Ex-post Evaluations of Private-Sector Investment Finance Projects
—To Support Private Sector-led Development Projects—

As the role of the private sector has recently become increasingly important in facilitating high-quality, sustainable economic growth in developing countries, JICA, as well as international agencies and Western donors, is boosting support for the private sector. An example is Private-Sector Investment Finance, a program that finances or invests in projects carried out by private companies in developing countries to stimulate economic activities and improve the quality of people's life there.

Since October 2012, when it was decided to resume the Private-Sector Investment Finance program in full swing, 52 projects (31 financing and 21 investment projects) have been approved, reaching 17 countries and four regions (as of April 2020). Going forward, it will be essential to conduct ex-post evaluations of completed projects to assess their outcomes.

The evaluation approach to Private-Sector Investment Finance projects should take into account their features related to the process of financing and investing in private companies' projects and therefore differ from methods used for other development projects that directly support the governments of developing countries. In light of this, JICA conducted a study in FY2017 to compare and analyze how the International Finance Corporation (IFC), Asian Development Bank (ADB), European Bank for Reconstruction and Development (EBRD) and other international development financial institutions evaluated their private-sector investment and financing and consider how to develop a framework and a method to evaluate Private-Sector Investment Finance projects at the ex-post stage. As a result, JICA decided to apply the Five DAC Criteria (relevance, effectiveness, impact, efficiency, and sustainability) to Private-Sector Investment Finance projects, like other JICA projects, but also set additional evaluation criteria to assess the characteristic aspects of investment and financing projects, such as financial and non-financial additionality. Then, JICA conducted the ex-post evaluations of two Private-Sector Investment Finance projects (in Mongolia and Pakistan) on a trial basis in FY2018 and FY2019.

Ex-post evaluations of Private-Sector Investment Finance projects started on a full scale in FY2020. JICA will continue to conduct ex-ante and ex-post evaluations for each Private-Sector Investment Finance project and publish the evaluation results to fulfill its accountability, while respecting individual company's confidential information, and apply lessons learned to future project design and management.

Tsetsii Wind Farm Project in Mongolia (Finance)*1

In Mongolia, economic growth and urbanization boosted the demand for electricity and heat. Nevertheless, the country's power generation was much less than the installed capacity due to the aging of facilities. Because the domestic power generation did not meet the demand, electricity was imported from Russia to cover the shortage. While coal power plants generated approximately 90% of the country's electricity, the Government promoted the development and use of renewable energy resources to increase the share of renewable energy in the total electricity generation.

This project provided financing to Clean Energy Asia LLC (CEA), a Mongolian special purpose company jointly established by a Mongolian company called Newcom and SB Energy of the SoftBank Group to operate as an independent power producer, in order to assist the joint venture in the construction and operation of a wind power plant (with a total capacity of 50MW) in Tsogttsetsii District of Ömnögovi Province in southern Mongolia. It was assumed that CEA would supply electricity under

Tsetsii Wind Farm

Project location Map

a long-term power purchase agreement with the National Dispatching Center of Mongolia. JICA signed a project financing agreement with CEA in June 2016, expecting the project to improve the power supply and demand balance, ensure the stable supply of power, diversify energy sources, and promote the use of renewable energy resources to contribute to economic and social development in Mongolia.

The ex-post evaluation showed that this project had been consistent with the development policies and needs of Mongolia and the development cooperation policies of Japan. The evaluation for effectiveness and impact indicated that the operation and effect indicators had been achieved. it was also confirmed that this project was supplying electricity to the Central Power System, which was facing an increasing demand, and reducing CO2 emissions by increasing the share of wind power in the electricity mix in Mongolia, where coal accounted for a remarkably large share. The evaluation for efficiency demonstrated that neither costs nor time incurred by the project had exceeded the planned values. The evaluation for sustainability implied that, although financial sustainability was not high, there were no concerns about institutional or technical sustainability or maintenance mechanisms. The project is expected to continue to support the development of renewable energy resources and power infrastructure in Mongolia.

Private Sector Investment Finance for the First MicroFinance Bank – Pakistan (Investment)*2

The Government of Pakistan emphasized the use of microfinance in its development policy to support low income populations and worked to develop and reform its legal system to promote and expand microfinance services. In this project, JICA invested in the First Microfinance Bank Ltd, Pakistan (FMFB-P) to expand and stabilize its business to promote access to financial services for the low income households in Pakistan. JICA signed an equity investment agreement with the FMFB-P in March 2012, expecting the project to stabilize the livelihoods of low income households in Pakistan.

The ex-post evaluation showed that this project had been consistent with the development policies and needs of Pakistan. The evaluation for effectiveness and impact indicated that key indicators, such as the number of clients financed and the amount of loans provided, had increased year-on-year and reached the target levels. The financial and economic analysis demonstrated that the FMFB-P had rapidly improved and expanded its business and enhanced its profitability and economic benefits though its return on invested capital (ROIC) remained lower than its weighted average cost of capital (WACC). The evaluation for efficiency was omitted because JICA was holding shares of the FMFB-P at the time of the ex-post evaluation. The sustainability of the project was rated satisfactory. The FMFB-P had a sufficient number of employees and a sound governance and risk management structure. The bank was working to improve its business efficiency, for example, by introducing a core banking system. The banks also had developed a human resource development system and had enhanced its financial stability.

FMFB-P's client running a private shop

FMFB-P's client engaged in livestock and dairy farming business

*1: The ex-post evaluation report of this project can be found on https://www2.jica.go.jp/en/evaluation/pdf/2018_0883_4_f.pdf
*2: The ex-post evaluation report of this project can be found on https://www2.jica.go.jp/en/evaluation/pdf/2018_1817_4_f.pdf

Monitoring and Evaluation Using SWIFT

- To Assess Changes Made by Projects Over Time Using Advanced ICT -

Although many projects were implemented in the past, quantitative data to answer the question of how much they actually contributed to reducing poverty and improving the quality of life were limited. However, Survey of Well-Being via Instant and Frequent Tracking (SWIFT), a new tool developed by the World Bank, allows us to monitor and measure the impact of projects on the income and poverty levels of beneficiaries in a cost-effective and user-friendly manner. JICA considers the use of SWIFT to monitor and evaluate its projects on a trial basis to determine the effectiveness of the tool.

What is SWIFT?

SWIFT*1 is an innovative tool developed by the World Bank to monitor and measure the impact of specific projects on the income and poverty levels of beneficiaries in a cost-effective and user-friendly manner. There has been established a calculation model using machine learning and artificial intelligence (AI) to derive poverty indicators from existing national and regional household income and expenditure surveys. SWIFT uses this model to design 10 to 15 truly effective questions to ask in surveys. Using digital technologies, such as smartphones and cloud services, SWIFT takes around 10 minutes to collect responses to the questions. SWIFT is also characterized by not using actual household expenditure data but using alternative variables correlated with that measures (e.g. the number of household members and the possession of refrigerators). Thus, SWIFT solves major problems with household income and expenditure surveys, such as high costs, time-consuming procedures, and complicated survey designs and analysis. SWIFT has been used for more than 90 projects in 52 countries by the World Bank Group.

How to use SWIFT in JICA projects

JICA also implements many projects intending to reduce poverty and improve the quality of life and has difficulty providing quantitative evidence on how much contribution they make to these issues. To begin with, it is essential to identify people in extreme poverty. Then, conducting reliable monitoring and evaluation is important. However, monitoring and evaluation, especially data collection, are highly costly. Therefore, SWIFT has caught JICA's attention for its potential of data collection in a cost-efficient and user-friendly way.

A survey using SWIFT

JICA is considering to use SWIFT in baseline and endline surveys of beneficiaries and non-beneficiaries for projects with the overall goal of increasing the income of the target group. SWIFT is expected to provide more accurate evidence for project evaluation by estimating the poverty rates of beneficiaries and non-beneficiaries before and after interventions and comparing their changes over time. Ordinarily, JICA relies on qualitative outcomes of its projects such as case studies. Conventional follow-up surveys of project beneficiaries can be too costly for its limited budget and quantitative data on income and expenditure from the statements of beneficiaries are not reliable because they are based on their memories and perceptions. Therefore, there are relatively high expectations that SWIFT may be able to collect data in a more efficient manner and properly measure the impact of interventions, which has been observed by the field practitioners for years.

JICA is currently using SWIFT on a trial basis, expecting that this innovative tool, practiced in a proper manner, can be widely applied to monitor and evaluate outcomes and achievements of JICA projects.

*1: Please refer to the World Bank's booklet for details of SWIFT.
https://www.ifc.org/wps/wcm/connect/64f11adb-ab01-4207-93cd-dd2cc51af16c/SWIFT-booklet-05.pdf?MOD=AJPERES&CVID=m9Or9Ia

Development Impact Assessment Using A Theory of Change
- To Visualize the Paths towards Outcomes -

JICA formulates project plans using a logical framework (logframe) called "Project Design Matrix (PDM)" to enhance the relevance of its interventions in development issues. A PDM can help make a logical project plan that describes how inputs will lead to the project purposes and then to the overall goal. However, as shown in Figure a PDM represents a simplified process of producing outcomes, and the omission of details in this simplification can make it difficult to see the whole picture of the process.

Recently, a theory of change (ToC) has become increasingly accepted in the development community, with increasing calls for measures to address more complicated issues and a more comprehensive monitoring/evaluation framework that takes into account environmental and contextual factors. A ToC is generally defined as a way to describe the set of assumptions that explain both the mini-steps that lead to the long-term goal and the connections between project activities and outcomes that occur at each step of the way. A ToC is often depicted in a diagram, generally containing multi-faceted elements, such as a series of changes that need to be made to solve the targeted problems, the assumptions that need to be met for the changes to occur, the conditions that need to be satisfied for the assumptions to be met, the interventions of the project, the timeframe for achieving the intended outcomes, to illustrate how the project's ultimate goal can be achieved. Moreover, a ToC diagram can provide a detailed, clear picture of the intentions as it is flexible and adaptable to its use, such as showing multiple pathways, indicating a hierarchical relationship where a single output leads to several different outcomes, or depicting the process of producing outcomes as a loop if necessary.

Figure PDM (Example)

<table>
<tr><th>Project Summary</th><th>Indicators</th><th>Means of Verification</th><th>Important Assumptions</th></tr>
<tr><td>Overall Goal
The Project contributes to XXX.</td><td>To be achieved three years after the completion of the project
1. An outcome related to XXX is reflected in the annual plan of the Ministry of Agriculture.
2. A program related to XXX is implemented in more than X districts.</td><td>1. Relevant policy documents, interview surveys
2. New program reports</td><td></td></tr>
<tr><td>Project Purpose
The capacity of the Government of XXX is enhanced.</td><td>To be achieved by the completion of the project
1. An example of XXX is reflected in the annual plan of the Ministry of Agriculture.
2. The XXX Action Plan is developed.</td><td>1. Relevant policy documents, interview surveys
2. Plans regarding XXX</td><td>1. The necessary project personnel is assigned.
2. There is no drastic change to federal policies.</td></tr>
<tr><td>Outputs
1. Action plans are developed.</td><td>1-1. More than three action plans are developed for pilot districts.
1-2. More than three action plan formats are developed.</td><td>1-1. Action plans for pilot districts
1-2. Prototype action plans</td><td></td></tr>
<tr><td>2. XXX is established.</td><td>2-1. XXX Guidelines are developed.
2-2. Human resources development guidelines are developed.</td><td>2-1. Reports on the guidelines
2-2. Reports on the guidelines</td><td></td></tr>
<tr><th colspan="2">Activities</th><th colspan="2">Inputs</th><th>Important Assumptions</th></tr>
<tr><td colspan="2">1-1. To survey the target area in the province.
1-2. To review the profiles of districts in the province.
2-1. To develop action plans to promote XXX and natural resource management across the province.
2-2. To develop a management system for XXX and natural resource management</td><td>Japanese Side
1. Japanese Experts (draft)
1-1. Chief Advisor
2. Provision of equipment</td><td>XXX Side
1. Counterpart personnel
1-1. Federal-level Project Director
1-2. Provincial-level Project Director</td><td>Preconditions
The Federal Government maintains policies related to XXX.
Problems and Solutions</td></tr>
</table>

In order to assess the impact of interventions on a wide range of issues, JICA is considering not only evaluating individual projects but also analyzing a set of projects addressing the same issue by setting medium- to long-term goals and assessing their overall impact . Using a ToC to depict the paths from inputs to outcomes can improve and enhance JICA's project management cycle. JICA also considers this framework as a useful tool in visualizing how to produce medium- and long-term outcomes and how to contribute to the SDGs. In light of these points, JICA has started a study for "Development Impact Assessment Using Theory of Change" to get insights on how to use a ToC effectively in its project management process.

The study team has reviewed academic literature, interviewed major development partners that are using a ToC approach, such as the World Bank, USAID, DFID, GIZ, 3ie, IPA, UNICEF, and UNFPA, to gather detailed information on their use and views of the approach, and organized and compared the collected information.

This study also focuses on some of the maternal and child health handbook projects and water supply projects carried out by JICA as case studies to validate the appropriateness of the intended ToC based on existing evidence and data gathered through field surveys and to retroactively assess whether the expected outcomes were produced as assumed in the ToC.

These analysis results will be used to derive recommendations on how JICA can apply a ToC approach to visualize the process of producing outcomes (The study report will be finalized at the end of July 2021). Then, these recommendations will be reviewed by JICA staff to consider how to internalize the approach, not only in individual projects but also in a set of projects, to visualize and accurately assess their medium- to long- term development impacts.

Thematic Evaluation Efforts

- Cross-sectoral Evaluation and Analysis of JICA's Cooperation -

JICA conducts not only individual project evaluations but also thematic evaluations on specific subjects, such as regions, issues, sectors, and methodologies. Through thematic evaluations, JICA conducts various studies, such as identifying common trends and problems related to a particular issue, classifying cooperation types through a comprehensive analysis of projects to extract patterns and lessons, and reviewing evaluation methods to develop new evaluation approaches. The following paragraphs describe four ongoing thematic evaluations.

Transversal Analysis of Evaluation Results to Extract Practical *Knowledge Lessons* in the Rural Water Supply Sector

JICA extracts and accumulates lessons from ex-post evaluations conducted as part of the PDCA cycle. In addition, JICA incorporates many lessons learned from individual project evaluations every year into knowledge lessons*1 by reviewing and classifying sector-specific lessons, further analyzing them, and adapting them to promote their application.

