development by offering scholarships for young leaders who can promote development and solve problems in their home countries. These scholarship programs have been steadily expanding in recent years. In the meantime, it is pointed out that there are many difficulties in evaluating the effectiveness of scholarship programs. For example, it takes a long time for results to materialize. In addition, it is difficult to measure the contribution made only by the study abroad experience to career development. Moreover, it is essential to provide an appropriate working environment for program participants to apply their knowledge and skills after returning to home countries. These difficulties, specific to the evaluation of scholarship programs, need to be overcome to go beyond the follow-up surveys of ex-participants and the collection of successful cases and assess the effectiveness of scholarship programs from different angles to extract lessons learned and fulfill accountability.

In this context, this study was conducted to make suggestions on the evaluation of JICA scholarship programs by reviewing existing methods used to evaluate and measure the effectiveness of scholarship programs and performing case studies to validate evaluation methods and items for scholarship programs. Considering the characteristics of the programs, such as the large number of countries and fields covered by each program and the lengthy time taken for the impact of human resources development to materialize, this study examined appropriate methods and items to evaluate scholarship programs.

[Evaluation Method]

Despite the different forms and contents of scholarship programs and their evaluations, this study focused on how to analyze the medium- and long-term outcomes of human resources development, which had been overlooked in most previous studies and evaluations of JICA scholarship programs. In this analysis, the following two methods were hypothetically applied for their validation.

(i) Evaluation based on a clear program logic/theory: This study applied the theory of change (ToC)* approach because of its flexibility in describing the parallel and hierarchical relationships of outcomes which characterize JICA scholarship programs.

(ii) Analysis of causal relationships between program inputs and outcomes / contribution of programs: This study used a (so-called impact evaluation) approach by comparing program participants with non-participants (control group) as a counterfactual (to assume what they would have been like without participating in the program) to assess the changes (impacts) made by scholarship programs. In addition, the African Business Education Initiative for Youth (ABE Initiative) was evaluated to determine whether it had achieved outcomes as expected in its draft ToC.

Moreover, case studies were conducted on the following two scholarship programs to tentatively assess the outcomes of the JICA scholarship programs.

●Master's Degree and Internship Program of African Business Education Initiative for Youth (ABE Initiative)

The objectives of the ABE Initiative are (i) to foster human resources for industry and business that would be the key to growth of Africa and (ii) to foster "navigators" for Japanese companies' business activities in Africa and build their network. Since its inception in 2014, this program has so far invited 1,382 participants from 54 African countries to study for a master's degree in Japan (as of December 2020).

In the case study, the expected results of the ABE Initiative were categorized into short-term (completion-time), short- to medium-term, and medium-term outcomes and assessed, using quantitative data collected through an online questionnaire survey and qualitative data gathered through interviews, to determine whether these outcomes had been achieved within their respective timeframes. It was assessed using the ToC approach and comparing program participants with a counterfactual group of people who had been screened out at the final selection stage to analyze the causal relationships between the program's inputs and outcomes.

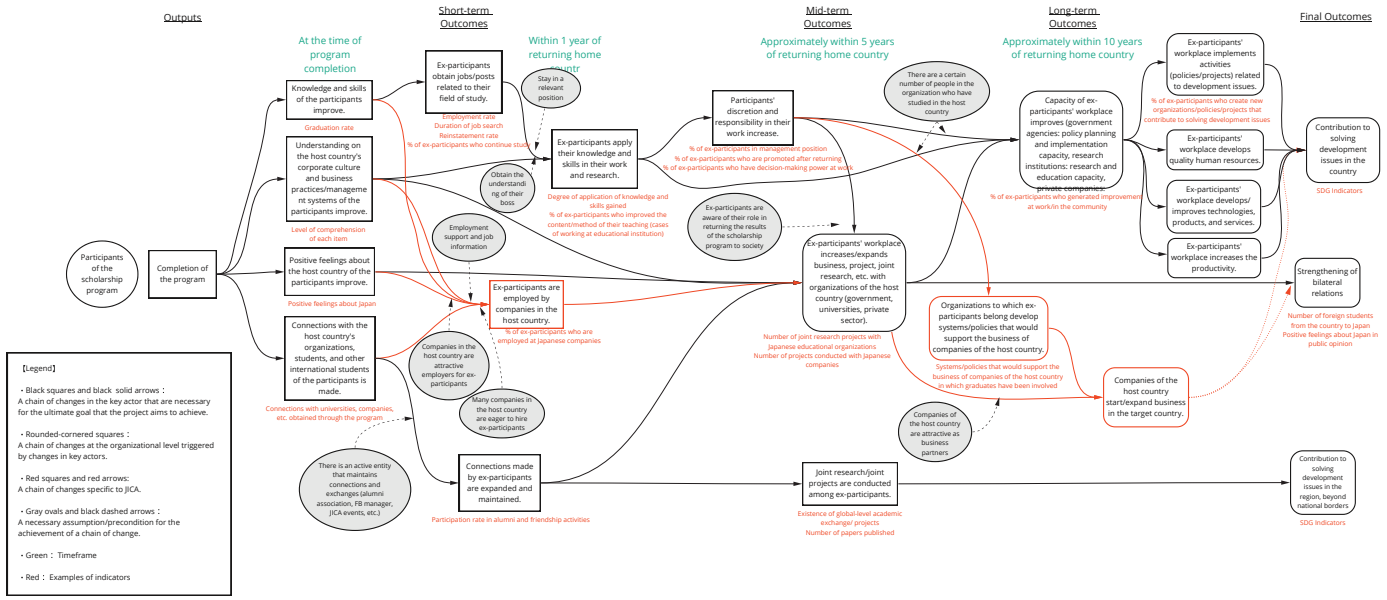


Figure 1 Draft ToC for the ABE Initiative

* Refer to p.48 for details of the ToC.

●Human Resources Development in the Mining Sector (Kizuna Program)

The Kizuna Program is intended to build mutually beneficial relationships between Japan and the partner countries by developing human resources in the mining and geothermal sectors in developing countries with an eye towards assisting developing countries in solving their development issues in the mining and geothermal sectors and securing the stable supply of natural resources to Japan. This program aims to invite more than 200 participants from around the world to study for a master's or PhD degree in Japan between FY2014 and FY2023.

In the case study, the expected results of the Kizuna Program were categorized into short-term (completion-time), short- to medium-term, and medium-term outcomes and assessed based on interviews to stakeholders to determine whether these outcomes had been achieved within their respective timeframes. A key difference from the case study of the ABE Initiative was that the data collection for the Kizuna Program was highly limited due to the design of this study. Therefore, this study was not intended to assess all the outcomes of the Kizuna Program but rather to evaluate some of these outcomes to get insights for the full-scale evaluation of the program in the future.

[Evaluation Results] Analysis based on the ToC

The evaluation of the ABE Initiative found that the completion-time outcomes (the increase in participants' skills, understanding about Japan, and positive feelings towards Japan) were achieved to a high degree, as expected in advance.

As for the short- to medium-term outcomes (ex-participants' assignment to relevant positions, employment by Japanese firms, business start-ups, maintenance of skills and networks established through the ABE Initiative), those who had been assigned to positions related to their field of study were more likely to get involved in tasks related to Japan. This indicated the tendency of ex-participants to use their study-in-Japan experience not only to get positions in their field of study but also to serve as a bridge between Japan and their countries.

As for the medium-term outcomes (the increase in ex-participants' responsibility and the promotion of business operations, transactions, or joint research between ex-participants' organizations and Japanese organizations (government agencies, JICA, universities, and companies)), ex-participants were less likely than non-participants to get appointed to supervisor positions or promoted to higher positions after spending a few years outside their home countries, but a half of ex-participants (twice higher than the ratio of non-participants) were involved in the launch, expansion, and facilitation of business, collaborative, and joint-research projects between Japanese and African organizations. This indicated that the ABE Initiative may have contributed to fostering "navigators." Meanwhile, there seem to be mainly two paths for ex-participants to take after returning to their home countries. One path is to get positions (or return to their previous positions) related to their field of study and eventually contribute to solving development issues in their countries. This path is in line with the objective of the ABE Initiative to foster human resources for industry and business that would be the key to growth of Africa. The other path is to contribute to their countries by promoting collaborative relationships with Japan, which conforms to the other objective of the ABE Initiative to foster "navigators" and establish their network.

Welcome reception for the fifth group of participants in the African Business Education Initiative for Youth (ABE Initiative) for FY2018

In the case study of the Kizuna Program, the increase in participants' knowledge and skills related to the mining and geothermal sectors, the increase in their positive feelings towards Japan, and the expansion in the network of ex-participants were categorized as completion-time outcomes. Ex-participants' application of knowledge and skills learned through the program in their work or research and the expansion and maintenance of connectivity were grouped as short- to medium-term outcomes. The increase in ex-participants' discretion and responsibility in their work and the increase in the volume and efficiency of business operations, transactions, and joint research between ex-participants or their organizations and Japanese organizations were classified as medium-term outcomes. The completion-time and short-term outcomes were found to have been achieved as expected. The medium-term outcomes were also found to have been achieved to some extent, though their achievement levels varied considerably compared to the short-term outcomes.

Based on these findings, this study concluded that in the case of evaluating scholarship programs that take a long time to produce results, it would be effective to use the ToC to clarify the program logic/theory and assess the changes (impacts) made by the program by comparing participants with control subjects. Moreover, this study provided lessons learned, such as the importance of clarifying what to assess (e.g. project effectiveness, efficiency, or country-specific tendencies), the effectiveness of analysis using both quantitative and qualitative data, and the necessity of establishing a mechanism to assess the medium- to long-term outcomes of the program.

[Findings by Evaluation Department Staff]

This study not only offers suggestions about how to evaluate scholarship programs but also provides insights for future project evaluations, such as (i) key considerations in data analysis and (ii) the importance of modifying the ToC based on monitoring results. As for insight (i), the analysis of the effectiveness of the ABE Initiative through a comparison with the control group implies that the analytical results may be biased depending, for example, on the questionnaire response rate. This finding provides useful lessons learned for project evaluations, making us aware of difficulties we may face in the 1) evaluation design, 2) data collection, 3) analysis, and 4) results interpretation phases and, in turn, the necessity of taking measures to prevent and overcome these challenges (including awareness and skill building). As for insight (ii), given the facts that the achievement levels of ex-participants of the ABE Initiative on the short- to medium-term outcomes varied depending on the type of organization they were working for (e.g. private, public, or educational) and that their paths varied depending on their choice (e.g. switching jobs or starting their own businesses), it is considered to be essential to make programs consistent with the expected outcomes and update the path (ToC) for achieving the outcomes based on reality during the program implementation phase. Thus, this study has made us realize the importance of refining the ToC based on monitoring results to make it more realistic and more consistent with objectives and sharing the updates with all the stakeholders during the implementation phase.

Extracting Practical Knowledge Lessons for the Rural Water Supply Sector (Specified Issues/Sectors) (The report is in Japanese.)

