Baseline study analysis for Technical Cooperation projects

Background of the study

JICA has recognized the importance of setting up effective quantitative indicators during the planning phase or early implementation phase of a technical cooperation project to effectively monitor operational activities, outcomes and achievements throughout the project. Based on this recognition, JICA has recommended that baseline study be conducted for the purpose of establishing quantitative indicators. As a result, an increasing number of baseline studies* have been incorporated particularly into technical cooperation projects.

In this study, the circumstances of baseline studies and the revision of indicators are investigated in the cases of 90 technical cooperation projects for which ex-ante evaluation sheets were completed in 2009 and 2010, with the study objectives of: (1) examining and analyzing the information on the utilization of contents, methods and results of baseline studies which were carried out in recent technical cooperation projects; and (2) then, materializing and sharing the set-up measures of verifiable indicators.

Summary of the study results

The study results revealed that baseline studies were carried out for nearly 90% of all the target projects and their implementation appeared to have contributed to the revision of indicators to some extent. However, regarding indicators which were supposed to be revised during the implementation phase of a project, stakeholders were likely to disagree on the timing, term and degree of revision. After the examination of these situations, problems and their causal factors were summarized as follows.

1) Problems concerning baseline studies

- (1) The revision of indicators is delayed
- (2) A relatively long period of time is spent before the revision of indicators
- (3) Because of ambiguities about the availability and criteria of many indicators even after the revision, project achievements are hard to verify

2) Factors which cause problems

- (1) Indicators are not specifically determined during the planning phase (e.g. how and what to measure, how to obtain indicators).
- (2) The necessity of revising indicators prior to the implementation of a project is not indicated in the agreement with the counterpart government.
- (3) The revision process (procedures and measures) for each indicator is not clarified prior to the implementation of a project.
- (4) The revision process for indicators (procedures and measures) is not fully discussed among the stakeholders.
- (5) The necessity of early setup and verifiable indicators is not sufficiently recognized by the stakeholders.
- (6) A baseline study has some defect in its design and method.

3) Remedial measures for the problems and causal factors

In order to deal with the problems and their causal factors mentioned above in 2), stakeholders need to understand deeply, during the planning phase, the importance of clarifying the aim (project objective) of "who (what) will change how" with the implementation of a project and of "monitoring the project in accordance with verifiable indicators which are set up during the early period of project implementation" under results-based management. From these perspectives, strategies for improving the system and structure are laid out as follows.

- (1) To define indicators before the start of a target project, and to document essential items and standard study procedures in the detailed project design.
- (2) To prepare the standard indicator reference (tentative name) according to development issues (in response to the type of issues). Typical and characteristic indicators are put together under major sectors so that the stakeholders can use it as a reference for setting up proper indicators.
- (3) To increase awareness and knowledge of indicators among staff members and experts, and to incorporate information about results-based management and the revision of indicators into various seminars.
- (4) To encourage the counterpart country to be involved in a baseline study.

In the light of the study results, important points and remedial measures the person in charge should notice in each project phase are listed in the table on the right. Necessary improvements should be carried out by referring to these remedial measures. It is important to promote accuracy and efficiency in the baseline study in order to set up more objective and quantitative indicators.

^{*} A baseline study is generally defined as an analysis that is carried out to understand the situation of indicators (standard values) prior to the implementation of a project. In this study, however, the selection of a target area and socioeconomic situations and needs among target groups were also investigated.

<Major remedial measures and important notices in each project phase>

Phases in a program	Important notices and remedial measures
Detailed planning survey	 Outcomes (scenarios for finding solutions to problems and resultant changes) are made clear and candidate indicators are examined (reference to indicators of similar cases, alternative plans in terms of capacity building, monitoring plan etc.) If few indicators have been set up during the detailed planning survey, corresponding measures should be considered and minutes should be kept detailing them.
Creating an ex-ante evaluation sheet	(1) Indicators which need to be revised(2) Measures (studies, consultations and other activities) to revise each indicator(3) Detailed schedule for revising indicators.
Creating terms of reference/expert TOR	 In addition to the above mentioned items (1) to (3), pending matters in relation to the revision of indicators and the baseline study*, roles of experts, time limit of the revision, and commitments of counterparts are defined. It should be stipulated in the TOR that a report of the baseline study as a project outcome be produced and shared with the stakeholders including counterpart institutions and JCC members after the completion of the baseline study and that the progresses of a revising work and the baseline study should be recorded in an expert report/progress report.
Immediately after the implementation of a project	At the kickoff meeting, the procedure for revising indicators, the roles of experts and counterparts, and the understanding of the task schedule should be thoroughly confirmed.
Working out a baseline study plan	The study objective, input, study/analysis method, schedule, expected outcomes and application of study results should be clearly indicated in the plan.
During and after the baseline study	The report should be closely inspected to make sure that data on indicators are compiled. Study results are to be shared with the stakeholders, including counterpart institutions.