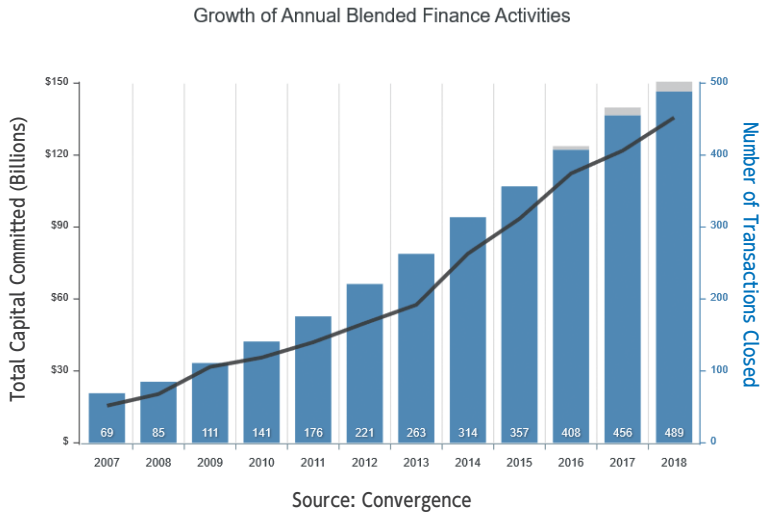
The theme of the year is selected depending on the accumulated number of lessons learned. This year, the rural water supply sector was selected as it had many good practices. A review of lessons learned from past projects in this sector reconfirms that special attention should be paid to the following two issues: (1) challanges in the operation and maintenance of water supply facilities by community associations and (2) challanges in procurements of spare parts for water supply facilities. The review also indicates (3) the additional need to identify the benefits delivered by each water supply project to women in the target area. Some ex-post evaluations confirmed the participation of women in society but merely considered it as an impact; therefore, the review results suggest that each ex-post evaluation should include a detailed classification and analysis of the benefits delivered by the project to women in order to understand how it actually affected women.

Based on these findings, this study will continue to conduct a detailed analysis of the above three issues, in addition to the classification of lessons learned. More specifically, this study will conduct an analysis of key factors for the successful operation and maintenance of rural water supply systems by community associations, a theoretical analysis of the impact on women, and a classification of issues with procurements of spare parts. The study team is now developing an analytical framework and will further deepen their analysis to promote the application of knowledge lessons in the future.

Examination of Evaluation Methods for Mobilization of Private Financing

As official development assistance (ODA) alone can no longer meet the demand for development financing to address diverse development issues including SDGs, it has become increasingly important to mobilize private funds. While donors are expected to play a catalytic role in mobilizing additional financing from private sources for development, increasing attention are being drawn to blended finance (BF), which uses catalytic capital from public or concessional sources to encourage private investment. However, it is not easy to evaluate BF because the involvement of organizations of different legal forms with different goals makes it difficult to infer a causal relationship between mobilized private investment and donors' interventions and assess the outcomes produced by mobilized private investment.

Therefore, in order to facilitate the evaluation of projects implemented by JICA with BF, this study aims to review and analyze the methods of major donors to evaluate BF projects (e.g. evaluation policies, items, and perspectives), use the results to draft a BF evaluation method for JICA, validate the drafted evaluation method by using it to evaluate individual projects in pilot countries on a trial basis, and establish a BF evaluation method for JICA. The study team is reviewing and examining the evaluation methods of other donors and will organize and analyze the findings of the review and the results of trial evaluations to develop evaluation method.



Source: Convergence

*1: Please refer to the following URL for details of knowledge lessons (in Japanese): https://www.jica.go.jp/activities/evaluation/lesson/ku57pq00001o9wd2-att/index_01.pdf

Analysis of Evaluation Methods for Scholarship Programs

JICA has supported human resources development by providing a scholarship program (Long-term Training Program) for young leaders in developing countries to promote development and solve problems in their home countries. JICA's scholarship opportunities continue to increase, further driven by the recent launch of the JICA Development Studies Program (JICA-DSP)*2. On the other hand, there are various difficulties in measuring the outcomes of scholarship programs, such as time taken to produce outcomes, difficult assessing the contribution of scholarship programs alone to participants' future career success, and working conditions required for participants to apply what they learned at the scholarship program after returning to their home countries. In order to learn lessons and fulfill its accountability despite these constraints, JICA should not only conduct follow-up surveys of former participants and collect success stories but also analyze the outcomes of its scholarship programs from various angles.

This study is designed to review the existing evaluation methods to measure and assess the outcomes of scholarship programs, examine case studies to develop evaluation items and methods for scholarship programs, and make recommendations for the evaluation of JICA's scholarship programs. The case studies will survey participants in the Master's Degree and Internship Program of African Business Education Initiative for Youth (ABE Initiative)*3, announced at the fifth Tokyo International Conference on African Development (TICAD-V) in 2013, and the JICA-DSP. This study will develop appropriate evaluation items and methods for JICA's scholarship programs by taking into account the characteristics that they cover a wide range of countries and fields of study and that human resource development takes a long time to produce a result.

ABE initiative trainees visited Japan

Nutrition Improvement through a Multifaceted Approach

While undernutrition accounts for almost half of the deaths among children under five in the world, the prevalence of overnutrition among children also increases around the world, including in developing countries. The prevalence of undernutrition and overnutrition is not only caused by direct factors, such as diseases and unbalanced diet, but also associated with a complicated combination of problems in different sectors, such as economic conditions, customs, education, and living conditions. Therefore, a multisectoral approach is needed to address malnutrition.

JICA has been assisting nutrition improvements through a multisectoral approach involving the public health, water supply and sanitation, agriculture and food, education, and other sectors in various countries. For example, in Ghana, JICA took a multisectoral approach to address malnutrition by introducing the maternal and child health handbook to provide nutrition counseling services in the public health sector and promoting parboiling technology to reduce the loss of nutrients in rice in the agricultural sector. However, JICA has not analyzed or evaluated its multisectoral nutrition interventions in a comprehensive way.

Accordingly, this thematic evaluation is being conducted, including a cross-sectional analysis of multisectoral nutrition interventions by JICA and other development partners and a quantitative analysis of outcomes in the nutrition sector. It aims to integrate quantitative and qualitative indicators and lessons learned into a versatile tool to formulate projects and monitor, evaluate, and visualize their outcomes in the nutrition sector.

A training conducted during the "Project for Improving Continuum of Care for Mothers and Children through the introduction of combined MCH Record Book"*4 in Ghana (2018-2021)
Photo credit: Yusuke Abe

*2: The JICA Development Studies Program (JICA-DSP) invites future leaders from developing countries to Japan and provides opportunities for them to learn Japan's experience of modernization, different from that of Western countries, and Japan's expertise as a development partner after World War II. Please refer to the following URL for details: https://www.jica.go.jp/jica-dsp/english/index.html
*3: The ABE Initiative is an industrial human resource program for young Africans. Please refer to the following URL for details: https://www.jica.go.jp/english/countries/africa/internship.html
*4: Please refer to the following URL for details of the project: https://www.jica.go.jp/project/english/ghana/010/index.html

Qualitative Comparative Analysis (QCA)
- Strengthening organizational learning by utilizing QCA tools -

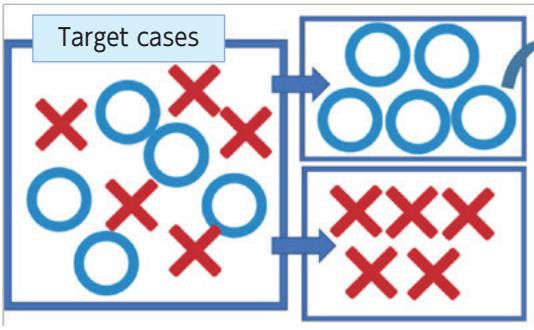
JICA has utilized Qualitative Comparative Analysis (QCA) as a new evaluation method, applicable given a limited number of target cases and simplifying the process of estimating the causal relationship between intervention and outcome.

What is QCA?

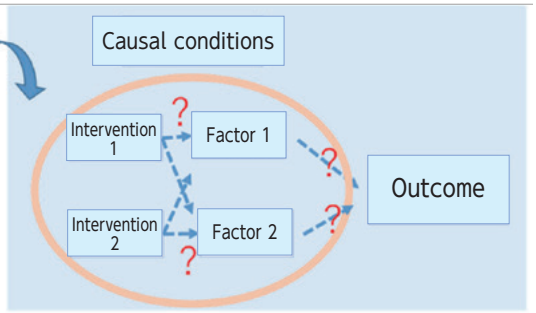
QCA is a method used to infer the combination of causal conditions*1 surrounding projects (e.g.factors such as intervention of JICA projects and capacity of the recipient country) that could contribute to the project outcome. Specifically and as reflected by the QCA acronym, it constitutes using Qualitative (Q) information, such as the "presence/absence of an outcome" to determine patterns of causal conditions that contribute to project outcomes and categorizing and "comparing" (C) successful and unsuccessful cases*2. In other words: QCA analysis.

While quantitative analysis involves collecting samples and verifying the average effect of an intervention in a certain group, QCA paves the way to also analyze low numbers of cases*3 as it uses characteristic cases for data, such as "successful/unsuccessful", rather than average cases. Another feature of QCA is its ease of adoption, given that QCA do not require advanced mathematical/statistical knowledge and cost and timing hurdles are low.

Among several QCA methods, one representative example that is easily interpreted is Crisp-set QCA, using only binary data (1 and 0). Here, a dataset is created for each case by allocating information on successful (1) or unsuccessful (0) interventions and the presence (1) or absence (0) of an outcome. Analyzing the relationship between (0) and (1) based on Set Theory, QCA extracts patterns of causal conditions that contribute to outcomes.



Compare 10 to 40 cases in terms of the presence/absence of an outcome.



Then, analyze which combinations of interventions and factors contribute to outcomes among those groups with the presence of outcomes.

JICA has started efforts to identify which causal conditions among multiple factors surrounding projects contribute to this outcome, using QCA methods. This annual report will introduce two cases applying QCA this fiscal year.

(1) Application of QCA to forest projects in India and its utilization going forward

JICA has applied QCA for two participatory forest projects implemented in India (both under the ODA Loan scheme), namely: the Tripura Forest Environmental Improvement Project and the Uttar Pradesh Participatory Forest Management and Poverty Alleviation Project*4, simultaneously in conducting their ex-post evaluation.

The purpose of this QCA is to identify which interventions and factors presented outcomes resulting in improvements to the natural environment, the living standards of residents and the social and economic capacities of women. Specifically, the research question is defined as "Which interventions and factors in the participatory planting projects in India have achieved said three outcomes". As variations (indicators) and causal conditions related to project effects, JICA will set variations to analyze relations per target projects. As for "environmental improvement", variations could be whether the project implemented was in line with a forest management plan, whether a road/school/meeting place was constructed during an entry-point activity and whether the revenue of the joint forest management committee (JFMC) from their forest products suffices to cover their operation. As well as analyzing on a per-project basis, it is expected to clarify the interventions and factors related to project effects achieved in the Indian forest sector by analyzing both projects using variations common to them.

When selecting cases, it is important to maintain key conditions such as rainfall elevation, annual average climate and tree species,

*1: "Causal conditions" in QCA refers to those conditions that contribute to outcomes.
*2: Quantitative data can also be used for categorization/comparison.
*3: While it depends on the number of causal conditions, QCA can be conducted with around 10 to 40 cases in general.
*4: Please refer to the evaluation report of each project for details. External ex-post evaluation results on P.10-11 show the link to report on the project title.

all of which are factors directly affecting outcomes but difficult to change through project intervention. That helps boost the comparability of factors. In practical terms, target areas and villages meeting criteria are identified in advance, as well as cases with the necessary (given) conditions, like the abovementioned rainfall, to make them comparable. To confirm such necessary conditions and maintain comparability in conducting QCA, there is a need to pursue cooperation on the part of related organizations owning the required data other than those of implementing agencies (e.g. geographic information systems). Accordingly, JICA will continue to proceed with the survey and analysis while tackling such issues in case selection.

A forest in Uttar Pradesh
(March 2020, photo credit: Evaluator)

A forest in Tripura
(March 2020, photo credit: Evaluator)

(2) QCA related to collaboration between Grant Aid and Technical Cooperation in the water supply sector

Leveraging statistical analysis results on the collaboration between Grant Aid and Technical Cooperation (refer to P.60-61), JICA utilized QCA to further analyze conditions effective for collaboration of both schemes in the water supply sector, in which the number of collaboration cases peaked and studied patterns of Technical Cooperation which impacted on the effectiveness and sustainability of Grant Aid projects. Specifically, the scope of patterns deemed as eliciting more positive impacts among the results quantitatively compiled by statistical analysis was further narrowed down to the water supply sector. Subsequently, the timing of the Technical Cooperation project implementation was analyzed as a causal condition to outcomes of "High Effectiveness/Impact of Grant Aid".

The quantitative analysis identified patterns in which introducing facilities/equipment by a Grant Aid project after implementing a Technical Cooperation project is attributable to effectiveness. Additional examination by QCA suggested that in the water supply sector, implementing Technical Cooperation and Grant Aid projects almost simultaneously would attribute to effectiveness (in this case, Technical Cooperation provides know-how on operation and maintenance directly linked to facility/equipment provided by Grant Aid) (Figure 1) and implementing Technical Cooperation for the long term, covering a period before and after Grant Aid implementation, would help achieve effectiveness and sustainability (in this case, Technical Cooperation mainly focuses on nurturing human resources

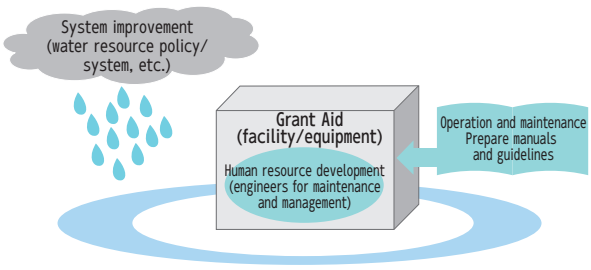


Figure 1 A pattern attributable to effectiveness

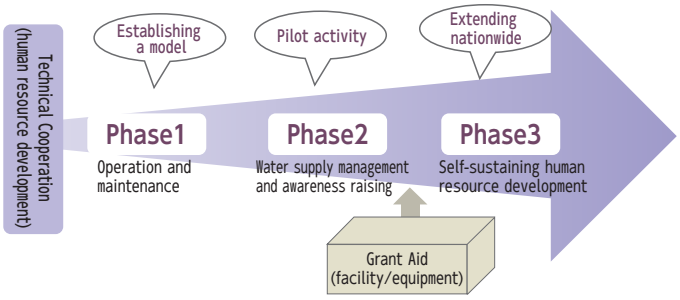


Figure 2 A pattern attributable to effectiveness/sustainability

of water supply, enhancing their facility operation and maintenance capacity but also raising awareness of water supply management and tariff collection to establish a human resource development system organized by local resources, at least at the time of completion of Grant Aid) (Figure 2).