[Purpose of Evaluation]

JICA values the PDCA cycle in project management, which includes utilizing lessons extracted from individual ex-post evaluations to formulate similar projects. JICA encourages efforts to further capitalize on lessons accumulated every year and has reviewed past evaluation results cross-sectorally since FY 2014. In concrete detail, JICA has elaborated lessons by analyzing and adopting the more important, applicable and practical elements as "knowledge lessons" and organized them by sector as reference when formulating or implementing similar projects.

The JICA Evaluation Department reviewed the ex-post evaluation of water supply and sewerage projects in 2019 and confirmed that, among the ex-post evaluations of the water supply sector conducted between FY 2010 and 2018, the overall rating was C in 25% and D in 9%, indicating that approximately 30% of the rating were low. Given the wide range of different project contents and issues among all the water supply projects, JICA selected rural water supply projects which were relatively numerous in the water supply sector, and extracted relevant knowledge lessons through conducting their cross-sectoral analyses on ex-post evaluations from 2010.

[Evaluation Method and Results]

In order to extract more practical knowledge lessons, JICA conducted deeper analysis to examine more detail from three perspectives: (1)Analysis on the factors of community organizations' operation that contribute to the sustainability of project effects; (2) classification of issues associated with the procurement of spare parts; and (3) verifying the impact of the project intervention on promoting women's social participation. In addition, taking into account the result of field surveys of the following projects in Cambodia and Tanzania, overall 11 knowledge lessons were extracted.

- Cambodia (Grant Aid) "The Project for Rural Drinking Water Supply in Kampong Cham Province" (ex-post evaluation in FY 2010)
- Tanzania (Grant Aid) "The Project of Rural Water Supply in Tabora Region" (ex-post evaluation in FY 2019)

<Deeper analysis (1): Analysis on the factors of community organizations' operation that contribute to the sustainability of project effects >

When the water facilities are operated and managed by community organizations, it was confirmed that success or failure in the following factors significantly affected the sustainability of project effects: (1) awareness-raising when community organizations were established (importance of community organizations, water and sanitation, rule on self-payment of personal expenses, etc.); (2) capacity development of the community organization to ensure their regular operation and maintenance of water supply systems; (3) setting up methods of fundraising to operate and maintain water supply systems by community organizations; and (4) support and monitoring by implementing agencies for water supply system operation and maintenance by community organizations. In successful cases, soft components and technical cooperation were planned and implemented depending on the capacity of local communities, implementing agencies and other stakeholders based on the cultural and socioeconomic characteristics of the target area. In terms of project period and budget, there is a limit to cover all these elements in a single project. Therefore, many successful cases targeted supplementary and synergetic effects, such as the collaboration between different schemes (e.g. financial and technical cooperation) and with a project implemented by the recipient government. JICA also prepared a logic model using project intervention (soft components) as input and the sustainability of project effects as outcome, which was then verified via a questionnaire survey to the local community association. The finding was that a logic model like this more or less corresponded to the actual status. Moreover, it was confirmed that the quality and quantity of water supplied, location and design of water supply systems were key

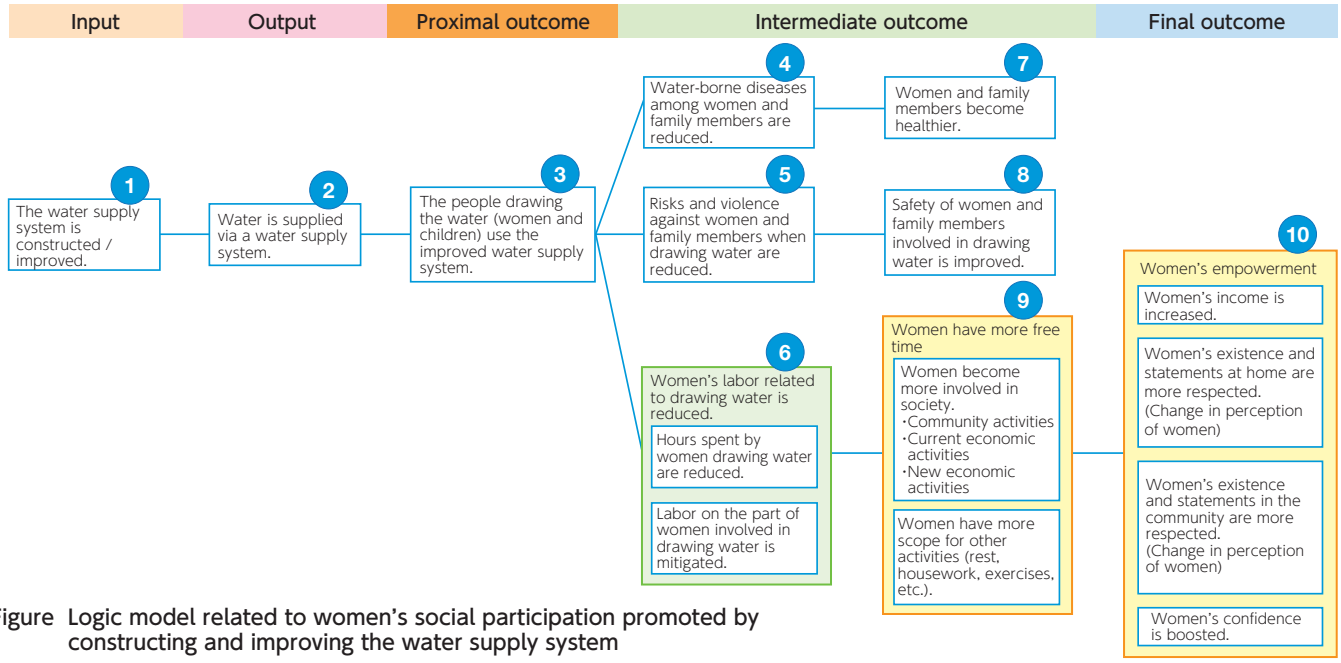


Figure Logic model related to women's social participation promoted by constructing and improving the water supply system

elements for the success or failure of water supply system operation and maintenance by community organizations.

<Deeper analysis (2): Classification of issues related with the spare parts procurements>

JICA extracted the following knowledge lessons, which could contribute to sustainability, in order to ensure continuous procurement of spare parts after completing the project: (1) When designing or planning water supply systems, the most popular specifications should be adopted by determining the popular type of hand pump and the handling status at spare parts distributors in the target country/region; (2) While implementing the project, information on the location of spare parts distributors and pricing should be collected and disseminated to implementing agencies and community organizations.

<Deeper analysis (3): Verifying the impact of the project intervention for promoting women's social participation >

JICA analyzed cases in which the positive effects from the gender perspective were confirmed. The cases included those helped boost the livelihood of beneficiaries (women) by constructing water supply systems and empower women through community organization activities. Knowledge lessons were also extracted regarding how gender perspectives could be strategically incorporated into the project plan. Meanwhile, "boosting the water supply rate" and "ensuring a safe water supply" were cited as project goals for many rural water supply projects, and in many cases, reduction of the women's labor for drawing water, promotion of women's social and economic activities, and empowerment of women were identified as either qualitative effect of "effectiveness" or "impact" which no indicators were set for. Many projects subject to the review did not have information by gender in the description of the activities and project effects of the community organizations. Accordingly, lessons learned included the necessity of setting out relevant qualitative and quantitative indicators and fully incorporate gender perspectives into soft components and other activities during the project planning process when the promotion of women's social participation through JICA project interventions is expected to be an effect of the project.

The study team prepared a logic model which uses the project intervention (the construction of water supply systems) as input and women's social participation as outcome considered as the basis in many projects. After verifying the model by conducting a questionnaire survey of local beneficiaries (women), result difference between the Cambodia and Tanzania was confirmed. This may be attributable to cultural factors, including the background of "fewer risks and violence associated with water drawn by women and family members" in Cambodia. Although generalizing the logic model is difficult, it is expected that there is a certain degree of potential for utilization of logic model depending on the gender situation in regions and countries, since a certain level of causality of effect was confirmed in the case of Tanzania.

[Findings by Evaluation Department Staff]

As well as the issues of extracting knowledge lessons, this study also found ex-post evaluation issues in the rural water supply sector when analyzing the evaluation results cross-sectorally. Although the procurement of spare parts is recognized as a key factor behind the sustainability of project effects, many ex-post evaluation reports lack details of specific efforts on spare parts issues, which hinders the comprehensive classification of issues. Moreover, many cases also lack the quantitative evidence that would explain the causal relationship between water supply projects and mitigation of female labor in drawing water, promotion of women's socioeconomic activities, women's empowerment, etc. In addition to utilizing knowledge lessons to project formulation, JICA will also utilize issues related to ex-post evaluations, which confirmed via cross-sectoral analysis, for future ex-post evaluations.

JICA will keep striving to extract knowledge lessons from various sectors as well as conducting field surveys, aligning with the latest donor trends and considering other arrangements, so that lessons can be extracted with greater practicality.

Table 1 List of knowledge lessons

Lesson No.	Area	Title of knowledge lesson
1	Operation by community organization	Points to note when supporting the establishment of a community organization
2		Capacity development of the community organization (project activity)
3		Capacity development of the community organization (collaboration with other schemes)
4		Determining a proper water rate and payment method
5		Efforts of the implementing agency, etc. to support and monitor community organization after the project completion
6	Consignment to the private sector	Points to note concerning how a water supply system is operated and maintained by an entity other than a community organization
7	Spare parts	Efforts to ensure sustainable spare part procurement
8		Efforts to establish/improve spare part supply network
9	Gender	Planning and designing the system from gender perspectives
10		Maintenance and management from gender perspectives
11		Gender mainstreaming in the project management cycle

Table 2 Examples of knowledge lessons

Lesson 6	Points to note concerning the operation and maintenance of the water supply system by an entity other than community organizations
Applicable conditions	When considering whether to consign the operation and maintenance of a water supply system to the private sector in a rural water supply project.
Risks	When proceeding with private consignment under the policy of the target country but a private organization lacks capacity to handle the consignment sufficiently, there is a risk of inability to implement sustainable operation and maintenance. This could also be the case when the division of roles among community organizations, contracted private organizations and supervising administrative agencies is unclear.
Expected measures	(1) During the project planning, collect sufficient information on private organizations and their capacity to determine the organizations for operation and maintenance. (2) From the project planning stage, activities to develop the capacity of stakeholders includes private organization and activities to consolidate collaboration among stakeholders should be incorporated into the plan. (3) As well as community organizations and private organizations, the division of roles among major actors, including responsible administrative agencies, should be clarified and documented to establish a monitoring system with a liaison function among them.