The importance and effects of collaboration between financial cooperation, including Grant Aid and Technical Cooperation, have been mentioned in many ex-post evaluation reports and are perceived in the actual project scenes. However, they had not been proven with data. Despite quantitative analysis showing the collective results of many projects cross-sectorally, case analysis was needed, given the limited number of target cases for quantitative analysis. Even if no clear result was available from quantitative analysis due to the limited number of cases, QCA could be utilized to identify trends by comparing individual cases with features that stand out. Accordingly, the importance of program approach was indicated and lessons for project planning going forward were learned.

Leveraging QCA in future

QCA is expected to be utilized to improve projects based on the causal relationship between outcome and intervention as suggested by digitalizing intervention and factors linked to achieving project effects (impressions of local staff and beneficiaries and facts such as environmental factors) and organizing patterns of their combination using Set Theory. Moreover, QCA is a new approach linking both quantitative and qualitative analyses, which are often carried out independently, drawing a causal inference of project effect achievement but also helping further enhance learning within related organizations. Accordingly, JICA will promote the use of QCA.

Process Analysis

JICA has been trying 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 year, JICA has analyzed an education-sector reform project in Rwanda and transportation project in Vietnam, focusing on the project implementation process: how was the project effect achieved as planned/aimed and, in particular, how did the project stakeholders promote discussions/coordination to implement the project? The specific details are shown below.

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

The Project of School-based Collaborative Teacher Training (SBCT) in Rwanda, completed in December 2015, was implemented to improve the education in Rwanda through disseminating a system of the "School-Based In-service Training (SBI)" for lower secondary schools nationwide. This was a voluntary and spontaneous training activity among teachers, in response to the increasing need for in-service teacher training in Rwanda, which is promoting reforms in its education sector.

As a preceding project, the Project on Strengthening Mathematics and Science in Secondary Education (SMASSE) was implemented from 2008 to 2011 to improve the quality of lessons delivered by science and math teachers in secondary schools. SMASSE achieved its project purpose, given that the teachers significantly improved their lessons once trained, such as providing learner-centered lessons, but several challenges remained. The trainees did not share the knowledge and skills acquired through trainings with their colleagues due to the lack of a scheme for exchange and sharing such information, meaning the scope of the project effects remained limited. With this in mind, the SBCT project defined disseminating systematic and voluntary training activities as basic policy and planned a process to encourage teachers to work on the PDCA process for which they set training themes, consider custom-made measures to solve issues, put them into practice, conduct evaluations on these, and provide feedback to further improvement.

The terminal evaluation of the project confirmed various effects such as improvement in student performance represented by the better results on graduation exams for students of schools where the project implemented SBI, compared to non-SBI schools. A further benefit was the building of cooperative relationships among teachers as shown by some teachers starting to discuss issues with their colleagues (nurturing a school culture of mutual teaching). However, the causal relationship between the project intervention (activities to support SBI implementation) and its effects has not been fully examined, particularly the effect development process and the changes that were brought about by SBI in the knowledge, skills, attitudes and behavior of the project targets. Verifying these would make it possible to consider and apply activities that are more effective in achieving the target when forming and implementing similar projects in the future. Accordingly, JICA endeavors to identify the project planning and implementation processes, stakeholders' roles, organization/operation of the implementing agency, and other focuses to show applicable lessons for similar projects in future.

This analysis has been conducted referring to the method of "Process Analysis on Ex-post Evaluation." However, in response to the COVID-19 pandemic, information from local stakeholders have been collected remotely utilizing local consultants, online hearing and questionnaire while making sure the quality of the information by carrying out thorough monitoring such as arranging questions, reconciling interviewing contents, collecting videos, images as well as other visual data and revising questions as needed by being reported orally immediately after a hearing survey was completed. With these efforts, further analysis will be conducted based on the information collected.

A hearing survey with a target school

Case study Achieving effects and formulation of airport/port projects in Vietnam

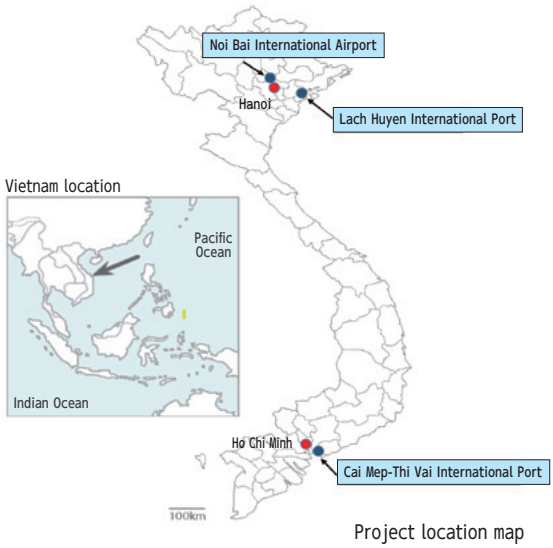
The Cai Mep-Thi Vai International Port Development Project was completed in April 2015. The objective was to construct container and general cargo terminals in the Cai Mep-Thi Vai area of southern Vietnam's Ba Ria-Vung Tau Province and develop infrastructure related to the terminals, in response to the increasing national demand for cargo, thereby supporting economic growth, not only in southern Vietnam, but nationwide. Since the low operation rate of the port remained a concern prior to the project completion, the project stakeholders approached the recipient government to boost this rate. The (external) ex-post evaluation observed an improvement in the rate and other items; confirming the positive evaluation results. Against this background, the process of overcoming concerns and achieving project outputs has been analyzed and verified by gaining feedback from relevant Japanese and Vietnamese personnel involved in the project, referring to existing documents and conducting a field survey to obtain lessons for similar port construction projects to be implemented going forward.

Meanwhile, in response to the growing number of larger vessels in the maritime transportation market, the ongoing Lach Huyen Port infrastructure construction project will respond by building a new international deep-sea port and related basic infrastructure in the Lach Huyen area, Cat Hai district, located in eastern Hai Phong, further boosting the economic development and competitiveness of Vietnam in the international market. This project was the first joint initiative between the public and private sectors in Japan and Vietnam to utilize the ODA loan scheme, planned and initiated by both governments as part of a strategic partnership. Accordingly, in formulating the Lach Huyen project, JICA considers that useful lessons have been learned for formulating similar projects in future by recording/analyzing how both Japanese and Vietnamese private and public sectors discussed and coordinated on how to make the project work.

Moreover, three construction projects, namely the Hanoi City International Gateway (the Terminal 2 Construction Project in Noi Bai International Airport, the Nhat Tan Bridge (Vietnam-Japan Friendship Bridge) Construction Project and the Noi Bai International Airport to Nhat Tan Bridge Connecting Road Construction Project), the opening ceremony of which was held in January 2015, were expected to boost the economic development and competitiveness of Vietnam overseas, by constructing a new international terminal building and improving access from downtown Hanoi. The projects have exceeded expectations, including saving more than 20 minutes on access time to the city and easing traffic congestion there. To verify the successful factors, JICA has confirmed and analyzed the efforts made in formulating and supervising three relevant projects, including the development of an airport and related infrastructure.

In response to the COVID-19 pandemic, JICA will collect information from local stakeholders remotely via local consultants and an online interview and questionnaire to proceed with the analysis.

A berth and cranes in the Cai Mep container cargo terminal



Project location map

These analytical results will then be compiled in line with the Delivery Challenge provided by the Global Delivery Initiative (GDI), a knowledge platform established by the international development community, summarized as Delivery Notes and published on the GDI website.

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*1 as an effective tool.

Many donor agencies have recently been promoting EBP and emphasizing the application of impact evaluation as key to further boosting projects and making them more effective. JICA conducts impact evaluations in health, education, agriculture and various other sectors.

An impact evaluation precisely assesses the changes caused in target societies by intervention (i.e. specific measures, projects, or development models to improve and solve development issues). To determine the effects of projects precisely, situations actually observed (Factual) and situations which would have appeared in the absence of the project (Counterfactual) must be compared. However, understanding counterfactual situations remains a challenge, since "ex-ante" conditions and situations outside the target area, which are compared before and after intervention to policies and projects to verify their effectiveness, often differ from counterfactual situations. Accordingly, to eliminate evaluation bias and ensure a reliable impact evaluation result, a Randomized Controlled Trial (RTC) is conducted, which carefully chooses an ideal control group indicating a counterfactual situation, or applying various statistical analyses as required to evaluate the real effect of intervention.

Since an impact evaluation requires additional costs and high expertise for its analysis, JICA prioritizes based on evaluation purposes and needs and conducts impact evaluations selectively on relevant projects. Impact evaluations will be actively incorporated into such projects to apply a new approach or expand the scale going forward so that reliable evidence obtained from the impact evaluation can be utilized for and reflected in project implementation and policymaking in partner countries.

Candidates capable of planning, conducting and supervising impact evaluations properly as well as utilizing the result are crucial in promoting impact evaluation. Accordingly, JICA also strives to develop human resources for impact evaluation via capacity development training on impact evaluation for development consultants and other personnel.

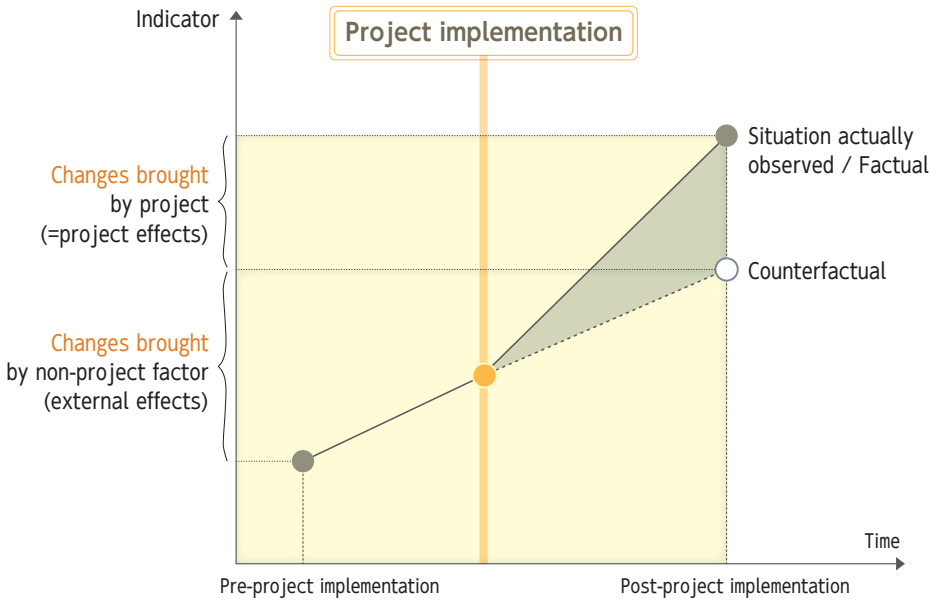


Figure Conceptual Diagram of the Impact Evaluation: Comparison of situation actually observed and counterfactual situation

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

Case study

Project for Capacity Building of Facilitators on Improving Productivity and Quality for Small and Medium Enterprises in Central America and the Caribbean Region
- Verifying effects of introducing *Kaizen* on working conditions, wages and employment -

Most businesses throughout Central America and the Caribbean Region are classed as small and medium enterprises (SMEs). And with the need for job creation, economic growth and poverty reduction in mind, developing their capacity remains an important challenge. To strengthen quality management and organizational capacity, which impact directly on SMEs' competitiveness and productivity, JICA has supported the efforts of SME support agencies in the regions to replicate Japanese methods to improve and hence enhance their consultation capacity to SMEs. The project has trained facilitators and introduced Japanese *Kaizen* management*2 to improve SMEs and their productivity within each country.

Although past studies mainly evaluated the impact of introducing *Kaizen* on management practices and business performance, few studies have assessed the impact on workers from perspectives of working conditions, wages and employment. Since *Kaizen* applies a participatory approach, in which all parties, from managers to workers, are involved, it is important to understand any changes in workers' awareness and behavior. Accordingly, working alongside an external researcher, a interview survey was conducted, targeting both managers and workers of enterprises having introduced *Kaizen*, and propensity score matching methods*3 were applied to analyze the effect of *Kaizen* and evaluate the impact of introducing it during the project on working conditions, wages and employment in SMEs in the regions*4.

The analytical result confirmed that managers felt that *Kaizen* encouraged employees to change, including: (1) Improve their working practices, (2) Increase their participation to work and (3) Enhance mutual trust. Simultaneously, managers and workers perceived the *Kaizen* effects differently, and especially for the part of workers, it takes time to embrace new initiatives and realize their effectiveness. Conversely, the analysis found sales, wages and employment remained unaffected. To elicit positive impacts on these elements across SMEs, as well as *Kaizen*, a broader management approach is also needed.

The introduction of *Kaizen* is considered to require workers to have a mindset of thinking spontaneously and independently, and the results of this verification provide important suggestions for the continuous development and improvement of *Kaizen* activities in the future. With a view to introducing *Kaizen* on a long- rather than short-term basis, JICA will continue its *Kaizen* cooperation, taking into consideration the importance of establishing *Kaizen* and the need to carefully ensure workers' understanding of *Kaizen*.

A factory introduced *Kaizen* in El Salvador

*2: The term '*Kaizen*' collectively means activities to make each workplace more productive according to the business type, scale and production environment. It is believed to be one of the factors supporting the high growth of Japan from a production perspective.