Lesson 9	Planning and designing the system from gender perspectives
Applicable conditions	When designing and planning the water supply system in a project involving its construction.
Risks	There is a risk of the water supply system being unused, or not properly maintained, unless the needs, usability and cultural customs of the domestic users and local residents drawing the water are fully reflected in the technology to be introduced and the system design when designing and planning the system.
Expected measures	(1) After surveying details of people's lifestyles and water-related activity and determining the needs and cultural customs of men and women respectively, they should be reflected in the location and type of the system (e.g. foot pump or hand pump). (2) As well as geographical conditions and the technical perspective, determine the needs and cultural customs of both men and women and obtain consent from residents while selecting the lifting pump and designing superstructures.

Examination of Evaluation Methods for Mobilization of Private Financing (Development of evaluation methodologies)

[Purpose of Evaluation]

It is becoming more and more important to mobilize private financing as ODA alone can no longer meet the increasing demand for development financing which addresses diverse development issues. To achieve the SDGs by 2030, adopted at the United Nations Summit in September 2015, there are a huge demand for development financing to be met. According to the estimates by the United Nations Conference on Trade and Development in 2014, the development financing demand would increase by 2.5 billion USD per year. Under these circumstances, donors are expected to play a catalytic role in mobilizing additional financing from private sources for development.

Besides the proactive examination and utilization of ODA to maximize its catalytic effects for mobilization of private and commercial finance (reducing business risks), such as improving relevant policies and systems to support business operations, developing the institutional and human capacity of relevant organizations, and upgrading basic infrastructure such as transport and electricity, the importance of blended finance (BF), combining public development finance and commercial finance to promote private investment, will continue to increase in years to come. However, universal methodologies for evaluating BF projects have not established yet. This is because, unlike conventional ODA projects, BF projects involve multiple organizations of different legal forms with different objectives, which brought more difficulty in project evaluation. It is particularly pointed out that major challenges lie in identifying causal relationships between donor interventions and mobilized funds, measuring the effectiveness of development outcomes brought by mobilized funds, and assessing the relevance and efficiency of donor interventions in mobilizing funds. Meanwhile, major donor agencies started to formulate projects using BF and explore approaches for evaluation of these projects. Therefore, JICA conducted this thematic evaluation study to compare and examine their assessment approaches, items, perspectives and rating methods in order to develop JICA's BF evaluation approaches.

[Evaluation Method]

(1)Investigating the BF evaluation approaches of other donor agencies

This study started with Investigation Item (i), understanding discussions and trends on BF in the international community, to identify trends and topics discussed in relation to BF and examine the approaches of major donor agencies to BF projects. This was followed by Investigation Item (ii), reviewing the approaches of major donor agencies to BF project evaluations (gathering case studies), to collect examples of BF project evaluations and examine how donor agencies had applied and related their evaluation guidelines to BF project evaluations. Then, in Investigation Item (iii), analyzing BF project evaluation approaches, the collected examples were classified to examine and analyze key evaluation points. In this process, the approaches of major donor agencies to BF project evaluations were compared and analyzed, especially in terms of evaluation approaches, criteria, and perspectives of evaluation.

(2)Developing draft BF evaluation approaches for JICA

In Investigation Item (iv), developing draft BF project evaluation approaches for JICA, the BF evaluation approaches of other donor agencies and the existing project evaluation method of JICA were examined to develop BF project evaluation approaches suitable for JICA.

In Investigation Item (v), performing trial evaluations in pilot countries, the developed BF evaluation approaches were applied in pilot countries. The following five projects were evaluated in this process. Through reflecting results of the trial, the BF evaluation approaches were reviewed and revised into its final recommendation.

[Evaluation Results]

This study provided four perspectives to evaluate effectiveness of BF and mobilization of private finance, and suggested how to relate them to the current DAC evaluation criteria, as shown in the table below (see Table 1).

In order to effectively assess the mobilization effect, the study also found that different evaluation approaches need to be applied to different forms of BF. In the case of financing or investing in a private project or fund, it would be relatively easy to evaluate the mobilization effect because the scope of the specific project would be obvious enough to distinguish additional mobilized funds from finance provided by donor agencies. In contrast, it was found difficult to measure the mobilization effect of another form of BF: providing finance and/or technical assistance for F/S in a private project. Based on the results of pilot evaluations (see Table 2), the study was concluded as follows.

◆Evaluation of Finance and Investment Cooperation Projects

In the case of providing finance to funds or offering two-step loans to support the sub-projects of end-beneficiaries in cooperation with local financial institutions, as exemplified by the Environmental Development Project in the Philippines (ODA Loan), which was evaluated on a pilot basis in this study, additional finance can be distinguished from finance provided by JICA by checking the portfolio composition of the target project or fund of the partner

Table 1 Correspondence Table of BF and private finance mobilization viewpoints and DAC evaluation criteria

Viewpoints of BF and mobilization	DAC evaluation criteria	Reasons
Measurement of private finance mobilized	Effectiveness/ Impact	These perspectives can be regarded as one of the project effects/impacts.
Catalyzation effect		
Concessionality of BF	Efficiency	Concessionality is a viewpoint of whether inputs are appropriate.
Additionality of BF	Independent perspective or Relevance	This will be an independent perspective, or otherwise assessed at "Relevance" since having additionality is a precondition for project implementation.

financial institution. In the case of providing direct finance to individual projects, as exemplified by project finance for private-sector projects through Private Sector Investment Finance (PSIF), additional mobilized finance are expected to be able to confirm relatively easily by identifying the scope of the project and checking its capital structure.

With the growing awareness of the importance of the leverage effect of development finances, it is considered meaningful to measure additional finances mobilized by JICA to explain its contribution. However, it is noted that this calculation cannot clarify how much JICA contributed to mobilizing additional funds because it does not mean to distinguish the difference between factual and counterfactual scenarios; with and without additional finance such as multilateral development banks (MDBs) or donor agencies.

◆Evaluation of Technical Cooperation Projects

Regarding evaluation of effectiveness of technical cooperation projects whose mobilized finance is difficult to distinguish, it was suggested to include their catalytic effects in a broader sense, given the wide-ranging effect of technical cooperation projects aiming to assist the governments of partner countries in capacity building and/or policy and institutional system improvements. In order to quantitatively estimate the amount of mobilized funds to evaluate the catalytic effect of technical cooperation, the logic model should be verified to map out the process from the input of technical assistance to the realization of its catalytic effects on promoting private investment and identify the scope of the funds mobilized by the catalytic intervention in a convincing manner. The challenges are that the scope of catalytic effects is wide-ranging and that the influence of external factors cannot be easily eliminated. The results of pilot evaluations suggested that qualitative perspectives should be added in project evaluations because the quantitative calculation and analysis of the catalytic effect can be overestimated or underestimated, depending on the influence of external factors and the timing of evaluation. Evaluation of BF and mobilization of private funds is still under research and development, with only a few case studies reported by MDBs and other donor agencies, especially in terms of the catalytic effects. Therefore, recommendations on the evaluation of the mobilization and catalytic effects of JICA projects on private investment also included that JICA should continue to evaluate its catalytic effects on a pilot basis to accumulate experiences in the field.

Table 2 Projects evaluated on a pilot basis

Scheme	Project title	Project outline
(i) Indonesia: Promotion of Geothermal Development		
Technical Cooperation	The Project for Capacity Building for Enhancement of the Geothermal Exploration Technologies	Assisting Geological Agency in providing geothermal resource information to government agencies and geothermal power development companies.
Technical Cooperation	The Project to Develop Medium and Long Term Geothermal Development Policy in Indonesia	Assisting in review of geothermal policies, sustaining operation of the Test Drilling funds, and improving geothermal resource exploration capabilities to increase the feasibility of private sector geothermal development schemes.
(ii) Indonesia: PPP Promotion		
Technical Cooperation	The Project for Public Private Partnership Network Enhancement	Assistance for the establishment and operation of a government financial support mechanism for PPP / PFI projects, capacity building of related organizations, improvement of PPP / PFI business formation process, and consensus building on master plan and roadmap for PPP / PFI promotion.
Technical Cooperation	KPPIP Support Facility Project	Support for the implementation of priority infrastructure projects and the introduction and operation of the PPP / PFI system through the operational support of the Priority Infrastructure Project Acceleration Committee (KPPIP).
(iii) Philippines: Environmental Development		
ODA Loan	Environmental Development Project	Through the Development Bank of the Philippines, provide financing for private companies, municipalities, and government-owned companies throughout the Philippines with medium- and long-term funds necessary for capital investment for environmental improvement.

[Findings by Evaluation Department Staff]

Focused on the promotion of private investment whose importance was growing year by year, this study was remarkable as it not only provided evaluation perspectives to assess the effectiveness of JICA's approaches based on recent discussions among international development actors and their definitions of and approaches for promotion of private investment, but also validated the proposed evaluation approaches through pilot evaluations on actual JICA projects. In particular, this study was interesting in that it explored quantitatively estimation on the "catalysitic" effects of technical cooperation projects based on the assumption that activities aimed to improve the policies and institutional systems of partner countries could promote private investment in the long term. In contrast to the definition of "mobilization", the concept of "catalytic" activity has a broader meaning, which includes inducing additional private investment after or outside the financed project. This perspective is considered important in evaluating the effectiveness of assistance in promoting private investment in partner countries, because many of the technical cooperation projects aim to assist the governments of partner countries in capacity building and/or policy and institutional system improvements.

Through the pilot evaluations, we realized how difficult it would be to determine when to evaluate the catalytic effects of projects which appear after capacity building or policy and system improvements are accomplished. Although it is desirable to evaluate projects after their catalytic effect appears, it is difficult to standardize the timing of evaluating projects in a uniform way. Therefore, it was also recommended to evaluate both the achievement level of catalytic effect at the time of evaluation together with its potential level in future, if project evaluations performed before realization of catalytic effect.

Following this study, we will continue our efforts to analyze and evaluate the effectiveness of our projects in promoting private investment.

Lahendong Geothermal Power Plant in Indonesia (external appearance)

Impact from JICA's Cooperation in Health Sector (Infectious Diseases Control) and Socio-Economic Development in Developing Countries (Specific Issue/Sector)

[Purpose of Evaluation]

In the face of the global COVID-19 pandemic, JICA launched JICA's Initiative for Global Health and Medicine*1 to strengthen treatment system, research/early warning system, and prevention in order to achieve human security and universal health coverage (UHC). This has made it increasingly important to fully use the outputs of past cooperation projects as assets to promote future cooperation. In the health sector, JICA had been involved in many cooperation projects, including infectious disease control and health system development, but the impact and effectiveness of such cooperation on the development of developing countries at the medium to long-term and macro level have not yet been fully verified. Therefore, in order to identify noteworthy outputs,*2 whether tangible or intangible, which JICA's cooperation projects for infectious disease control had delivered to developing countries, and make a catalogue of noteworthy outputs to visualize and convey their effects to external audiences, this evaluation study reviewed ex-post evaluation reports and other reports, and interviewed stakeholders. In addition, the organization-wide mechanism established by the Evaluation Department of JICA to reshape important lessons learned from project implementation into knowledge lessons*3 and archive them in order to promote the use of lessons identified in project evaluations was used to compile important knowledge lessons in the health sector based on the effects and cooperation processes reviewed in this study so that JICA can fully use past outputs as assets to increase the efficiency and effectiveness of project formulation and implementation.

[Evaluation Method]

This study identified noteworthy outputs by analyzing in detail the projects JICA had implemented in the health sector (especially, in the area of infectious disease control). Because the analysis covered more than 400 projects stored in JICA databases,*4 including three schemes of assistance (ODA Loans, Grant Aid, and Technical Cooperation, including the Science and Technology Research Partnership for Sustainable Development (SATREPS)) and other complementary projects, such as volunteers, the JICA Private Sector Partnership Program, and thematic training courses, at first screening criteria*5 were set based on different points of view, including perspectives particularly important to this study, to select projects to be analyzed in detail. Then, a total of 31 projects were selected and analyzed in detail. In the detailed analysis, existing materials were reviewed to understand the logic model of each project and identify candidate noteworthy outputs produced in the process of implementing activities to achieve the project purpose (outcome), and questionnaire and interview surveys were carried out with project stakeholders to make a final shortlist of candidates based on how effective and universal these project effects would be. Their effectiveness was assessed on how they had contributed to achieving relevant project purposes and how they had been used after project completion, while their universality was assessed on how applicable (reproducible) they would be to other projects. Project stakeholders were also asked how they regarded these outputs. Then, knowledge lessons were drawn by examining internal and external environmental factors that had affected the effectiveness and universality of achievements and identifying reproducible, non-personal factors that had significantly affected the achievement of project purposes.

[Evaluation Results]

<Noteworthy Outputs>

Eventually, this study identified 19 noteworthy outputs (see Table 1 for the list of noteworthy outputs). For example, in the case of the Noguchi Memorial Institute for Medical Research (NMIMR) established in Ghana in 1979, the Infectious Diseases Project at the Noguchi Memorial Institute for Medical Research, launched in 1999, was found to have produced a noteworthy output in the form of comprehensive research and training capacity for infectious disease control. This capacity was further increased through following projects, ranging from grant aid and technical cooperation to training programs. In fact, the Institute was found to have contributed to the capacity development of laboratory technicians in neighboring countries and the implementation of COVID-19 control measures by organizing virological, bacteriological, and parasitological training courses under JICA's Third Country Training Program, which had been attended by 42 laboratory technicians from nine neighboring countries by FY2020, and delivering training on COVID-19 testing methods.

<Knowledge lessons>

The factors that had affected the achievements of the 31 projects analyzed in detail were examined and compiled into seven Knowledge Lesson Sheets on Implementation Structures, Project Management, Training, Capacity Development, and Others (see Table 2 for the list of knowledge lessons). Knowledge lessons are used to facilitate project implementation and contribute to project

*1 For details, visit https://www.jica.go.jp/activities/issues/special_edition/health/index.html
*2 A noteworthy output is defined as an output which directly contributed to the achievement of the project purpose (outcome) and which can be used for future improvements.
*3 For details on knowledge lessons, visit https://www.jica.go.jp/activities/evaluation/lesson/index.html (The QR code is available on P.58).
*4 The databases used in this study were accessed through the Search Page for Evaluation Reports developed by the Evaluation Department of JICA and the ODA Visualization Site at the following links (The QR codes are available on P.58).
Search Page for Evaluation Reports: https://www2.jica.go.jp/ja/evaluation/index.php
ODA Visualization Site: https://www.jica.go.jp/oda/index.html
*5 For example, the criteria for JICA's Initiative for Global Health and Medicine include the prioritization of work on testing, research, and early warning systems, the availability of minimal information required to mobilize public goods, and the preparation of a biosafety checklist to prevent the leakage of major infectious pathogens.
*6 Use the QR code next to the title to see the original report for detailed results of this study, including individual projects that delivered noteworthy outputs (Table 1) and specific lessons learned from project implementation (Table 2).

Table 1 List of noteworthy outputs identified through this study*6
* As of January 21, 2022

No.	Noteworthy output name
1	National guidelines for tuberculosis management including standard operating procedures (SOPs) for external quality assurance (EQA)
2	Standard operating procedure (SOP) for external quality assurance (EQA) using the lot quality assurance system (LQAS), including monitoring/supervision
3	Chagas disease control (preparation, attack, and surveillance phases) implementation model applicable across Central America
4	Biosafety Level 3 laboratory and its maintenance system established at the University Teaching Hospital, the Ministry of Health, Zambia
5	Production and distribution systems for locally produced quality, affordable alcohol hand sanitizers
6	Comprehensive research and training capacity for infectious disease control at the Noguchi Memorial Institute for Medical Research
7	Hospitals, Centers for Disease Control and Prevention (CDCs) and emergency care centers with improved functions
8	277 trained laboratory technicians from 64 countries
9	National laboratory network built around the National Institute of Hygiene and Epidemiology (NIHE) in Hanoi
10	More than 1700 human resources developed by participants (from 92 countries) in tuberculosis training organized in Japan for nearly 60 years
11	Human resources for effective antimicrobial resistance (AMR) and medical infectious disease control including COVID-19
12	Biosafety Level 3 laboratories
13	Health workers trained for surveys specified by the Pacific Programme to Eliminate Lymphatic Filariasis (PacELF)
14	Rapid diagnostic kits for the detection of Ebola virus disease
15	Diagnosis and treatment manuals of the Clinic Hospital of the university of Campinas, including knowledge and experience in fungal diseases and rapid testing methods for fungal detection
16	Portuguese manuals for DNA microarray, loop-mediated isothermal amplification (LAMP), β-glucan determination, antifungal susceptibility testing, and real-time polymerase chain reaction (RT-PCR) methods
17	Diagnostic techniques for infectious diseases (including COVID-19)
18	Lead compounds developed through joint research between Japan and Indonesia
19	Measles-rubella combined vaccines domestically produced in Vietnam

Table 2 Summary of Knowledge Lesson Sheets*6
* As of January 21, 2022. See [⇒the report] for detailed lessons learned.

Sub-theme	Sheet Title	Lessons learned (possible countermeasures)
Project implementation structure	Effective project implementation structure	Collaboration and cooperation with other donors
		Cooperation with external organizations (other than donors)
		Cooperation with other JICA schemes
		Elaborate organizational structure inside the project
Project management	Project progress management	Effective schedule management to increase collaborative work time
		Testing system improvements and motivation enhancement in the recipient country by adding epidemic diseases and diseases requiring an international emergency response to training during the project period
Project management	Communication between stakeholders	Efforts to enhance communication
		Implementation of collaborative activities to share understanding with counterpart personnel
		Regular sharing of research results
Project management	Expansion of outputs (e.g. nationwide rollout)	Development of national guidelines for nationwide rollout
		Successful nationwide rollout of the external quality assurance (EQA) system for tuberculosis testing
Training	Quality training	Appropriate training duration, equipment, number of lecturers, and language
		Training by local instructors and former training participants
		Enrichment of training content
		Flexible plan changes (e.g. diseases covered in training, target countries, and training content)
		Review of training
Capacity development	Capacity development of project counterpart personnel	Arrangements to facilitate technical transfer
		Involvement of Japanese experts to facilitate skill development
		Importance of assisting those seeking academic degrees
		Thorough capacity development activities
		Organization of international symposiums to maintain and increase the motivation of stakeholders
Others	Others	Securing of financial resources to continue activities
		Selection of equipment specifications suited to the needs of users

achievements at different performance levels. The figure on the right shows at which level in the logic model the knowledge lessons identified through this study could contribute to project achievements. This illustrates that six of the seven knowledge lessons drawn in this study are related to activities and able to increase the attainment levels of outputs (in both quality and quantity). In other words, knowledge lessons at this level can contribute to the production of noteworthy high-quality outputs. The illustration also indicates that these noteworthy outputs eventually make it possible to achieve the project purpose and overall goal.

[Findings by Evaluation Department staff]

This study was intended to visualize how JICA's cooperation had contributed to infectious disease control when it was brought into the spotlight by the global COVID-19 pandemic. It was particularly challenging to maintain the transversality and objectivity of the secondary evaluation of such a huge number of infectious disease control projects implemented in different schemes. In this study, it was decided at the beginning to use objective screening criteria developed based on the objectives of the study to maintain consistency in the analysis of different types of cooperation projects, which enabled to visualize the contribution of JICA's cooperation in a reproducible way. This also strengthened our accountability by allowing us to objectively assess various outputs produced in developing countries through JICA's continuous interventions that had not been fully revealed in individual project evaluations. Meanwhile, various relevant departments point out that many successful projects were screened out by the screening criteria for this study. As evaluation results may vary depending on the perspective of analysis, we are planning to continue evaluations and discussions with relevant departments to increase the efficiency and effectiveness of JICA's Initiative for Global Health and Medicine.

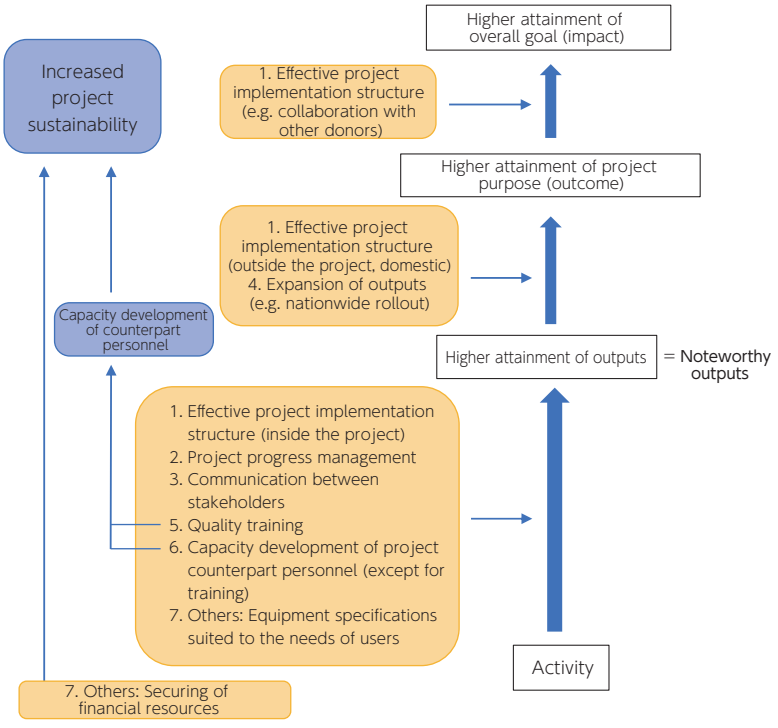


Figure Illustration on how knowledge lessons contribute to project achievements in the logic model

JICA works on improving and diversifying its evaluation methods, in addition to the regular ex-post evaluations based on before and after the project comparisons.

Development Impact Survey Using Theories of Change (The report is in Japanese.)