*3: A method to compare two groups with similar characteristics by selecting the target subjects of intervention and non-target subjects of a similar nature on the individual background factors observed. By using logistic regression with explanatory variables, which include background factors that impact on determining the intervention subject and the actual existence of intervention, it calculates the probability (propensity score) to presuming the attribute of each case (intervention or control groups). Subsequently, a comparison control group is formed by randomly selecting (matching) pairs of the target subjects and non-target subjects with similar propensity scores.

*4: Shimada,G and Sonobe,T (2018). Impacts of Kaizen Management on Workers: Evidence from Central America and the Caribbean Region
https://www.jica.go.jp/jica-ri/publication/workingpaper/wp_173.html

Case study Disaster prevention education project utilizing a traditional "Maena" dance in Nias Island - Verifying effects of introducing disaster prevention education on children's disaster prevention awareness and behavior -

Nias Island in Indonesia was seriously damaged by the Nias-Simeulue earthquake that struck in March 2005. Having experienced such an unprecedented disaster, the Island acknowledged the urgent need to promote in-depth understanding and raise awareness of the inhabitants with regard to disaster prevention as well as the need for prompt evacuation and other responses. However, sufficient improvement did not transpire after the disaster, due to the lack of disaster prevention education and a local custom whereby inhabitants hesitate to discuss disasters.

Under the circumstances, JICA provided support for disaster prevention education utilizing a traditional dance "Maena"*1, which Wako University has implemented (Grassroots Technical Cooperation). The most notable features of the project include ensuring each elementary school child creates a "Maena for disaster prevention", which incorporates the concept of disaster prevention into the Maena lyrics and presents in each area of the Island as well as basic disaster prevention activities such as confirming evacuation routes and instruction systems during disasters and improving the emergency contact network. This unique idea of utilizing traditional dance was inspired by the ability of neighboring Simeulue Island to minimize fatalities following the 2004 Indian Ocean earthquake and tsunami thanks to inherited lullabies and folklores which incorporate disaster prevention insights. From the start, the project was also expected to achieve psychologically preferable effects by learning through fun and familiar culture such as traditional dance.

From 2017 to 2018, JICA deployed external researchers and precisely verified the project effect on children's disaster prevention awareness and behavior. Specifically, a questionnaire survey was conducted; targeting elementary schoolchildren on whom Maena for disaster prevention was implemented (intervention group) and those schoolchildren facing similar geographical conditions but outside the program scope (non-intervention group) to conduct an impact evaluation incorporating "propensity score weighting (PSW)" *2 and "difference-in-differences (DID)" *4.

The analytical results revealed that Maena for disaster prevention made schoolchildren be more aware of the importance of discussing disaster preparedness and prevention. Across the board, children of the intervention group actively gained insights into natural disasters from their family and neighbors and extended their disaster prevention knowledge. More importantly, in accordance with these changes, they were more likely to engage in proper evacuation behavior, such as moving under the table when an earthquake actually occurred. Conversely, the project did not improve awareness of disaster risks in Nias Island, since disaster awareness was already high among its inhabitants.

The impact evaluation indicated that disaster prevention education utilizing Maena helped improve disaster prevention knowledge and evacuation behavior. Effectiveness achieved by this approach of leveraging traditional dance without large-scaled cost and equipment will be crucial when implementing similar projects in future with cost effectiveness in mind. Inspired by the project activities and its impact evaluation result, Maena for disaster prevention has been introduced island-wide in all elementary schools as an extracurricular lesson.

Evacuation drills

Schoolchildren dancing Maena for disaster prevention

*1: A dance with a song casually enjoyed at wedding ceremonies and various other events in Nias Island. The steps are understandable, which means anyone can participate.

*2: A method to remove bias from measuring effects by calculating the probability of each target subject included in intervention group (propensity score) and the declining weights of children with excessively higher and lower probability when comparing both groups.

*3: A method to estimate the effect of intervention by calculating difference-in-differences between the outcome change before and after intervention in the intervention group and the outcome change of the same period in the on-intervention group.

*4: Shoji, M., Takafuji, Y., & Harada, T. (2020). Behavioral Impact of Disaster Education: Evidence from a Dance-Based Program in Indonesia. *International Journal of Disaster Risk Reduction, 45,* 101489. https://www.sciencedirect.com/science/article/abs/pii/S2212420919311392?via%3Dihub

Contributed Article
For Evidence-based Strategy Development

Hiroyuki Yokoi, Evaluation Officer, Independent Evaluation Group, World Bank

The 2019 Nobel Prize for Economics was awarded to three economists, Professor Abhijeet Banerjee and Professor Esther Duflo from the Massachusetts Institute of Technology (MIT) and Professor Michael Kremer from Harvard University in the US, for their experimental approach to alleviating global poverty. Their impact evaluation*1 is essentially intended to provide evidence based on experimental results. Driven by their research, the number of impact evaluations has increased significantly since around 2005, reaching over 500 cases per year*2. Then, the question is, how much is this evidence used? And how can it be used in policy-making and project design for developing countries?

How do international organizations use impact evaluation?

According to a report published in 2012 by the Independent Evaluation Group (IEG) of the World Bank, the World Bank Group conducted 411 impact evaluations from 2000 to 2010, and 22-23% of them were used to make important decisions for projects (e.g. whether to continue, scale up, scale down, or suspend the project). This report also indicated that the systematic selection of sectors for impact evaluation and the integration of impact evaluation into the project cycle are essential to the effective use of impact evaluation results*3. Meanwhile, the IEG report entitled "Learning and Results in World Bank Operations: How the Bank Learns" pointed out that the strong pressures for disbursements on World Bank staff had made it difficult for them to use academic research and impact and project evaluation results in project design and implementation*4.

The Inter-American Development Bank reported that it had planned and conducted 380 impact evaluations from 2006 to 2016 and found that projects with impact evaluations have faster disbursements and are completed earlier than projects without impact evaluations. Like the World Bank, the Inter-American Development Bank also indicated that the lack of a consistent strategy for selecting projects with impact evaluations hindered the effective use of impact evaluation results in sector strategy development*5.

The World Bank's efforts to turn evaluation results into action

The IEG is responsible for evaluating the relevance, efficacy, and efficiency of programs and projects carried out by the World Bank Group, assessing their contribution to development effectiveness, and communicating evaluation results and recommendations to the World Bank Group's Board of Directors through the Committee on Development Effectiveness (CODE). The IEG's recommendations based on corporate, sector, and thematic evaluation results are compiled and translated into action plans for the World Bank Group in the Management Action Record (MAR), which is used to facilitate regular monitoring. However, the MAR has not been used as much as expected (52% of the recommendations have been implemented). The IEG is now reviewing the implementation of the MAR and reforming the MAR system. This reform aims to make the IEG' s recommendations fewer and more strategically focused, clarify whether the Bank's management will agree or disagree with the recommendations, and require the Bank's management to report annual progress towards the recommended outcomes*6.

To use evidence in strategy development

As shown in the above-mentioned examples, there are some key points to consider, depending on the type of evaluation, such as impact, corporate, sector, thematic, country, and project, in order to ensure the full use of evidence gathered from evaluations in strategy development, policy-making, and project design. Given these lessons, what should development partners, like JICA, take into account? The answer to this question is to consider two aspects: technical and organizational.

*1: See P. 44-46 for details of JICA's approach to impact evaluation.
*2: Manning, R., Goldman I., & Hernandez Licona, G. 2020. The impact of impact evaluation: Are impact evaluation and impact evaluation synthesis contributing to evidence generation and use in low- and middle-income countries?. WIDER Working Paper 2020/20. Helsinki: UNU-WIDER.
*3: Independent Evaluation Group. 2012. World Bank Group Impact Evaluations : Relevance and Effectiveness. Washington, DC: World Bank. © World Bank. https://openknowledge.worldbank.org/handle/10986/13100 License: CC BY 3.0 IGO.
*4: Independent Evaluation Group. 2014. Learning and Results in World Bank Operations : How the Bank Learns, Evaluation 1. World Bank Group, Washington, DC. © World Bank. https://openknowledge.worldbank.org/handle/10986/19982 License: CC BY 3.0 IGO.
*5: Crespo, Ana, and Oliver A. Azuara. 2017. IDB's Impact Evaluations: Production, Use and Influence. Washington, DC: Inter-American Bank.
*6: Independent Evaluation Group. 2020a. Management Action Record Reform: IEG's Validation Report. Washington, DC: World Bank. © World Bank.

To strengthen evaluation methodology and maintain quality

On the technical aspects, strengthening evaluation methods is the element that an institution has to explore at the first place. Evaluation methods should be designed flexibly, depending on the unit of analysis chosen (e.g. corporate, sector, thematic, country, or project). In particular, in the case of corporate, sector, thematic, and country evaluations, evaluation design needs the consistency from planning to implementation to ensure the systematic evaluations across the different levels (e.g. project, program, partnership, and organizational). More specifically, it is essential to set clear and logical evaluation questions, develop an analytical framework in line with the questions, and select mixed methods based on the analytical framework, generate and analyze data based on the evaluation questions and the analytical framework, and integrate the analytical results gained by applied methods*7. The second technical aspect is how to maintain and enhance the quality of evaluation. As mentioned above, there is a qualitative gap in impact evaluation. For example, 94% of the 166 impact evaluations conducted by the World Bank were satisfactory in quality*3, while 55% of the impact evaluations conducted by the Inter-American Development Bank were satisfactory in quality by international standards*8. Evaluators need to ensure evaluation quality and data accessibility*9 to deliver high-quality evaluations that meet the international standards.

Identify evaluation needs and integrate evaluation into the management cycle

On the organizational aspect, one has to consider the way to identify evaluation needs. In any products, a proper assessment of demand is essential. Evaluators need to engage with the management to capture organizational strategies for the next few years and to anticipate what evidence will be needed for the management. The IEG consults with the World Bank President and various other management team when making an annual working plan to understand which direction management will steer the Bank in, know what evidence will be needed, and strategically select what to evaluate. For example, the latest working plan calls for strengthening country evaluation capacity in order to enhance the Country Partnership Framework as intended by management and selects sector and thematic evaluations to focus on in line with the strategic focus of the World Bank*10.

The second organizational aspect is how to integrate various evaluation tools into the management/project cycle. As mentioned above, the lack of integration of impact evaluation into the project cycle prevents the strategic use of impact evaluation results. Moreover, even if corporate and sector evaluations are conducted, the recommendations are often out of date when the evaluation results are reported because there is a time lag between identifying evaluation needs and reporting evaluation results.Iin order to ensure the appropriate distribution of limited management resources, evaluators should agree, before starting evaluations, with users (management, operational departments, and staff) on the evaluation cycle and the evidence to be gathered while taking into account management or sector strategies or projects in the pipeline for the next few years.

Professor Ronald A. Heifetz at Harvard University makes distinctions between technical problems and adaptive challenges for organizations. Many organizations*11 deal with technical problems but cannot properly address adaptive challenges. In the evaluation, the technical problem is how to generate good quality evidence, while the adaptive challenge is how to organize the systemic use of evidence. These two issues should be addressed in parallel to facilitate evidence-based policy-making.

*7: For details of these discussion, refer to Fereday and Muir-Cochrene (2006) and Johnson, Adkins and Chauvin (2020).
*8: Crespo, Ana, and Oliver A. Azuara. 2017. IDB's Impact Evaluations: Production, Use and Influence. Washington, DC: Inter-American Bank.
*9: Manning, R., Goldman I., & Hernandez Licona, G. 2020. The impact of impact evaluation: Are impact evaluation and impact evaluation synthesis contributing to evidence generation and use in low- and middle-income countries?. WIDER Working Paper 2020/20. Helsinki: UNU-WIDER.
*10: Independent Evaluation Group. 2020b. IEG Work Program and Budget (FY20) and Indicative Plan (FY21-22). Washington, DC: World Bank. © World Bank.
*11: Heifetz, R. A. 1., Grashow, A., & Linsky, M. 2009. The practice of adaptive leadership: Tools and tactics for changing your organization and the world. Boston, Mass.: Harvard Business Press.

Knowledge Co-Creation Program for Evaluation Capacity Development in Developing Countries

JICA organized a new Knowledge Co-Creation Program for government officials in developing countries to learn how to design, implement, and institutionalize project evaluations. The first program session for FY2020 was held virtually online from January 25 to February 19, 2021.

The 2030 Agenda for Sustainable Development, adopted along with Sustainable Development Goals (SDGs) at the 70th session of the United Nations General Assembly on September 25, 2015, include an additional chapter on "Follow-up and Review" to achieve the SDGs and point out the importance of developing clear, measurable indicators. The Agenda also underline the need to strengthen evaluation capacities in developing countries and call for active support from development partners.

Against this backdrop, JICA organized a new Knowledge Co-Creation Program on project evaluation regarding "Capacity Development for Improving Design, Implementation and System Institutionalization" for officials from central governments and other relevant agencies in developing countries to learn how to design, implement, and institutionalize project evaluations in order to enhance their evaluation capacities and develop and strengthen evaluation systems in individual countries. This program is to be held from FY2020 to FY2022.

This training course aims to develop evaluation capacity and knowledge of evaluation methodology so that participants can make specific recommendations to improve their countries' project evaluation systems. To this end, four unit objectives (outcomes) are set for participants: (1) to grasp the present situations and challenges of project evaluation system of each participants' country and entity, (2) to understand the present situations and challenges of project evaluation systems in Japan and the world aligning with the SDGs, (3) to acquire knowledge and methodologies for evaluation design and project evaluation system which can provide useful information for project management, and (4) to propose a concrete plan for improvement of project evaluation system in each country.

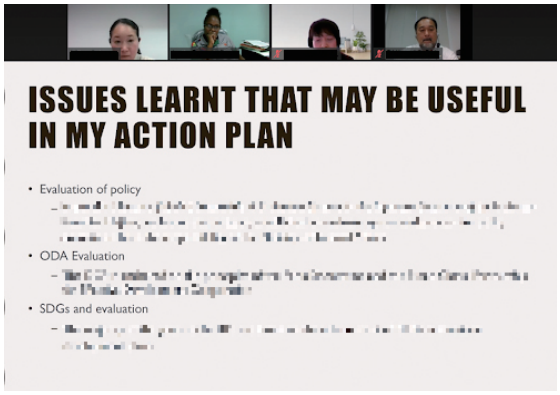
In order to achieve these objectives, this training program was prepared and implemented in cooperation with many partners, including Professor Takahiro Saito at Osaka University and other experts from the Japan Evaluation Society (JES) and officials from the ODA Evaluation Division of the Minister's Secretariat of the Ministry of Foreign Affairs and the Engineering Affairs Division of the Minister's Secretariat of the Ministry of Land, Infrastructure, Transport and Tourism, who developed training materials and answered questions from participants.