While JICA has used the Project Design Matrix (PDM) for project management for years, we conducted a study on the Theory of Change (ToC) approach, in order to explore an alternative method to articulate in greater detail the process of producing project outcomes, identify potential obstacles in the process, and make necessary adjustments to the project to achieve the overall objective on a timely basis. The ToC is generally considered as a means to express the pathways of activities leading up to expected outcomes and clarify the assumptions and preconditions for these outcomes to emerge, but it is defined and developed in different ways from organization to organization. Therefore, in this study, we reviewed the approaches of major international organizations to ToCs through interviews and used the result to explore the most appropriate way to introduce the ToCs into JICA's project management.

In developing countries faced with various development challenges, when administrative agencies provide social capital or services, people using or affected by them are likely to go through some changes, which will eventually increase their welfare standards. Development cooperation projects are the efforts to identify what kind of changes are needed in society to raise welfare standards and to actually bring about those changes. In this study, we consider the ToC as a diagram visualizing the pathways of beneficiaries' behavioral changes necessary to achieve the final objectives as well as the assumptions and preconditions for these behavioral changes to occur. More specifically, it can be illustrated with multi-layered components below.

This study not only examined the concept of ToC but also reviewed five projects in the maternal health and water supply sectors in an attempt to retrospectively draw up ToCs. At first, systematic reviews were conducted in order to extract evidence in relevant fields and the results were compared with the drawn-up ToCs to assess the relevance of the logics developed in the planning phase (theory evaluation). Then, project stakeholders were interviewed to carefully confirm whether the expected outcomes had actually been achieved (whether the domino effect had taken place) in each project, as illustrated in the ToCs (theory-based evaluation). Although the field surveys were significantly constrained due to the COVID-19 pandemic, all the five projects were assessed in terms of their logical relevance, achievement of overall objectives, and contribution to SDGs, and insights were gained about how to improve project management as a whole.

There are discussions about revising JICA's project management method to group projects into clusters and integrate the organization's efforts, based on the Global Agenda, JICA's cooperation strategies for global issues. These discussions also include developing cluster scenarios to articulate the process of project implementation based on common theories. The concept of ToC based on the results of this study will be useful when developing these scenarios in the future.

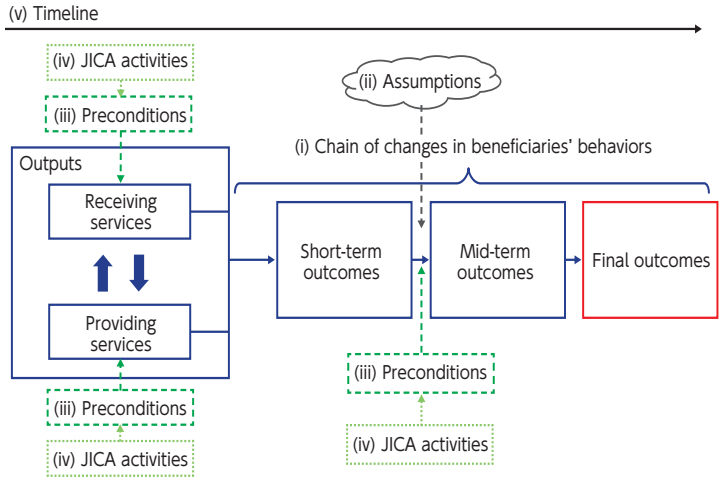


Figure Components of Theory of Change

<Components>

- **1st Layer** Chain of changes in beneficiaries' behaviors
- **2nd Layer** (Assumptions) Conditions that can be met / Phenomena that can occur by themselves or with support from others: There must be certain administrative services, available resources or enabling environments such as support from others for the beneficiaries' behavioral changes to occur. Of those, this layer refers to the conditions/phenomena that are likely to be fulfilled without particular support from JICA. These assumptions also include support from other development partners.
- **3rd Layer** (Preconditions) Conditions that will not be met / Phenomena that will not occur without support from JICA: In particular, certain administrative services need to be provided to and received by beneficiaries to trigger the chain of changes in their behaviors, but if those services are not there, an environment has to be created to enable the provision and receipt of such services through support from JICA.
- **4th Layer** (JICA activities) JICA's cooperation activities required to meet the preconditions.
- **5th Layer** (Timeline) A timeframe to produce expected outputs: Setting the timeline enables the project managers to have a better understanding on exactly which outcomes to monitor and assess at which timing.

Process Analysis

JICA has tried to find ways to integrate findings from project evaluations to improve project management. In these attempts, we have not only assessed project results (outcomes) but also actively analyzed project processes (how the project process affected the delivery of the outcomes) to enhance learning.

This report introduces the result of a survey on an education-sector reform project in Rwanda.

Rwanda Process Analysis on "Project of School-based Collaborative Teacher Training (SBCT)"

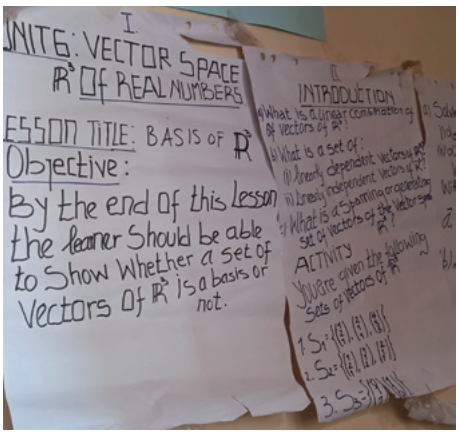
The Project of School-based Collaborative Teacher Training (SBCT) aims to improve education in Rwanda by disseminating the "School-Based In-service Training (SBI)", which is a system of spontaneous and voluntary activity among teachers. With SBI disseminated nationwide through the project, teachers participating in SBI recognized improvements to their lessons, and provided learner-centered lessons with which students were satisfied, resulting in capacity development of teachers. In addition, the impact was also confirmed by improved student performance on subjects in schools where the SBI was implemented. Although it is not a training program to implement specific teaching methods, it was suggested that the SBI would contribute to the improvement of teachers' lessons and, moreover, to the improvement of students' performance on subjects. Accordingly, JICA surveyed the project implementation processes, focusing on what changes occurred among teachers and other project stakeholders, and what elements and approaches played a role in realizing the project effectiveness.

According to the results of this survey, the short-term effect of the SBI was the establishment of a cooperative relationship through a change in teachers' awareness and behavior, such that teachers who had previously been hesitant to discuss their own weakness and problems in lessons with other teachers became more conscious of exchanging information and opinions. Consequently, the results revealed that they have come to be more open to students and to provide lessons that make students think.

As well as teachers' awareness and behavioral change, it is also necessary to acquire skills and knowledge such as better teaching methods. The survey confirmed SBI participants' improvement of skills such as teaching material development and facilitation for learner-centered lessons. These technical inputs derive from the fact that the SBI was developed by focusing on usability for teachers who are users of SBI. In other words, the SBI has become more versatile and can be incorporated as an independent learning and self-improvement of teacher training by other development partners, avoided using teaching/learning theories. This allows teachers to discuss how to practice in lessons using knowledge and skills introduced by "hosted training"*2. So that, In other words, each teacher can learn specific practical methods and even teachers who do not participate in hosted training can also share the content. The survey also confirmed that the SBI and "hosted training" complement each other, and that this relationship is one of the elements supporting efforts to achieve the project effectiveness. This has led to the useful lesson learned that countries which have had problems such as improvements only for teachers who have participated in training, difficulty in continuing the training due to costs, and insufficient utilization of training content in lessons are expected to be able to overcome their problems and increase the effectiveness of training by adopting "hosted training" and the SBI approach.

JICA strives to utilize and promote these lessons in similar projects in the future not only by sharing the survey result within JICA but also by presenting them at the 32nd Annual Conference of the Japan Society for International Development.

A school implementing SBI



Teaching materials made in SBI

*1 The School-based In-Service Teacher Training (SBI) is a method for mutual learning activities among teachers. Different from the form of "hosted training" in which training organizers prepare specific training contents for training participants, this is a new form of approach of in-school training which enables teachers to set training problems, to think of measures for solving problems, to implement them, to evaluate and to provide feedback for further improvement.

*2 Hosted training is a form in which training organizers prepare specific training contents for training participants. Although this training has the advantage that participants can learn new knowledge and skills, it is confirmed to have the problems such as the limitation of the number of participants, of training days and of durations, which make it difficult to conduct continuous training and to share the contents of the training with people who have not participated in the training.

Use of Satellite Data

JICA promotes the use of space and geospatial information such as satellite data and map information (hereinafter collectively referred to as "satellite data") for international cooperation projects. Recognizing the importance of satellite data as an objective information source, JICA has used these data for ex-post evaluations on a trial basis.*1 In FY2021, available satellite data were used and analyzed for ex-post evaluations in the bridge, irrigation, rural water supply, and power sectors.*2

Among them, the ex-post evaluation of the project for reinforcing power transmission and distribution lines in Tanzania is featured below.

Tanzania Project for Reinforcement of Power Distribution in Dar es Salaam (Grant Aid)

This project was implemented to reinforce existing substations, build new substations, and construct transmission and distribution lines in Dar es Salaam. By developing substations and transmission and distribution lines, this project aimed to increase the power transfer capacity of transmission and distribution lines and ensure stable power supply in Dar es Salaam, thereby promoting electricity-intensive businesses and public services and stimulating economic and social activities in the city.

The results of the ex-post evaluation showed that the project had increased the power transfer capacity of transmission and distribution lines and stabilized power supply, reducing blackout time, stabilizing voltage, and improving power losses. In addition, according to local interviewees, health and public facilities and hotels saw their in-house power generation costs decline, became able to use necessary electrical equipment to provide services, and improved profitability. Small-scale retailers also said that they became able to use electrical appliances without interruptions, which allowed them to increase their customer base and income.

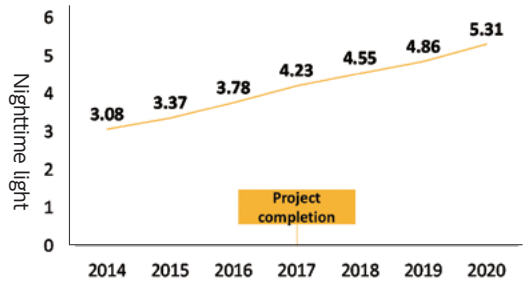
Moreover, in order to quantitatively measure the performance of economic and social activities, this ex-post evaluation used satellite data to analyze changes in nighttime lights, which had been confirmed to reflect the level of electrification and gross economic product. The results showed an increasing trend in nighttime lights in Dar es Salaam from 2014 to 2020 (see Figure 1).

Moreover, a comparison of satellite images of nighttime lights in the city before the project implementation and at the time of the ex-post evaluation indicated an increase in the geographical area glowing at night (see Figure 2). The use of satellite images, where the glow becomes brighter with an increase in nighttime lights, visualized the increase of nighttime lights and the activation of economic activities.

The ex-post evaluation also included a district-by-district comparison of nighttime lights between before and after the project, which showed that nighttime lights had increased on average in the target areas surrounding the substations developed through this project (see Figure 3).

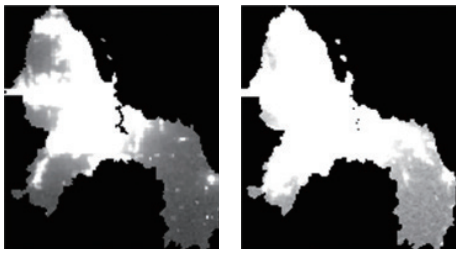
Thus, quantitative, objective assessments using satellite data in addition to qualitative information on the effectiveness of the project collected through field work seemingly increased the quality of the evaluation. Moreover, in the case of project evaluations undertaken through literary analysis due to travel restrictions (e.g. evaluations in conflict-affected countries and regions), satellite data can be used as an effective alternative to field survey and qualitative analysis data.

It is noted that this ex-post evaluation had difficulty acquiring satellite data due to the lack of accurate positional information on the facilities developed through the project. This provided insights into ex-post evaluations using satellite data, such as the importance of acquiring the positional information of project facilities during the project implementation phase and the possibility of increasing the reliability of data by combining satellite and geographical data. Going forward, JICA will use satellite data throughout the evaluation process, from the ex-ante to ex-post stages.



Source: Earth Observation Group, Payne Institute for Public Policy, Colorado School of Mines, VIIRS Nighttime Day/Night Band Composites Version 1

Figure 1 Trends in nighttime lights*3



2014 (before project implementation) 2020 (at time of ex-post evaluation)

Figure 2 Satellite images of nighttime lights in Dar es Salaam before and after the project

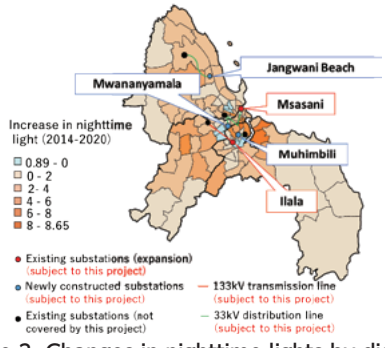


Figure 3 Changes in nighttime lights by district

*1 JICA has tentatively used satellite data as alternative/complementary data for operation and effect indicators in ex-post evaluations for an irrigation project in India, a road project in Laos (ex-post evaluation in FY2017), a hydropower project in Cambodia (ex-post evaluation in FY2018), and an irrigation project in Myanmar (application to the ongoing project in FY2018), among others.
*2 Satellite data were used in six ex-post evaluations for FY2020.
*3 Figures 1 to 3 are sourced from the Ex-Post Evaluation for the Project for Reinforcement of Power Distribution in Dar es Salaam in Tanzania.

Impact Evaluations

To further improve quality of the project and make it more effective, JICA has been promoting Evidence-Based Practice (EBP) and applying impact evaluation as an effective tool.

El Salvador

Project for the Improvement of Mathematics Teaching in Primary and Secondary Education in El Salvador

Scaling-up the package of interventions to improve learning outcomes in mathematics based on the evidence

More than 70% of children of primary and lower secondary school ages in low- and middle-income countries are not reaching the minimum proficiency level in mathematics.*1 The situation is a global issue called "learning crisis." JICA conducted a series of cooperation for mathematics textbook development in Central America since 2003. In El Salvador, one of the countries in the region, JICA supported "the Project for the Improvement of Mathematics Teaching in Primary and Secondary Education," hereinafter "The ESMATE project," from 2015 to 2019. The project was planned and implemented with the knowledge and experience gained through a series of cooperation in the region. The ESMATE project developed textbooks, student workbooks, and teacher's guides for mathematics in basic education. The project then designed a package of interventions, called the ESMATE Program. The package comprised of several interventions such as the distribution of the newly developed textbooks, introductory teacher training, lesson observations by school principals, and organization of mutual review meeting of teachers.

In order to evaluate the impact of the ESMATE program on learning outcomes in mathematics, JICA conducted a cluster-Randomized Controlled Trial (cRCT) for grade 2 students from 2018 to 2019. The results demonstrated that the ESMATE program improved learning outcomes in mathematics by 0.48 standard deviations in year 1 of the research.*2 The ESMATE program was scaled up nationwide in primary education in the following year. While the control group also received the ESMATE program in year 2 of the research, students in the treatment group performed better in mathematics assessment by 0.12 standard deviations. The results indicate that based on the improved understanding in year 1 of the research they advanced their mathematics learning in year 2.

In lower secondary education, JICA conducted a cRCT for grade 7 students (first grade of lower secondary level). While the Ministry of Education scaled up the ESMATE program nationwide In lower secondary level from year 1 of the research, several interventions in the package, such as the distribution of student workbooks and the utilization of test results in mutual review meeting of teachers, were not included in the nationwide scaling-up. In the cRCT in the lower secondary level, the interventions that were not covered in the nationwide scaling-up, such as the distribution of student workbooks, were additionally provided for the treatment group to evaluate the impact.*3 The additional interventions in the ESMATE program improved learning outcomes in mathematics by 0.18 standard deviations in year 1 of the research. The impact on student learning remained positive but became not statistically significant in year 2 of the research when the difference in the interventions between the two groups disappeared. The results indicate that students in the treatment group could not advance their learning well in year 2 (grade 8) as most of them did not understand well the content that they should have mastered in year 1 (grade 7) such as linear equations.

The results of the impact evaluation for the ESMATE program were shared timely with the Ministry of Education in El Salvador by organizing national seminars, which enhanced the continuity in the textbook policy of the Ministry even after the change of government in 2019. To further enhance the impacts by the ESMATE project, JICA launched "the Project for the Improvement of Mathematics Teaching Based on the Result of Evaluation Process in Primary and Secondary Education" in April 2021. JICA continues to verify the effectiveness of the cooperation using impact evaluation and advance the cooperation on the issues in international educational development, including learning crisis, towards the SDG 4.

Peer learning

Individual teaching

*1 The lower secondary education is equivalent to the first to third grades of junior high school in Japan.
*2 Maruyama, T., Kurosaki, T. (2021). Developing Textbooks to Improve Student Math Learning: Empirical Evidence from El Salvador. JICA Ogata Research Institute Working Paper No. 217.
*3 Maruyama, T. (2022). "Strengthening Support of Teachers for Students to Improve Learning Outcomes in Mathematics: Empirical Evidence on a Structured Pedagogy Program in El Salvador." International Journal of Educational Research. Vol. 115: 101977. https://doi.org/10.1016/j.ijer.2022.101977

Impact Evaluations

Ghana

EMBRACE (Ensure Mothers and Babies' Regular Access to Care) Implementation Research

Evaluation of effectiveness of an integrated package of continuum of care interventions for maternal and child health reduced maternal mortality

Pregnancy and childbirth are an important period when both mothers and babies are exposed to higher health and mortality risks. Although the coverage of individual antenatal and perinatal care services (e.g. antenatal check-ups and facility deliveries) has significantly increased, the high coverages of individual services do not necessarily reduce maternal and child mortality rates in low- and middle-income countries, and in fact 86% of maternal deaths occurred in Sub-Saharan Africa and South Asia (as of 2017).

This has raised awareness about the importance of ensuring the continuum of care (CoC) for maternal and child health by providing high-quality, seamless care for women and their babies throughout pre-pregnancy, delivery, and postpartum periods. However, the completion rate of essential maternal and child health care has remained low in low- and middle-income countries. For example, in Ghana, only 8% of woman–child pairs completed the CoC (received all the CoC services of four antenatal visits, skilled birth attendance, and three postnatal visits). Therefore, JICA analyzed the facilitating and hindering factors for the CoC in Ghana from different angles and preformed a cluster-Randomized Controlled Trial (cRCT) to assess the impact of the CoC interventions for maternal and child health under different circumstances.*1

The analytical results of facilitating and hindering factors for the CoC interventions showed that the combinations of the following three interventions had been accepted by health workers and helped mothers understand the importance of completing the CoC: (i) providing accommodation for mothers to stay for 24 hours after their facility delivery as well as means of transport, such as motorbikes, for health workers to visit pregnant women and mothers at their home; (ii) introducing a card monitoring system (CoC card) to track the continuum of care; and (iii) organizing orientation training for community health workers. These interventions were found to have increased the CoC completion rate and significantly reduced the maternal mortality rate. Subsequently, the results of this research led to development of a maternal and child health handbook and expand the CoC program nationwide in Ghana. Meanwhile, JICA is planning to take part in seminars and other opportunities to share evidence-based knowledge gained through this research and subsequent applications to policies and programs as widely as possible.

In order to facilitate governmental efforts to promote universal health coverage (UHC)*2 including the CoC for maternal and child health care, JICA will continue to promote evidence-based practices and scientific impact evaluations according to national and regional conditions.*3

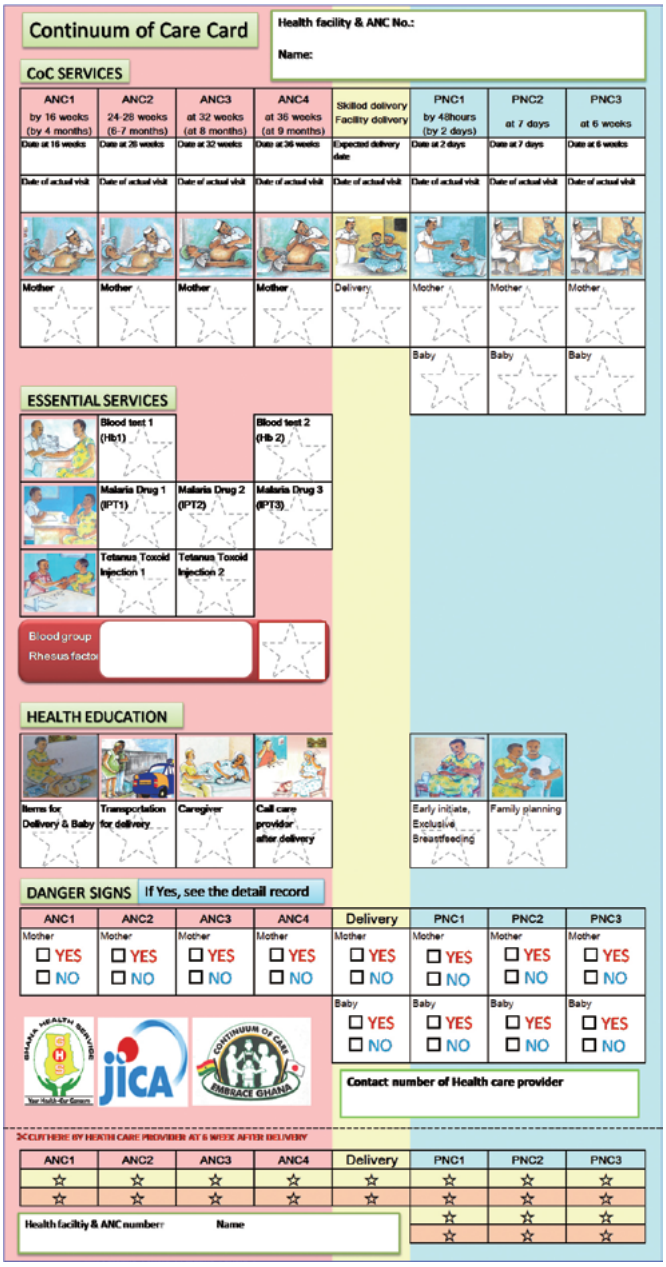


Figure CoC Card

*1 Shibanuma, A., et al. (2021). Evaluation of a package of continuum of care interventions for improved maternal, newborn, and child health outcomes and service coverage in Ghana: A cluster-randomized trial. PLoS Medicine. 18(6).
*2 UHC means that all individuals have access to affordable and appropriate health promotion, prevention, treatment, and functional recovery services.
*3 Policy Note (July 2018), JICA
policy_note_04_en.pdf (jica.go.jp)