The training session for FY2020 was held virtually online from January to February 2021 because the COVID-19 pandemic prevented participants from traveling from their home countries to Japan. The four-week training session was attended by six participants from six countries: India, Papua New Guinea, Botswana, Zimbabwe, Moldova, and Ukraine. These participants, responsible for monitoring and evaluating programs and projects at central and regional government agencies and facing problems with the design, implementation, and institutionalization of project evaluations, examined and analyzed their organizations' evaluation systems and structures and developed specific action plans. They took into account their individual situations, through lectures from and discussions with experts with rich knowledge and experience in the evaluation field. In addition to these participants, 10 other officials from the target countries and three national staff members from JICA overseas offices participated in the training as observers, accessing on-demand training materials. In Ukraine, the participant from the State Road Agency took the initiative in applying the outcomes of the training by making measures to improve the evaluation system in collaboration and cooperation with the observers from the same Agency and the Ministry of Finance.

Online training programs for participants from different countries and regions around the world need to be adjusted taking into account the time differences between the participants' countries. In this training program, lecturers of various fields of study developed new on-demand training materials (by uploading lecture videos to YouTube and distributing audiovisual materials) to allow participants to learn by themselves in an efficient manner. Moreover, while taking into account time differences between participants, this training program provided opportunities to let participants join online presentations and discussions so that they were able to learn from each other.

JICA will learn lessons from the first session in FY2020 to further improve the content and quality of the training sessions for the next two years.

An online discussion



An online presentation of action plan

Information Dissemination and Learning

One of the objectives of JICA's project evaluation is learning. JICA evaluates its projects to review the problems faced by past projects and their solutions, as well as causes for failure, and draw lessons for future project management and improvements. The evaluation results are shared within the organization and widely disseminated to the development community inside and outside of Japan.

Presentations at the Japan Evaluation Society

The 21st Conference of the Japan Evaluation Society (JES) was held online on Saturday, November 28, 2020, and JICA planned and organized a session on project evaluation. This was the eighth session held by JICA, which has hosted a common session or sessions every year since 2015. Like previous years, this year's session aimed to share recent developments in project evaluation and collect insights from participants to improve JICA's project evaluation practices. The conference was attended by approximately 100 participants, who were divided into three sub-conferences. JICA's session attracted some 60 participants, who actively participated in the discussion.

The first half of the session started with an explanation of the background and purpose of the session, followed by three presentations. The first presentation, entitled "Influence to the Operation of JICA Project Evaluation by COVID-19" described the impact of COVID-19 on JICA projects and ex-post evaluations and the responses of JICA to these challenges. The next presentation on "Revision of JICA Ex-post Evaluation Criteria and its future prospect" outlined important modifications made to JICA's evaluation criteria in line with the new DAC evaluation criteria revised to incorporate the principles of the SDGs, as well as arguments raised in this process*1. The third presentation on "New DAC Evaluation Criteria, Interpretation and application" provided examples of terms redefined in the new DAC evaluation criteria (e.g. outcome, equity, human rights, resilience, and coherence) to suggest that the new criteria should be interpreted and applied not in their literal sense but the context of each project.

These presentations were followed by questions from the audience, such as (1) how these modifications had improved learning in the project evaluation process and (2) how stakeholders had reacted to the change from a three-level to a four-level sub-rating system. To answer question (1), JICA explained that non-scored items had been added to improve learning. Then, JICA answered the question (2) by saying that the change had been favorably received by internal and external stakeholders, including advisory committee members, because it would prevent the ratings from converging to the midpoint and in turn, facilitate more accurate trend analysis and help make recommendations and proposals.

The second half of the session included a presentation on "An Application of Qualitative Comparative Analysis (QCA): Discussion on Influence of JICA's Technical Assistance Project to Effectiveness and Sustainability of JICA's Grant Aid Project in Water Sector"*2. This presentation discussed the analysis of effective collaboration between Grant Aid and Technical Cooperation in the water supply sector and outlined the patterns of Technical Cooperation that would improve the effectiveness and sustainability of Grant Aid. As mentioned above, this session was a good opportunity to report JICA's past efforts and progress in project implementation during the recent COVID-19 pandemic and share information on JICA's recent evaluation activities with evaluation experts through discussions with the audience. The insights gained through the exchange of views at this conference will be used to further improve JICA's project evaluation practices.

Presentations at the Japan Society for International Development

In response to the first revision to the DAC evaluation criteria in almost three decades, JICA held a round-table session entitled "Evaluation of International Development Project –Focusing on Updates of DAC Evaluation Criteria–" at the 31st Annual Conference of the Japan Society for International Development (JASID) on December 5 and 6, 2020.

This revision to the DAC evaluation criteria, intended to adapt evaluation to the SDGs and incorporate the principle of "Leave No One Behind" in the evaluation process, shared an important underlying theme with the JASID Annual Conference, which was entitled "Time for Change: Innovation for Inclusive Society."

In the round-table session, JICA made three presentations. The first presentation, entitled "The Background and Outline of the New DAC Evaluation Criteria and JICA's Response," described the background and objectives of the revised DAC evaluation criteria and the content and highlights of the consequent modifications to JICA's project

*1: See P.54-55 for JICA's revised ex-post evaluation criteria.
*2: See P.40-41 for an overview of the qualitative comparative analysis (QCA).

evaluation criteria. The next presentation on "A View on the Revised Ex-post Evaluation Criteria from Project Management Department side" pointed out the importance of identifying keys to success in innovative, challenging projects through ex-post evaluations. The third presentation on "Future Challenges for JICA's Project Evaluation" discussed the revised evaluation criteria and their future implications as well as JICA's efforts to facilitate the use of lessons learned.

Following these three presentations, participants made comments, such as "I think it was a good revision," "Because gender equality, human rights, and human wellbeing are qualitative measurements, they may raise a question of objectivity," and "It seems that this revision will make it more important to enhance quality control in the evaluation process." In response to these comments, JICA explained its plans to address the proposed issues. JICA's new project evaluation criteria will be applied to project evaluations initiated in FY2021 and onwards. JICA will actively disseminate and share the knowledge and experience gained through the application of these new criteria with internal and external stakeholders, including relevant conference attendees, and use their feedback to further improve the quality of evaluation.

Collaboration with the Development Assistance Committee of the Organization for Economic Cooperation and Development (OECD-DAC)

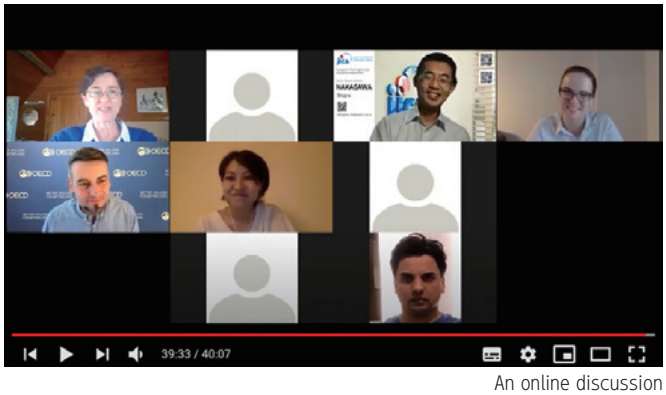
International collaboration is increasingly important to achieve the SDGs with limited resources. In particular, JICA emphasizes communication and collaboration with multilateral and bilateral development partners, cooperating to create a groundswell of support to international development and facilitating information-sharing and collaboration to improve project and organizational management.

In 2020, the Results Community planned to develop guidance to help members implement the Guiding Principles on Managing for Sustainable Development Results*4 adopted by the DAC in July 2019. With the COVID pandemic hampering in-person workshops, virtual working groups were established to exchange on the challenges identified by members to align to the Guiding Principles and the solutions to address them.

The OECD-DAC has established the Results Community*3, a network of partners to promote results-based management (RBM) in the global community. JICA has participated in the Results Community to support its vision to promote RBM. In 2020, the Results Community originally planned to develop technical guidelines, such as guidance on the Guiding Principles on Managing for Sustainable Development Results*4, adopted by the DAC at the July 2020 meeting. However, they changed their plans to address the COVID-19 pandemic and exchanged information to identify problems and solutions in the spirit of the Guiding Principles.

In these discussions, JICA reported its efforts to apply one of the Guiding Principles (to "maximise the use of results information for leaning and decision-making"). In particular, JICA explained to OECD-DAC members how to apply lessons learned from evaluation results to ongoing similar projects by referring to examples in JICA Annual Evaluation Report 2019. JICA also shared examples of new evaluation methods, such as qualitative comparative analysis and satellite date usage*5, to illustrate how to collect and analyze evaluation data to draw useful lessons.

A culture of dialogue and collaboration with multilateral and bilateral agencies like this can facilitate international networking and human development. In addition, it is expected to improve the efficiency and effectiveness of project management by sharing knowledge and experience with other development partners and making an intellectual contribution to the global community.



An online discussion

*3: Refer to the OECD-DAC website for details (http://www.oecd.org/dac/results-development/results-community.htm).
*4: Refer to the OECD-DAC website for details (http://www.oecd.org/dac/results-development/guiding-principles-on-managing-for-sustainable-development-results.htm).
*5: For details, see P.36-37 (qualitative comparative analysis) and P.40-41 (use of satellite data) in Part II of JICA Annual Evaluation Report 2019 (https://www.jica.go.jp/english/our_work/evaluation/reports/2019/index.html).

Report on the 5th Asian Evaluation Week (AEW)

Asian Evaluation Week (AEW)

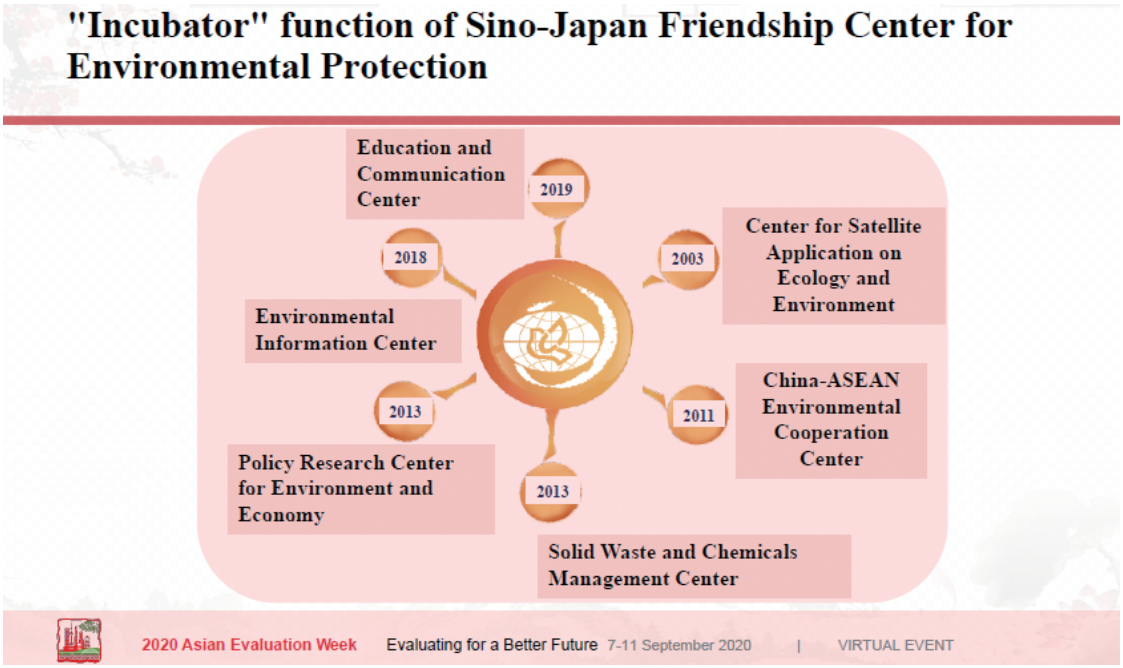
The Asian Evaluation Week (AEW) is an international event jointly organized by the Asian Development Bank (ADB) and the Chinese Ministry of Finance to share information on development evaluation in the Asia-Pacific region. Celebrating its fifth anniversary in 2020, the AEW was held online (with Zoom) from September 7 to 11, with the theme of "Evaluating for a Better Future," attended by government officials, international organization representatives, and evaluation experts from 112 countries and regions, mainly in the Asia-Pacific.

JICA's Session

JICA held an exclusive session for the third time in a row and presented the results of the 2019 Thematic Evaluation: Analysis on JICA's Cooperation in China for Environmental Management and Infectious Disease. The session started with a historical overview of Japan's official development assistance (ODA) to China, including a chronological review of projects from the beginning to the present day, followed by case studies in the above two fields of cooperation. The presentation in the environmental management field by a representative of the Chinese implementing agency (Sino-Japan Friendship Centre for Environmental Protection) discussed the medium- to long-term impact of major cooperation projects, especially the Center's role as an incubator in the environmental management field and as a platform for Japan-China cooperation and outlined prospects for future cooperation between the two countries after the end of Japan's ODA to China. The presentation in the infectious disease field described the outcomes of major cooperation projects, such as polio eradication, China-Japan Friendship Hospital, and infectious disease control projects, as well as their success factors and lessons learned for the future. , then, a video created by JICA's Evaluation Department was played outlining the Thematic Evaluation.

In the Q&A session, a representative of the Evaluation Department answered questions from the audience on JICA's project evaluation (e.g. JICA's evaluation criteria used to measure the impact of projects and JICA's efforts to strengthen the evaluation capacities of implementing agencies in developing countries). Then, the presenters discussed the outcomes of the long-standing cooperation between Japan and China, its contribution to controlling the COVID-19 pandemic, and prospects for future cooperation between the two countries. The presenter on behalf of the Shino-Japan Friendship Center for Environmental Protection told an anecdote about Japan-China cooperation during the COVID-19 pandemic (According to which, technical information on how to dispose of medical waste (e.g. needles) generated during testing and treatment was provided by Japanese project team members to the Center and translated and disseminated around China by the Center). These presentations and discussions enhanced the interest and understanding of the audience about the impact of the long-standing Japan-China cooperation and the future Japan-China relationship.