Mother and child waiting for medical treatment at a health center in Ghana

Contributed Article
Importance of Quantitative Analysis and Evidence-based Practices in Development Cooperation: From the Perspective of Interns

Interns: Eri Satake, Haruka Maeoka, Mirei Minegishi

We, three students, participated in the internship program of JICA from August to October 2021 because we were interested in how economics and statistics research is used in development cooperation projects in practice. In the program, we were engaged in compiling case studies of impact evaluations for the purpose of planning actual projects and improving future projects. These experiences made us realize that the global impact of development cooperation could be further enhanced by clarifying the mechanisms that lead to the achievement of results based on the Theory of Change in projects and by promoting the planning and implementation of projects based on evidence gained through impact evaluations.

Through this program, we have come to believe that projects not only need to incorporate statistical discussions but also need to reflect the actual situation based on trust in the field, and that quantitative and qualitative analyses could complement each other in the practical level. Going forward, we will continue to strive sincerely, remembering that the key to international cooperation is to understand the context surrounding projects with our own eyes and ears by interacting with many people in person while pursing theoretical approaches.

(Representative: Minegishi)

A photo of interns

Advisory Committee on Evaluation

JICA set up an Advisory Committee on Evaluation to seek advice on project evaluation to improve the quality of evaluation, strengthen feedback of evaluation results, and ensure accountability. The Committee consists of international cooperation experts and evaluation specialists from various sectors, including academia, private sector groups, NGOs, media, and international organizations.

The Committee holds discussions, exchanges views, and makes recommendations on JICA's project evaluation efforts and responses to recommendations and advice previously made by the Committee.

Table List of Committee Members (As of February 2022)

Chairperson	Motoki Takahashi	Professor, Graduate School of Asian and African Area Studies, Kyoto University
Acting Chairperson	Yuriko Minamoto	Vice President, Meiji University (in charge of social relations) Professor, Graduate School of Governance Studies, Meiji University
Members	Jun Ishimoto	Vice-Chairman, Engineering and Consulting Firms Association, Ja pan (ECFA)
	Katsuji Imata	Managing Director CSO Network Japan
	Mariko Kinai	National Director, World Vision Japan
	Takashi Kurosaki	Director, Institute of Economic Research, Hitotsubashi University
	Satoko Kono	President, ARUN LLC
	Tetsuo Kondo	Director, United Nations Development Programme (UNDP) Representation Office in Tokyo
	Reiji Takehara	Director, International Cooperation Bureau, Keidanren (Japanese Business Federation)
	Mika Funakoshi	Journalist

In FY 2021, Committee meetings were held in November 2021 and February 2022. In November, the Committee shared insights on progress in thematic evaluations and in consideration of new management methods for development cooperation projects. To help determine the progress of the thematic evaluation, the Committee discussed the following final reports: "Analysis of Evaluation Methodologies for Scholarship Programs", "Impact from JICA's Cooperation in Health Sector (Infectious Diseases Control) and Socio-Economic Development in Developing Countries" and "Nutrition Improvement through a Multifaceted Approach", as well as an interim report on "Evaluation Method for Human Well-being/ Happiness" and "Consideration on Evaluation Methods for Socially Vulnerable People to Achieve "Leave No One Behind" (For details of the thematic evaluation, please refer to pp. 38-47). Following the discussions in previous meetings, the Committee also discussed and advised on new management methods for development cooperation projects and associated evaluation methods, which JICA has been examining. For details, refer to [⇒ The Committee held in November 2021*1]. During the meeting held in February, the Committee continued to address the new management methods for the development cooperation projects and discussed details of the Annual Evaluation Report 2021 (this report). For details of these discussions, refer to [⇒ The Committee held in February 2022*2].

Performance evaluation and project evaluationstaff conducting

Based on the Act on General Rules for Incorporated Administrative Agencies, JICA is obliged to prepare a medium-term plan for achieving the medium-term objectives assigned by the competent minister, evaluate the annual plan yearly and conduct self-evaluation. Accordingly, JICA has implemented performance evaluations and published the results since 2003, with the current medium-term plan covering the period FY2017 to FY2021. JICA has also established an advisory committee on performance evaluation, operating independently of the Advisory Committee on Evaluation. For details, refer to [➡ Transparency of Operations in the JICA Annual Report 2021*3].

※1: https://www.jica.go.jp/activities/evaluation/iinkai/meeting/202111.html (in Japanese)
※2: https://www.jica.go.jp/activities/evaluation/iinkai/meeting/202202.html (in Japanese)
※3: https://www.jica.go.jp/english/publications/reports/annual/2021/fp4rrb000000sky0-att/2021_21.pdf

Presentations and Reports at Academic Societies
- Direction and ideal standpoint for evaluation in development cooperation-

JICA actively disseminates its evaluation results and various evaluation approaches to improve the quality of projects and ensure accountability. In FY 2021, JICA reported an updated trend in its project evaluation at the Japan Society for International Development and the Japan Evaluation Society to consider how to utilize JICA's project evaluation from various perspectives in response to the changing circumstances of development cooperation.

Japan Society for International Development

JICA held a round-table session entitled "Direction of Evaluation in Development Cooperation" at the 32nd Annual Conference of the Japan Society for International Development (JASID) on November 21, 2021.

First, in its presentation entitled "Overall Situations and Updated Issues in JICA's Project Evaluation", JICA reported how its project evaluation currently responds to evolving evaluation methodologies and changes in international development project circumstances. Subsequently, case studies of "Process Analysis on the Project of School-Based Collaborative Teacher Training (SBCT) in Rwanda" and "Effect Verification of Scholarship Programs from the perspective of Theory of Change (ToC)" were introduced as examples of evaluation methodology having evolved. Process analysis*2 is to confirm how the project effects are realized by focusing on the project implementation process, by which it is expected to enhance learning that is one of the objectives of JICA's project evaluation. ToC*3, meanwhile, can be utilized to clarify the process and timing of generating outcomes and is deemed useful as an evaluation methodology for projects, including scholarship programs, for which a mid- and long-term perspective is required pending final outcomes. Finally, JICA presented its latest efforts on new management methods for development cooperation projects planned to be introduced, entitled "Project Management toward Strengthening and Promoting Thematic Program Strategy in Development Cooperation", as an example of changing international development project circumstances and reported on evaluation issues to be addressed going forward.

After the presentation, discussants exchanged their views on issues in analyzing the process, applicable limitations when utilizing the ToC, the relationship between evaluation in new project management and existing evaluation frameworks, and other relevant topics. JICA intends to leverage proposals and insights obtained through the discussion to utilize evolving evaluation methods more effectively and further promote learning and improvement.

Japan Evaluation Society

During the 22nd Conference of the Japan Evaluation Society (JES) held on December 4 and 5, 2021, JICA hosted a common session entitled "Direction of Evaluation in Development Cooperation". During a free session "Science and technology/international cooperation", JICA reported on the use of satellite data in its project evaluation.

During the common session, JICA outlined how it has responded to changes in its project evaluation circumstances, entitled an "Overview of JICA's Project Evaluation – responding to recent trends –", briefing how JICA has considered evaluation in a new project management to be introduced ("strengthening thematic program strategy in development cooperation and issues to be considered for evaluation"). As well as explaining and reporting how to utilize the ToC, an important evaluation method under the new project management to visualize the paths towards outcomes, to JICA projects, JICA also reported on progress and updated the status of its consideration on how to incorporate two evaluation perspectives introduced in FY 2021 (Human well-being and Leave No One Behind) into its project evaluation.

Following the presentation, the participants actively discussed various topics sparked by questions and comments from the floor, including: the difference between new project management and former cooperation programs/approaches; how to accumulate evidence in new program management; how to evaluate projects utilizing the ToC and the academic background to the "Human well-being" perspective.

During the free session "Science and technologies/ international cooperation a case study of High-Speed Rail Development Project in Thailand", JICA made presentations entitled "Impact Evaluation of Infrastructure Project Using Satellite Data" and "Usability and Limitation of Satellite Data Analysis Using Google Earth Engine a case study of High-Speed Rail Development Project in Thailand"*4. Participants actively discussed the logic of estimating economic development from nighttime-light data and other topics.

The presentations and dialogues at JASID and JES conferences sparked discussions on future evaluation objectives and the desirable approach to evaluation in development cooperation projects, and spawned useful recommendations and suggestions. JICA will continue to respond to changes in development cooperation circumstances effectively and promptly, and promote various ways of improving to implement better projects in the future.

*1 For details, see P.40-41.
*2 For details, see P.49.
*3 For details, see P.48.
*4 Other cases using satellite data are introduced on P.50.

Statistical Analysis of Ex-post Evaluations

Statistical analysis in FY 2021: Highlights

- Since FY 2021 is the final year for JICA's project evaluation under the existing rating system, statistical analysis was conducted by focusing on two sub-ratings (Effectiveness / Impact and Sustainability). Simultaneously, it was reviewed how JICA's project implementation of three schemes (Finance and Investment Cooperation, Grant Aid and Technical Cooperation) in a unified manner after the JICA merger in 2008 has affected sub-ratings of ex-post evaluation.
- Strong interrelations consequently found between effectiveness/impact and scheme as well as sustainability and region/scheme.
- The trend of a high sub-rating for effectiveness/impact of the projects which started after the JICA merger was confirmed. However this statistical analysis could not clearly specify the impact of the JICA merger, since the number of project which had started after the merger and already completed was limited and number of ex-post evaluation of each scheme has deviated.

Overview

JICA has conducted a statistical analysis using the rating*1 result to examine the trend of overall ratings and feed it back to project planning/implementation. Since JICA's evaluation criteria were revised from five to six, and sub-ratings*2 were changed from a three- to a four-level scale, FY 2021 is the last year of consistent statistical analysis based on former criteria*3. At this turning point, it was reviewed how project implementation of three schemes (Finance and Investment Cooperation*4, Grant Aid and Technical Cooperation) in unified manner after the merger between the former JICA and the Overseas Economic Cooperation Operations of the former JBIC in 2008 (the JICA merger) has affected the ex-post evaluation results.