Thematic Evaluation: Analysis on JICA's Cooperation for Environmental Management and Infectious Disease in China Report URL
https://www.jica.go.jp/activities/evaluation/tech_ga/after/theme.html



(Presentation: Shino-Japan Friendship Center for Environmental Protection functioning as an incubator in the environmental protection field in China)

The Roles Played by ODA Projects for China in Environmental Management

Naoki Mori, Institute for Global Environmental Strategies

I worked with the State Environmental Protection Administration (SEPA: currently, Ministry of Ecology and Environment) in China from 2003 to 2006 as a JICA long-term expert with the aim of enhancing the collaboration between Japanese ODA loans and other Japanese environmental cooperation. As one of the important tasks, I conducted mid-term review to verify the expected environmental effects of the Environmental ODA Loan projects (Japanese ODA Loan projects aimed at environmental measures) being implemented at that time. Base on the results of the review, in the followings, I would like to touch on the impacts of the Environmental ODA Loans committed from the 1990s to the early 2000s on China's environmental policies and systems, as well as the role of JICA technical cooperation in strengthening the China's environmental policies and systems after 2007 when new commitment of the Japanese ODA Loans to China ended.

1. Impacts of Environmental ODA Loans on China's environmental policies and systems

(1) The effectiveness in local government's ability to manage environmental projects

The Environmental ODA Loan is considered to have enhanced the abilities of Chinese local governments to plan, implement, and manage environmental projects, and played a useful role in facilitating the implementation of the projects under the Loan. The Environmental ODA Loan has provided funds to the local governments, especially the municipal governments of cities designated as priority polluted areas, through the central government (SEPA) for the implementation of environmental projects. Thereby, many local governments followed the progress management methods demanded by the Japanese ODA Loans when implementing the funded environmental projects. Environmental ODA Loan projects have been implemented over 100 cities.

(2) The effectiveness in introduction of clean technologies

Environmental ODA Loan projects were not only about supporting technologies for treating pollutants emitted from factories, but also cleaner production technologies that suppress emissions of pollutants in the production process with energy-saving/resource-saving technologies, and technologies that enable the collection and reuse of valuable resources contained in waste. For example, in Benxi, Liaoning Province, which is a heavy industrial city that produces abundant iron ore and coal, I heard locally that an engineer from a company involved in the cleaner production project under the Japanese ODA Loan was qualified as a cleaner production consultant after leaving the company and diagnosed other companies.

(3) The effectiveness in environmental systems and standards

In the process of implementing Environmental ODA Loan projects, we could see some cases where the ODA Loan has also contributed to establishing institutional systems by local governments, which were indispensable for achieving sustainable development. Standards for the design and construction of environmental management related facilities, as well as operation technologies and accounting management were gradually introduced. For example, the central government enacted the Cleaner Production Promotion Law in 2001 recognized its effectiveness of technology. Furthermore, guidelines for selecting sewage treatment technologies for sewage treatment plants were also developed, as knowledge on their knowledge was accumulated and disseminated through implementation of the Environmental ODA Loan projects. In the guideline, there are included the experiences through environmental ODA loan projects such as in the region of North China where there is in a severe water shortage, sewerage treatment should be designed assuming the use of treated wastewater, and in other regions where more money can be invested, one should consider the digestion treatment of sludge, and the recovery and use of methane gas generated in the process to generate power.

(4) The effectiveness in environmental cooperation between cities in Japan and China

Environmental ODA Loans have had an effect in promoting and strengthening technical cooperation and exchanges between China and Japan at the city level. For example, the Chongqing Environment Model City Project played a role in complementing the technical cooperation between local governments regarding advanced natural gas utilization. Chongqing and Osaka conducted joint researches on various technologies, including gas supply technologies for automatic supply systems, combustion technologies for industrial fields such as boilers and furnaces, and detection technologies for gas leakage. In the Beijing Sewage Treatment Plant Construction Project, the Tokyo metropolitan government, a friendship city of Beijing, accepted trainees for water treatment and management techniques including how to start up a new big sewage treatment plant.

2. The role played by JICA technical cooperation in strengthening China's environmental policies and institutional framework

On January 1, 2015, the amended Environmental Protection Law (hereinafter referred to as the amended Environmental Law) entered into force in China. The amended Environmental Law called for ever stricter penalties for polluters of the environment. It also specified the responsibilities of the regulatory parties at the same time, which had not been included in the former law. At the same time, the subject of public interest proceedings against environmental pollution was clarified, and the disclosure of environmental information by the government and companies was institutionalized. Regulations have also been tightened in implementing the amended Environmental Law. From the viewpoint of promoting highly transparent administrative execution and mutual monitoring, the information of the Pollutant Discharge Permit is publicly disclosed on the Internet (the National Administration Information Platform) after the business application is approved.

JICA cooperated in preparation for the amended Environmental Protection Law. JICA conducted training in Japan in 2013, before the Standing Committee of the National People's Congress (NPC), the legislative body of China, held the second meeting to deliberate on the law amendment. Eleven members from the Administrative Law Office of the NPC Legislative Affairs Commission and the Ministry of Environmental Protection who were involved in the amendment of the Environmental Protection Law attended the training. The training emphasized philosophy of the Environmental Law, including importance of environmental rights, the impact of lawsuits on environmental policies, settlement of environmental pollution disputes, and the relationship between local governments and companies were introduced. Chinese side expressed, "We would like to apply what we learned from the training, in particular, background of local governments and companies' voluntary efforts in environmental protection, the active participation of citizens, and the government's incentive policies for enterprises, in order to strengthen the environmental protection measures in China."(JICA China Office News, April 2013)

3. Future Japan-China environmental cooperation

The strengthening of environmental regulations by the Chinese government, which could have been supported through international cooperation including Japan, can have a negative impact on business activities such as adding costs. However, the higher requirement of environmental measures will create opportunities in environmental businesses. As a matter of fact, from the perspective of cooperation between Japan and China in the environmental field, we can observe that business sector has been assuming a leading role. As the environmental businesses in Japan and China continue to grow, there are opportunities for both governments to cooperate in developing a kind of framework for enhancing green finance taking advantage of the common ground of SDGs and Paris Agreement. I believe it will become a promising area for future Japan-China environmental cooperation.

Revisions of Project Evaluation Criteria
- To Usher in a New Era of Project Evaluation for JICA -

JICA had evaluated Technical Cooperation, ODA Loan, and Grant Aid projects in a consistent manner across these three types of assistance based on the Five DAC Criteria since FY2009, and it reviewed its evaluation criteria for the first time in a decade since a new JICA was established, in part because the DAC evaluation criteria were revised.

1 Background and purpose of the revisions

1.1 Revisions to the DAC evaluation criteria

The Development Assistance Committee of the Organization for Economic Cooperation and Development (OECD-DAC) published "Principles for Evaluation of Development Assistance" in 1991 to set out five evaluation criteria (i.e. relevance, effectiveness, impact, efficiency, and sustainability), which were accepted as a global standard for evaluation criteria. In 2015, UN Member States adopted the 2030 Agenda for Sustainable Development: Transforming Our World*1 and set Sustainable Development Goals (SDGs)*2 to be achieved by 2030 based on the principle of "leave no one behind," which triggered a review of evaluation criteria. As a result of discussions, the Network on Development Evaluation (EvalNet) under the OECD-DAC agreed to add a new criterion (coherence) and redefine the existing evaluation criteria (to reflect the principles of the SDGs) at the end of 2019.

1.2 JICA's objectives for revising its project evaluation system

JICA's objectives for revising its evaluation criteria were to clearly reflect the evaluation perspectives of the SDGs, which are also aligned with JICA's vision, and to promote synergies and interlinkages with other development partners. The revised DAC evaluation criteria were also incorporated into JICA's evaluation criteria because of their consistency with these objectives. Another objective was to make the evaluation system more flexible for diverse project forms and contents in order to evaluate the appropriateness and timeliness of decisions made and actions taken if environment changes during project implementation and identify useful solutions to increase the effectiveness of development interventions. Moreover, JICA intended to make sharper distinctions in ex-post evaluation ratings for each of the criteria (sub-ratings) because of the tendency to rate many of the projects as "fair" on a three-level scale of high, fair, and low. In light of these objectives, JICA's evaluation criteria were reviewed through discussions with various internal and external stakeholders, including external experts and development consultants specialized in project evaluation, and revised as follows.

*1: To obtain the English version, go to https://www.un.org/ga/search/view_doc.asp?symbol=A/RES/70/1&Lang=E. The provisional Japanese version translated by the Japanese Ministry of Foreign Affairs can be found on https://www.mofa.go.jp/mofaj/files/000101402.pdf.
*2: Reference: (JICA's Position Paper on SDGs) Toward Achieving Sustainable Development Goals (SDGs): (https://www.jica.go.jp/english/ir/bonds/c8h0vm0000awltie-att/bonds_01.pdf)

2 Revisions to ex-post evaluation criteria

2.1 Integrating fairness, human rights, gender equality, etc. in criteria (to reflect the principles of the SDGs)

Each criterion was redefined to reflect the principles of the SDGs. As for relevance, the perspective of beneficiaries was added to evaluate considerations for vulnerable people and equitability in project design. Effectiveness was redefined to include any differential results across groups in its assessment, to evaluate the distribution of development benefits, including the gaps and the equitability perspective across the beneficiaries. The definition of impact was broadened to include human rights and well-being in its assessment. The definition of sustainability was also widened to include resilience to future risk in its assessment.

2.2 Adding a new evaluation criterion of coherence (to emphasize synergies and interlinkages with other development partners)

The DAC revised its evaluation criteria to include "coherence" (the compatibility of the intervention with other interventions in a country, sector, or institution). This new criterion had been partially covered by the existing criterion of relevance before the revision; however, according to the new definitions, the appropriateness and consistency of project design with the needs of the recipient country are to be assessed under relevance, and the synergistic effects/ mutual relations with JICA's other projects is to be evaluated under coherence.

It should also be noted that coherence assessment looks into wheth-

er collaboration produces specific achievement so that projects will not be highly rated just because they are implemented simultaneously with other projects or alignment of the SDGs. This means that JICA will be required to more strategically solidify assistance policies for partner countries and solidly grasp international trends, based on which JICA will be required to consider cooperation/coordination/role-sharing with other donors from project formulation and planning to implementation.

2.3 Adding non-scored items: "performance" and "additionality"

The evaluation criteria had mainly focused on the assessment of development effects before revised, but their definitions were broadened to include performance during project implementation (proper and timely responses to various changes in project circumstances) and additionality (JICA's unique values and innovative approaches, etc.) in the scope of assessment. Because it would be difficult to rate them objectively, they have been categorized as non-scored items so that they will not be rated or included in the overall ratings.

2.4 Shifting to a four-level sub-rating system and revising the flowchart

The sub-rating system was changed from a three-level to a four-level scale to make sharper distinctions, improve the accuracy of statistical trend analysis, and make it easier to identify challenges and get insights on project design and implementation. Moreover, given different levels of importance among the criteria, the overall rating process was revised to put greater emphasis on the combination of "effectiveness" and "impact", both of which show project results and on "sustainability" to ensure the continuation of such results.

2.5 Summary

Thus, the evaluation criteria were revised to reflect the principles of the SDGs in the achievement and impact at the level of each project. Moreover, a new criterion of coherence was added to make project design and implementation more strategic.

Table 1 Definitions of six new evaluation criteria

(The underlined definitions for existing criteria and the criteria marked as "new" are added in the revision process.)

Criterion title	Definitions 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 (new)	◆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

Table 2 Definitions of two non-scored items

Criterion title	Definitions of two non-scored items
Performance (New)	Proper and timely responses to various changes in project circumstances
Additionality (New)	JICA's unique approaches, values, and elements (inputs) that could be provided because of JICA, and innovative approaches

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 2021)

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

Discussions on revisions of JICA's evaluation criteria

In FY2020, the Committee mainly discussed revisions of JICA's evaluation criteria. Based on this discussion, JICA refined the evaluation criteria in the finalization process. These new criteria will be applied to projects to be evaluated from FY2021 onwards (See pp. 54-55 for details of JICA's revised evaluation criteria).

Key comments from Committee Members are summarized below.

★ A new criterion of "coherence" will be added to the evaluation criteria to require a more careful assessment of the consistency of each project with various policies, including Japan's development cooperation policies, the Official Development Assistance Charter, and the SDGs. It will be important to consider how to adapt JICA projects to recipient countries by taking into account their development strategies and plans and different stakeholders' needs. This will affect how Japan will support development in developing countries. I would like to suggest that Japan's official development assistance should stick to its principle of contributing to the benefits of recipient countries after the evaluation criteria are revised.

★ The addition of "coherence" to the evaluation criteria will make the definition of the existing criterion of "relevance" much clearer. Coherence assessment will enable ex-post evaluators to draw appropriate and detailed lessons regarding project design and to examine and evaluate the effectiveness of the project's interventions more easily. This revision should be highly appreciated.

★ The draft of revisions to the evaluation criteria has been carefully prepared and seems to particularly emphasize the sustainability of outcomes. In addition, some good attempts are made to elaborate the evaluation criteria, such as shifting the criteria rating (sub-rating) system from a three-level to a four-level scale. Although those who work to the full potential to deliver outcomes should be highly appreciated, given that only projects that "achieved better outcomes than planned" can receive the highest rating of 4 under the combination of "effectiveness" and "impact", attention should be paid so that no excessive efforts will be made to deliver greater outcomes than planned, because a particular emphasis is placed on sustainability in the present times.

★ New evaluation items of "adaptation/contribution" and "added/created value" have been added in the revision process though they are not included in overall ratings. These items are important because they are directly related to the success and added-value of other future projects. Going forward, these items should be properly assessed to draw lessons and recommendations so that they can be compiled and organized within the organization and applied and reflected in future projects. I think this is substantial and more important than reflecting overall ratings and scoring marks.

★ When sharing the results of ex-post evaluations, they should be correctly understood by key recipients in developing countries. To this end, it will be essential to develop human resources and enhance their capacity to appropriately understand the definitions of the revised criteria. I would like to suggest that necessary budget should be allocated to promote and facilitate such capacity building. Moreover, Japanese citizens and taxpayers should be able to access easy-to-understand explanations of evaluation results as well as changes made by JICA projects to developing countries and improvements made in the quality of people's life there.

Performance evaluation

Following 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, as distinct from individual project evaluations. Accordingly, JICA has conducted performance evaluation and published the results since 2003, with the current medium-term plan covering the period from FY2017 to FY2021. JICA has also established an advisory committee on performance evaluation separating from the Advisory Committee on Evaluation.

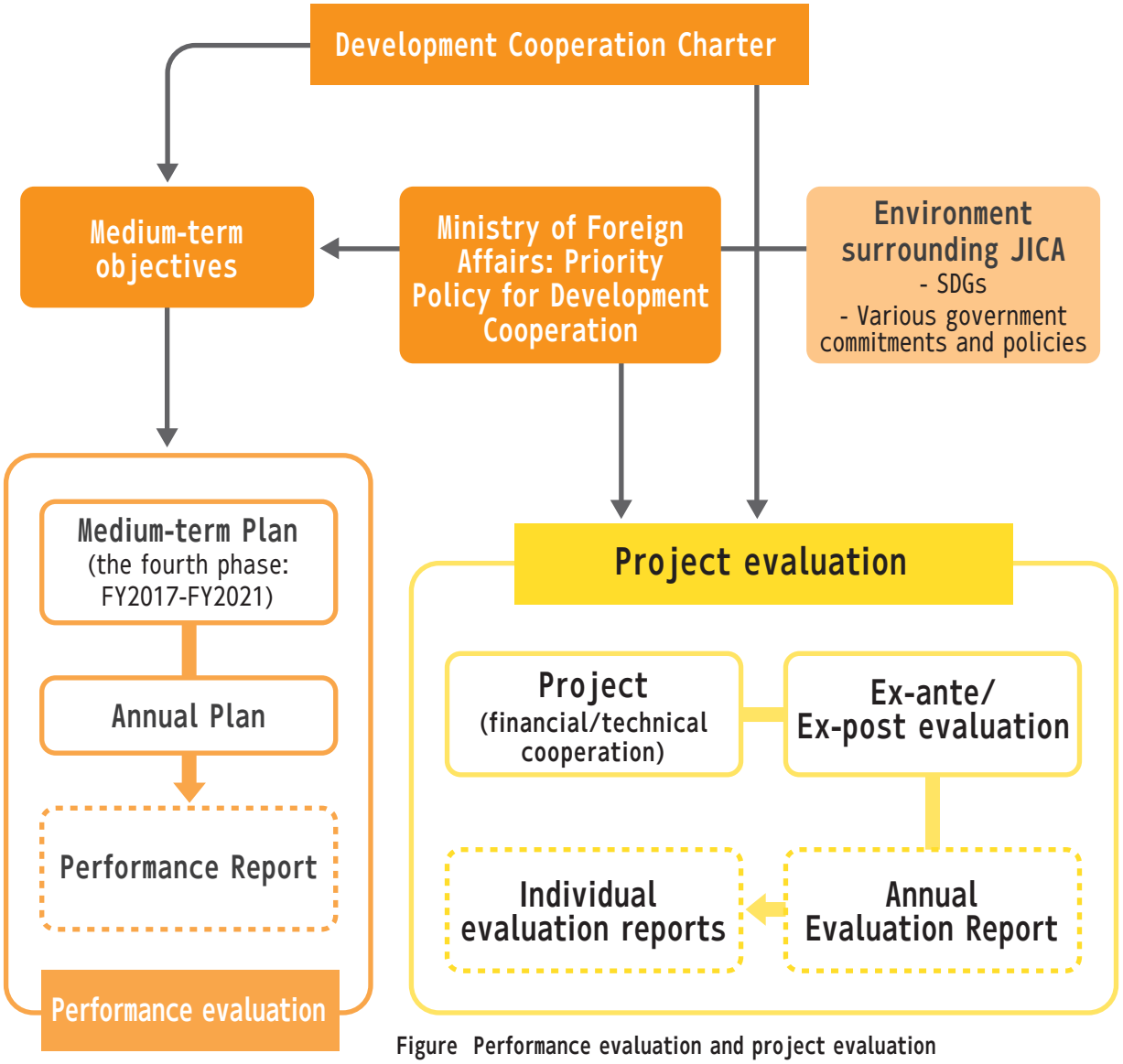


Figure Performance evaluation and project evaluation

Link to relevant reports (in Japanese)→ https://www.jica.go.jp/disc/jisseki/index.html

Statistical Analysis of Ex-post Evaluations

JICA has been engaging in statistical analysis of ex-post evaluations to determine project performance trends and gain insights from the ratings to improve project design and implementation.

▶ Statistical Analysis Overview

■Background

JICA has conducted ex-post evaluations based on coherent methodologies and criteria, including the Five OECD-DAC Criteria, for all three assistance schemes of ODA Loan*1, Grant Aid and Technical Cooperation. As of the end of February 2021 the number of ex-post evaluations had reached 2,006. This statistical analysis aims to analyze past those ex-post evaluations quantitatively to determine relevant trends and gain insights to improve the project design and implementation.

■Target of this statistical analysis

This statistical analysis was conducted on 1,249 evaluations, comprising ODA Loans of external evaluation*2 from FY2003 to 2020 and Grant Aid and Technical Cooperation of external evaluations*3 from FY2009 to 2020 (i.e. 762 ODA Loans, 317 Grant Aid and 170 Technical Cooperation projects) as well as 757 internal evaluations (239 Grant Aid and 518 Technical Cooperation projects) from FY2010 to 2020. The ratings were analyzed for a total of 1,984 projects (i.e. 762 ODA Loans, 556 Grant Aid and 688 Technical Cooperation projects) excluding 22 projects without a sub-rating (i.e. 13 ODA Loans, four Grant Aid and five Technical Cooperation projects).

■Method

Of all 2,006 evaluations shown in Figure 1 as the total evaluations per fiscal year, the overall distribution and trends in regions, sectors and schemes of 1,984 evaluations with overall ratings are visualized by applying the statistical method described.

■Note

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 and does not evaluate aspects like donors' roles and contributions; (2) the difference is not fully adjusted, relative to various issues encountered during the projects, such as the nature of assistance 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 endeavor or potential outcomes. Therefore, the rating itself cannot capture everything which happened in development projects.

*1: ODA Loans include Yen Loan and Private Sector Investment Finance
*2: External evaluation target projects with assistance of one billion yen or more and those likely to provide useful lessons learned.
*3: Ex-post evaluations of Yen Loans conducted by the former Japan Bank for International Cooperation and rated by their evaluation results.

▶ Analytical Result (Descriptive Statistics): Trends and Distributions of External and Internal Evaluations

■Number of evaluations

As shown in Figure 1, the rating system was first adopted to evaluate ODA Loans in FY2003, all of which were externally evaluated (although ex-post evaluations of ODA Loan projects took place before FY2002, they were not rated and mainly done by internal evaluation). External and internal evaluations were introduced to Grant Aid and Technical Cooperation projects from FY2009 and 2010, respectively.

To date, a total of 762 ODA Loan projects (only externally evaluated), 556 Grant Aid projects (317 external and 239 internal evaluations) and 688 Technical Cooperation projects (170 external and 518 internal evaluations) have been evaluated. The ratio of each scheme relative to all ex-post evaluations were: ODA Loans (38%), Grant Aid (28%) and Technical Cooperation (34%). Meanwhile, the ratio of internal evaluation in Grant Aid and Technical Cooperation projects were 239 out of 556 projects (43%) and 518 out of 688 projects (75%), respectively, representing relatively high percentages of Technical Cooperation projects.

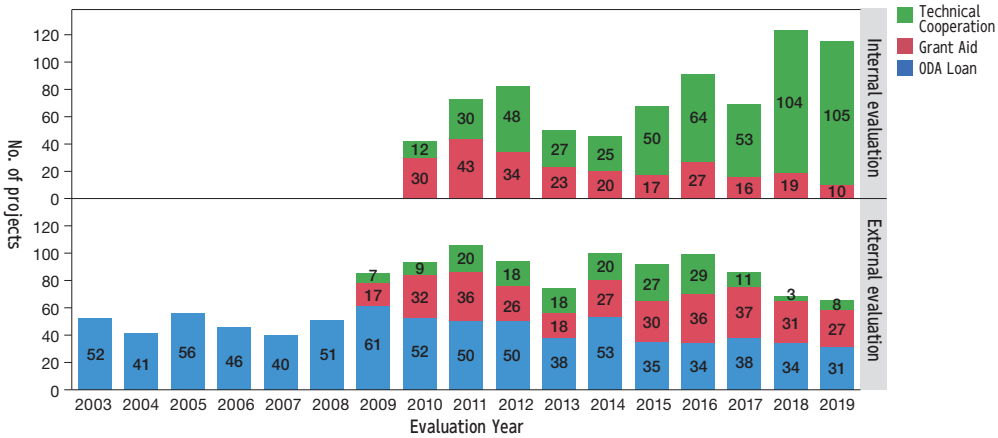


Figure 1 Transition in the Number of External and Internal Evaluations per Fiscal Year*4 by Scheme

*4: Evaluation Year shows the fiscal year of ex-post evaluation commencement

■Interrelation between the scheme and region/sector

This year also saw a four-grade overall rating (A to D: A: highly satisfactory; B: satisfactory; C: partially satisfactory, and; D: unsatisfactory) converted into 4 to 1 point to visualize the characteristics of evaluation

results by region and scheme for convenience. Figures 2 and 3 show the average points score (95% confidence interval) and variation range of the overall rating per region*5 and sector*6. Each table also vertically shows the average (dots on the center of the bars) and variation range (up/down variation from average) by region or sector while the horizontal red line shows the average of all projects (3.04).

These figures only applied to projects for which an ex-post evaluation had been completed at the time of aggregation and readers should note that they exclude ongoing or completed projects for which ex-post evaluations not yet undertaken.

The average overall rating of schemes by region suggests that the range of variation, namely 157 to 286 results for Southeast Asia, South Asia and East Asia are relatively small (no variation of ODA Loan in the Pacific because there was only one case in the region). When including these ranges as part of the average overall rating, Africa shows fewer points overall although it varies by scheme. On the whole, the Asian region shows more or less higher points than the overall average while Africa and Latin America show lower. This suggests that, since a recipient country requires economic and governance resilience in implementing and supervising ODA Loan projects, many African and Latin American countries are vulnerable to such resilience.

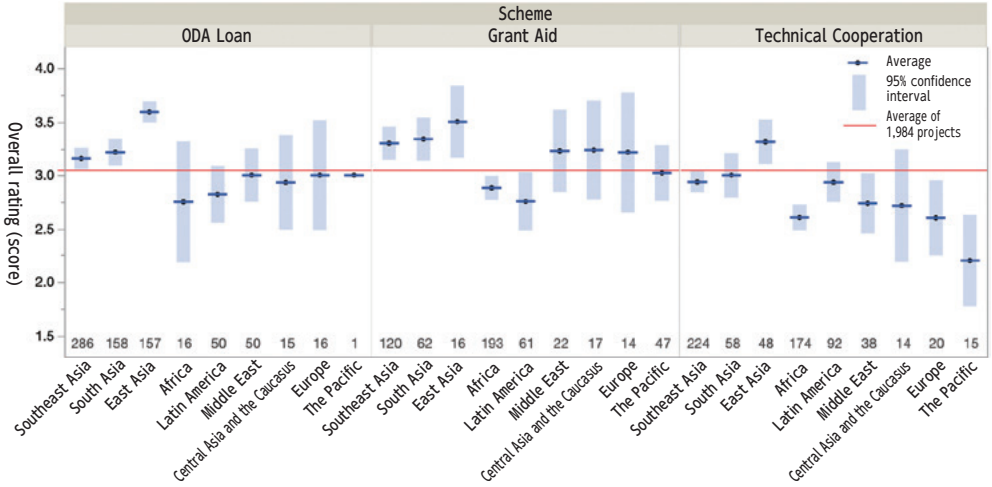


Figure 2 Distribution of overall rating (score) per region per scheme

Grant Aid shows higher points than the other two schemes except in Africa and Latin America. This is attributable to the fact that project results vary little, since JICA oversees the project implementation and supervision and the facilities and equipment provided are responsibly procured by the Japanese side. While Grant Aid shows higher points than the overall average in many regions, it shows lower in Latin America and Africa as in the case of ODA Loans. Africa shows the lowest points for ODA Loan and Technical Cooperation while Latin America showed the lowest for Grant Aid.

As for Technical Cooperation, Latin America and Africa are conversely ranked slightly higher. Although Southeast Asia shows higher points than the overall average in ODA Loan and Grant Aid, the region is lower in the Technical Cooperation project.

Accordingly, the average overall rating of schemes by sector suggests that ODA Loans have points totals higher than average on the whole and the health and social security sectors, in particular, show the highest points totals. In Grant Aid, the industry/trade sectors are significantly low but with a larger range of variation, given the low number of projects (five) and the fact that their evaluation results vary. The natural resources/energy sectors are rated high in Grant Aid, but significantly low in Technical Cooperation. Conversely, the industry/trade sectors have lower points, but points totals peak for Technical Cooperation.