■ Whole picture

A total of 2,163 projects with ex-post evaluation completed by FY 2021 is detailed as follows (Figure 1):

Finance and Investment Cooperation (evaluation completed between 2004 and 2021): 787 projects
(External evaluation: all projects)

Grant Aid (evaluation completed between 2010 and 2021): 594 projects
(Internal evaluation: 246 projects, external evaluation: 348 projects)

Technical cooperation (evaluation completed between 2010 and 2021): 782 projects
(Internal evaluation: 595 projects, external evaluation: 187 projects)

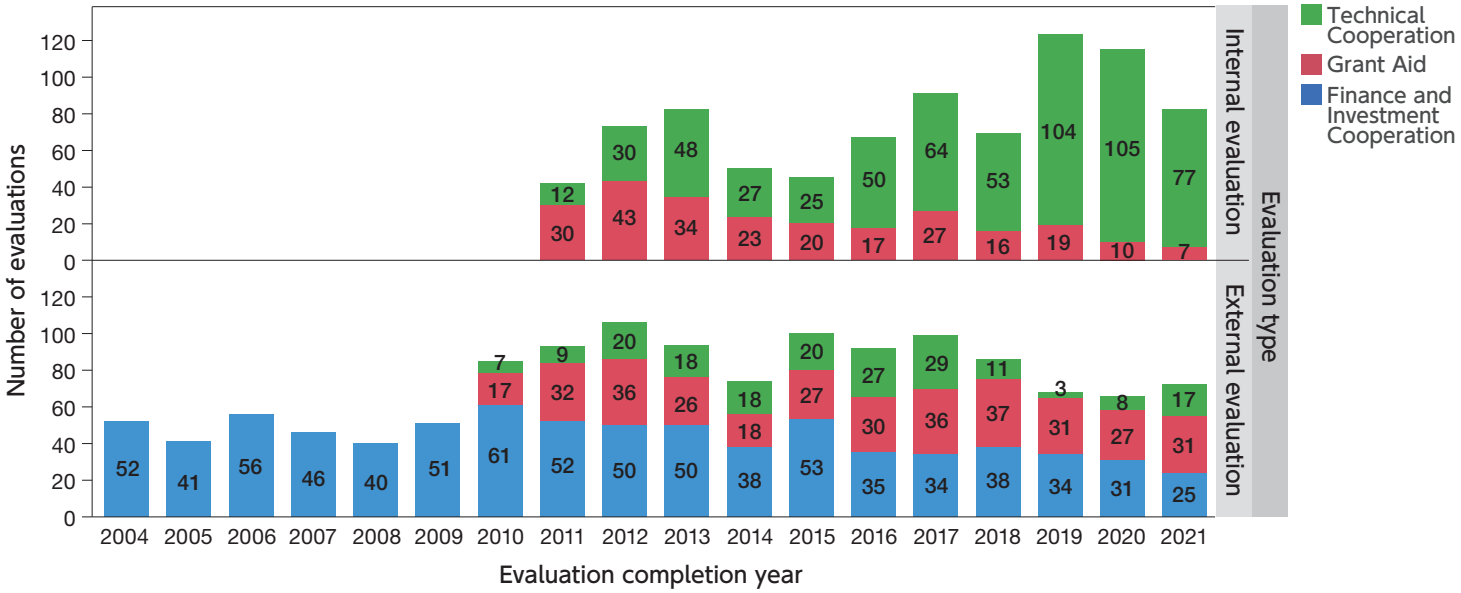


Figure 1 Changing number of evaluations per fiscal year of evaluation completion

*1 The rating system helps assess the performance of development projects and provides insights that shed light on the current situation and possible improvement approaches. The system is, however, subject to the following constraints: (1) it is based on the assessed scope of the DAC evaluation criteria; (2) the difference is not fully adjusted, relative to various issues encountered during projects, such as the nature of assistance (whether or not innovation is involved) or the environments where the projects were implemented (e.g. fragile state); and (3) it assesses only the results of past activities rather than ongoing endeavors or potential outcomes. Accordingly, the rating itself cannot capture everything which happened in development projects.
*2 For the sub-rating, refer to P.11.
*3 For the former JICA evaluation criteria, refer to Table 1 on P.11.
*4 Finance and Investment Cooperation includes ODA loan and Private Sector Investment Finance.

Interrelation between sub-rating and basic attribute (regression analysis)

This section focuses on two sub-ratings, namely effectiveness/impact and sustainability, from past ex-post evaluations and introduces some typical results including the extent to which basic attributes (scheme, region and sector) and the JICA merger have been affected.

■ Analytical method

An ordinal logistic regression was conducted to examine the three sub-ratings as the dependent variable, and the basic attributes (scheme, region, and sector) and the criterion of whether the year in which the project started came before or after 2009*5 as independent variables. The 700 projects that had completed ex-post evaluations by FY 2019 and began operations in each of the three years before and after the JICA merger (2006-2008 and 2009-2011 respectively) were included for this analysis which are considered to have relatively close backgrounds*6.

■ Analytical result (general)

The sub-rating of effectiveness/impact was the strongest interrelation with scheme, followed by the sector and region and a similar level of interrelation was also observed with the JICA merger. Meanwhile, the sub-rating of sustainability seemed to be strongly interrelated with differences between the region and scheme (Figure 2). The length of each bar in the graph reflects the degree of contribution to the regression model. The longer the bar, the stronger the interrelation with a dependent variable, which may reference the attribution level of each factor based on the regression model. It should be noted, however, that inter-models comparison cannot be allowed*7.

a) Effectiveness/impact

Source	FDR LogWorth	FDR PValue
scheme	4.508	0.00003
sector	1.568	0.02702
region	1.568	0.02702
JICA merger	1.333	0.04647

b) Sustainability

Source	FDR LogWorth	FDR PValue
region	8.015	0.00000
scheme	5.292	0.00001
sector	0.326	0.47252
JICA merger	0.326	0.47252

Figure 2 Analysis of basic attributes and project formulation before and after the JICA merger affecting the evaluation*8

■ Analytical results (detail)

Subsequently, after reviewed the three basic attributes (*scheme, region and sector*) and independent variables (*JICA merger*) having affected the effectiveness/impact and sustainability and examined how each item was actually affected. To distinguish from general terms, basic attributes and independent variables are *italicized* in the following descriptions.

First, it was found the interrelation between each item of the basic attributes and independent variable affecting the sub-rating (*effectiveness/impact*). The *effectiveness/impact* tended to rate higher for Finance and Investment Cooperation, an individual item of the *scheme* and lower for Technical Cooperation. Moreover, another trend shows the *effectiveness/impact* rated higher for projects having commenced after *JICA merger*. Given the strong interrelations between the *scheme* and *JICA merger*, however, it was not possible to clarify how these two factors and the rating for *effectiveness/impact* were specifically interrelated. Regarding the interrelation between individual *region* and *sector* items and the *effectiveness/impact*, the sub-rating of *effectiveness/impact* was higher in East Asia and South Asia while no typical trend was found elsewhere. Furthermore, it was suggested that the sub-rating of effectiveness/impact in transportation, an individual item in the *sector*, was high while that of industry/trade was low.

In terms of attribution to *sustainability*, the sub-rating of *sustainability* was low in Grant Aid and Technical Cooperation, individual items in the *scheme*, but their interrelation could not be clarified as with the case of *effectiveness/impact*. Regarding the interrelationship between each item in the *region* and *sustainability*, the sub-rating of *sustainability* is high in East Asia but low in Africa and Oceania. No clear findings in terms of the *sector*.

The foregoing shows an analytical result based on unified ratings of the former criteria. Although practically explaining the significance of these results remains difficult, there may be suggestive information on the change before and after the JICA merger if data is further accumulated. As above, in this FY 2021 report, it was focused on sub-ratings in its statistical point of view. It will also proceed with statistical analysis to address practical issues considering needs at the project site as well as factors and components which affect the project.

*5 Although the JICA merger was announced as October 1, 2008, the implementation of new project after the merger started from 2009 onward. Accordingly, the comparison was made before and after 2009.
*6 It is recommended to refer the JICA Annual Evaluation Report 2017 (P.58) which introduces a consideration using four-level categorized overall rating as a dependent variable and basic attributes and other factors as independent variables.
*7 The FDR LogWorth is calculated as the ordinal log of the False Discovery Rate "-log (FDR adjusted *p*-value)" and represents the significance of the test (the blue line in the figure indicates 2 corresponding to a significance level p=0.01).

Guide to JICA's Website

■JICA at Glance

▶https://www.jica.go.jp/english/about/at_a_glance/index.html

■JICA Homepage

Japanese
▶https://www.jica.go.jp/index.html

English
▶https://www.jica.go.jp/english/index.html

■Evaluation

Japanese
▶https://www.jica.go.jp/activities/evaluation/index.html

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

□Find out more on JICA's evaluation system

○ Overview
▶https://www.jica.go.jp/english/our_work/evaluation/about.html

○ Project Progress Monitoring at Implementation Stages
▶https://www.jica.go.jp/english/our_work/evaluation/oda_loan/review/about.html

○ Thematic Evaluation, etc.
▶https://www.jica.go.jp/english/our_work/evaluation/tech_and_grant/program/index.html

○ Advisory Committee on Evaluation
▶https://www.jica.go.jp/english/our_work/evaluation/advisory/index.html

○ JICA's Project Evaluations (Pamphlet)
▶https://www.jica.go.jp/english/our_work/evaluation/c8h0vm000001rdg1-att/evaluations_01.pdf

○ Ex-ante Evaluation
▶https://www.jica.go.jp/english/our_work/evaluation/oda_loan/economic_cooperation/about.html

○ Ex-post Evaluation
▶https://www.jica.go.jp/english/our_work/evaluation/tech_and_grant/project/ex_post/about.html

○ Evaluation Guides
▶https://www.jica.go.jp/english/our_work/evaluation/tech_and_grant/guides/index.html

□Search for Ex-post Evaluations (Ex-post Evaluation Report after 2008)

○ Search for project evaluations

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

□Search for Lessons Learned from Evaluation Results

○ Lessons Learned

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

□Read Past JICA Annual Evaluation Reports

○ JICA Annual Evaluation Reports

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

■ODA Visualization Website (in Japanese)

▶ https://www.jica.go.jp/oda/index.html

■JICA Library

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

■JICA Ogata Sadako Research Institute for Peace and Development

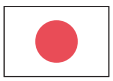
▶ https://www.jica.go.jp/jica-ri/index.html

○ Publication

▶ https://www.jica.go.jp/jica-ri/publication/index.html

JICA Annual Evaluation Report 2021 is also available on our website:

▶ https://www.jica.go.jp/english/our_work/evaluation/reports/2021/index.html



ISBN 978-4-86357-096-2

Japan International Cooperation Agency
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