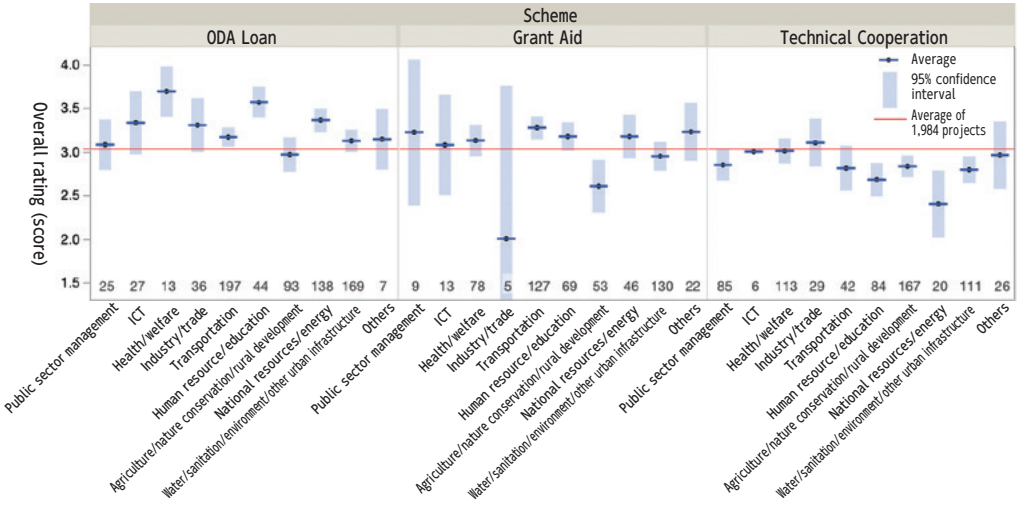


Figure 3 Distribution of overall rating (score) per sector per scheme

Although the department assigned to manage projects is aware that evaluation results by scheme vary according to the region and sector involved, depicting the information with visually comparable data as shown will pave the way to consider regional and thematic strategies going forward. However, to identify the factors affecting project evaluation results more accurately, various regression models and other statistical methods must be applied and multiple background factors adjusted and further analyzed. Where limitations apply, such as lacking a sample size for quantitative analysis, JICA examine issues at project levels and how best to solve them by also utilizing the qualitative comparative analysis (QCA) method, which filters cases and directly compares factors that are likely related to project effects, as well as quantitative approaches.

*5: Classification of sectors is based on those applied in statistical analysis.

*6: Each region includes the following countries: **Southeast Asia:** Indonesia, Cambodia, Thailand, the Philippines, Vietnam, Malaysia, Myanmar, Laos and East Timor; **Oceania:** Kiribati, Samoa, Solomon, Tuvalu, Tonga, Vanuatu, Papua New Guinea, Palau, Fiji, Marshall Islands and Micronesia; **East Asia:** Republic of Korea, China and Mongolia; **Central Asia and the Caucasus:** Azerbaijan, Armenia, Uzbekistan, Kazakhstan, Kyrgyz, Georgia, Tajikistan and Turkmenistan; **South Asia:** Afghanistan, India, Sri Lanka, Nepal, Pakistan, Bangladesh, Bhutan and Maldives; **Latin America:** Argentine, Antigua and Barbuda, Ecuador, El Salvador, Guyana, Cuba, Guatemala, Grenada, Costa Rica, Colombia, Jamaica, Suriname, Saint Christopher and Nevis, Saint Vincent and the Grenadines, Saint Lucia, Chile, Dominica, Dominican Republic, Nicaragua, Haiti, Panama, Paraguay, Barbados, Brazil, Belize, Peru, Bolivia, Honduras and Mexico; **Africa:** Angola, Uganda, Eswatini, Ethiopia, Eritrea, Ghana, Cabo Verde, Gabon, Cameroon, Gambia, Guinea, Guinea-Bissau, Kenya, Côte d'Ivoir, Comores, Democratic Republic of Congo, Zambia, Sierra Leone, Djibouti, Zimbabwe, Sudan, Seychelles, Senegal, Tanzania, Togo, Nigeria, Namibia, Niger, Burkina Faso, Burundi, Benin, Botswana, Madagascar, Malawi, Mali, Mauritius, Mauritania, Mozambique, Rwanda, Lesotho and Republic of South Africa; **Middle East:** Algeria, Iran, Iraq, Egypt, Saudi Arabia, Syria, Tunisia, Palestine, Morocco, Jordan and Le banon; and **Europe:** Albania, Ukraine, Croatia, Kosovo, Slovakia, Serbia, Turkey, Bulgaria, Poland, Bosnia and Herzegovina, Moldova, Montenegro, Romania and Republic of North Macedonia.

Analytical results (multivariate analysis): Collaboration between Grant Aid and Technical Cooperation projects and its interrelation with Effectiveness/Impact

JICA examines the interrelation between ex-post evaluation results and their variations using regression analysis and selecting variations describing ex-post evaluation results (overall rating and Five DAC Criteria, i.e., relevance, effectiveness and impact, efficiency, and sustainability) of past projects. Financial cooperation projects (Grant Aid and ODA Loan) were analyzed*1 in FY2017 and 402 Technical Cooperation projects were analyzed in FY2018. In the previous fiscal year, evaluation results differed between those projects managed and supervised by the Headquarters and Overseas Office. This year introduces collaboration between Grant Aid and Technical Cooperation projects and an interrelation between effectiveness and impact, in which statistically significant differences*2 were consistently confirmed in multiple regression models and which were considered linked to discussions on systematic improvement in future.

Effect of collaboration between financial and technical cooperation

To use facilities effectively, including operating and maintaining infrastructure after it was constructed through financial cooperation, providing intangible support via technical cooperation was considered beneficial, to further achieve outputs and make the project more sustainable. Accordingly, there are many cases where financial and Technical Cooperation projects are implemented in the same sector and country by overlapping their project period. Since the effect had not been quantitatively analyzed, JICA analyzed the existence of collaboration and any change in their rating of effectiveness and impact according to the collaboration timing by focusing on Grant Aid projects for which it was relatively easier to confirm/verify the original data and Technical Cooperation projects implemented almost simultaneously.

Data used for the analysis

The data was taken from 471 Grant Aid projects with ex-post evaluations conducted after 2009*3. When technical projects implemented in the same country and sector*4 within three years before or after the Grant Aid project period are considered to constitute "collaboration", approximately 40% of Technical Cooperation projects apply to collaboration (Figure 1).

Compared to the Grant Aid project period shown in the middle of Figure 1, details of the timing for Technical Cooperation projects constituting "collaboration" were compiled and categories as Types 0 to 5 (Figure 2).

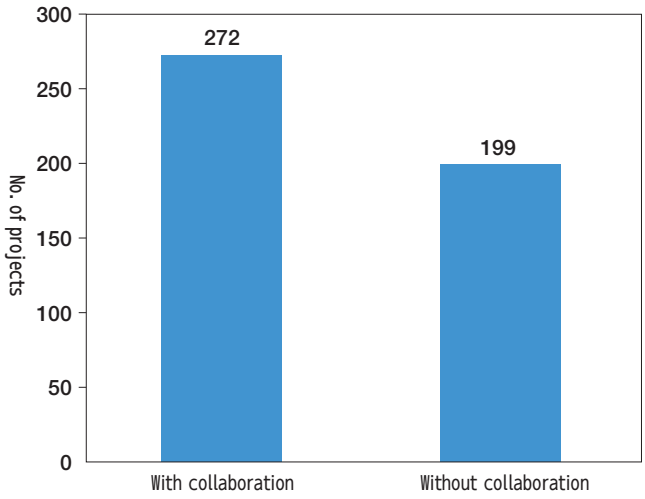
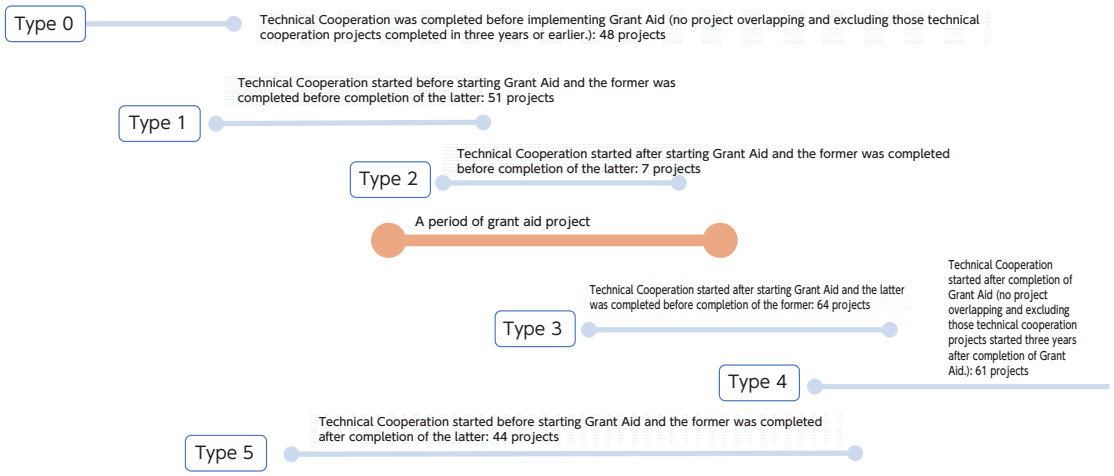


Figure 1 The number of Grant Aid projects with/without collaboration with Technical Cooperation projects (471 projects in total)



Note: Classified using the actual project period. Some Grant Aid projects collaborated with multiple Technical Cooperation projects.

Figure 2 Types of collaboration between Grant Aid and Technical Cooperation

*1: Refer to P.57-58 of the JICA Annual Evaluation Report 2017.
*2: Multiple models controlling variations related to the country, sector and project evaluation rating simultaneously, showing significance level of $p<0.05$ consistently.

Analytical result

The analytical result did not show any relevance with effectiveness/impact, sustainability and other evaluation criteria when focusing only "collaboration" alone. Meanwhile, effectiveness/impact*5 was shown high when dividing collaboration by timing (refer to Figure 2) and a pattern categorized as Type 1 (Technical Cooperation project was started before starting a Grant Aid project and the former was completed before completion of the latter) (p<0.05) (Figure 3).*6

Type 1 is a pattern whereby a Technical Cooperation project was started before introducing facilities constructed or equipment procured by a Grant Aid project. Materials and equipment were provided under the Grant Aid project after the capacity development is done by Technical Cooperation project. In other words, since the required human resources were nurtured to some extent during the Technical Cooperation project, the counterpart had the capacity to utilize materials and equipment provided when the facility or equipment launched by the Grant Aid project. Many ex-post evaluation reports related to Type 1 indicated that counterpart capacity was enhanced by Technical Cooperation before providing Grant Aid, which helped achieve the project effect high. This analytical result is consistent with the perceptive hypothesis that it is preferable to develop capacity of counterpart before facilities and equipment are introduced under Grant Aid.

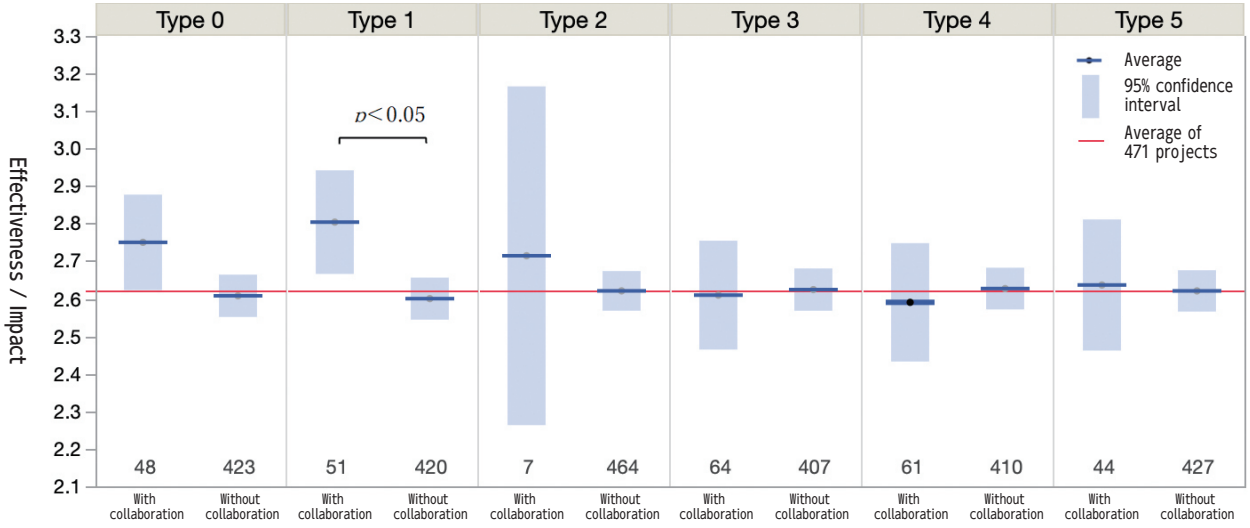


Figure 3 Collaboration and effectiveness/impact by type (mean value and its 95% confidence interval

Summary

The analysis revealed that those Grant Aid projects would have high effectiveness/impact when Technical Cooperation projects were implemented in advance, like Type 1 among multiple collaboration patterns, and completed before providing their materials and equipment. Since differences emerged not in terms of existence but in terms of timing of collaborative Technical Cooperation projects, it suggests that when such collaborative projects are implemented is key, not just whether such collaboration exists.

However, this analysis categorized the collaboration cases by timeline and examined them quantitatively among various categorizing methods, biased by the definition of collaboration. As described above, no causal relationship could yet be confirmed. Moreover, although the collaboration result was also attributed to sustainability in the hypothesis, no quantitative proof of the same emerged. Since it was based on the current number of cases and given that the number of cases was limited due to classification, the quantitative analysis may only be applicable for determining interrelation with effectiveness/impact. Although such criteria may be clarified to a greater extent if the number of target cases increases, the number does not actually increase immediately, implying a limitation of the quantitative approach. Going forward, by applying those approaches based on a small number of cases, including the qualitative comparative approach (QCA*7) and other methods focusing on individual patterns such as the sector and project purpose, more suggestions are expected to be obtained.

In response to recently revised evaluation criteria, to which COHERENCE (targeting a development effect via collaboration with different schemes) was added, the need and importance to formulate and implement projects strategically was reaffirmed. Project effects are more likely to be achieved by examining feasibility and strategically planning and implementing the timing of financial and Technical Cooperation projects, rather than simply collaborating during the same period. To further clarify the impact of collaboration with different schemes on the project effects, JICA will promote evaluations utilizing statistical analysis and a qualitative approach.

*3: The target projects were launched between 2001 and 2013 and the ex-post evaluations were conducted between FY2009 and FY2017.
*4: Technical Cooperation projects and Technical Cooperation projects for Development Planning. Projects involving Grassroots Technical Cooperation, Follow-up cooperation, Acceptance of Training Participants and Dispatch of Experts are not included.
*5: Scoring: High: 3 points, Medium: 2 points and Low: 1 point
*6: Type 1 saw significant differences consistently observed in multiple models (p<0.05 or <0.01). Meanwhile, although significant differences emerged in some models, Type 0 was not considered significant, since the figures were inconsistent.
*7: Refer to Qualitative Comparative Analysis (QCA) on P.40.