An example of a good practice: Strengthening the Capacity for Solid Waste Management in Ulaanbaatar City, Mongolia

Good points in revising indicators and conducting a baseline study:

- (1) Steps to revise indictors, scheduling and worksharing among the stakeholders were clearly defined.
- Immediately after the implementation of the project, a workshop was conducted for experts, counterparts and officers in charge to make sure that the revision of indicators was necessary, by inspecting measurement efficiency and a target value for each indicator.
- After the above mentioned workshop, weekly meetings were held where the methods for collecting the necessary data to revise each indicator and the person responsible for

- collecting the data were examined, and subjects discussed were listed and shared among the project stakeholders.
- (2) Thorough project management was performed by the stakeholders including officers and national staff members.
- O JICA Mongolia office/national staff members frequently participated in regular project meetings to continue sharing information and engaging in communication with the stakeholders. At the same time, they monitored the progress of the revision of indicators. As a result, the baseline study and other project management works were thoroughly performed and the revision of indicators was completed as initially planned by and large.

<Examples of major indicators revised>

Indicators listed in the ex-ante evaluation sheet		Improvements given to the revised indicators
(1) The degree of satisfaction among citizens with the waste management service will reach X% (2) The waste collection rate will increase to Y% (3) The waste charge collection rate will increase to Z%	⇒	In accordance with the baseline study, standard values were measured and the numerical target for each indicator (X, Y, and Z) was set up specifically.
All waste management machinery (waste collection vehicles and heavy machinery) will be used.	⇔	As the measuring method was yet to be decided, consultations were given and the line was changed to "a report on the use of waste management machinery will be submitted four times a year."
e amount of illegal dumping will decline by X%.		As the study result proved the difficulty in grasping the amount of illegal dumping, the line was changed to "6 out of 10 illegal disposal areas will be eliminated" as a measurable indicator.

Analysis of indicators of societal and economic impact of rural electrification

Operational consultant: OPMAC

Summary of the study

In this study, the logic of the realization of regional socioeconomic effects of rural electrification in a developing country was analyzed and examined to organize standard effect indicators. In addition, with the aim of outlining important notices

during the project planning and implementation phases, the rural electrification master plans (hereafter, M/P) which had been drawn up for the cooperation project by JICA were reviewed.

Study framework and policy

- (1) The validity of bringing about the regional socioeconomic effects of electrification is examined by reviewing the existing evaluation studies and those on rural electrification projects as well as past projects.
- (2) The validity above mentioned in (1) is verified in the Zambia field survey, and examined together with requirements for materializing such effects. Examples of indicators to realize the effects are to be shown.
- (3) Regarding the requirements specified in (2), their status within the framework of M/Ps (Table 1) that JICA was involved in for the past 14 years are reviewed and analyzed, and important notices in designing the plan and implementing the project to produce the desired effects are put together.

Table 1 A list of M/Ps reviewed

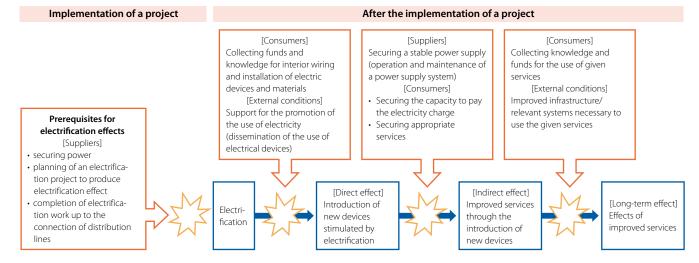
Countries	Projects		
Cambodia	M/P Study on Rural Electrification through Renewable Energy (2005-2006)		
Laos	The Study on Rural Electrification Project through Renewable Energy in Lao People's Democratic Republic (1998-2000)		
Vietnam	The Renewable Energy M/P Study in The Northern Part of the Socialist Republic of Vietnam (2001-2002)		
Bhutan	The Integrated M/P Study for Dzongkhag-wise Electrification in Bhutan (2003-2006)		
Ghana	M/P Study on Rural Electrification by Renewable Energy Resources in the Northern Part of the Republic of Ghana (2005-2006)		
Zambia	The Study for the Development of Rural Electrification in Zambia (2006-2007)		
Malawi	M/P Study on Rural Electrification in the Republic of Malawi (2001-2003)		
Bolivia	M/P Study on Rural Electrification through Renewable Energy (1999-2001)		
Peru	M/P for Rural Electrification through Renewable Energy (2007-2008)		

Study results

(1) The validity of bringing about the development effects of rural electrification

Based on literature reviews and filed surveys, the effects of rural electrification were found to be produced according to the logic indicated in Figure 1. Among various conditions for bringing about effects through electrification, what can be important requirements or bottlenecks differ depending on the development plans, socioeconomic situation and cultural background of a given country or region. Therefore, to implement a specific rural electrification project, it is essential to confirm the development plan and socioeconomic situation of the target region.

Figure 1 Validity and conditions for the effective realization of rural electrification



(2) Examples of standard indicators of the effects of rural electrification

Targets, conditions and approaches to secure the effects of electrification differ depending on electric use requirements fulfilled on the recipient side. Factors that possibly affect the fulfillment of requirements for electric use include socioeconomic conditions/levels, cultural background, status of rural electrification

in the local community, development, social systems, operational capacity of the government, how the population is dispersed, socio-economic activities in the target area, and support from donors/NGOs. The timing and nature of effects materialized by electrification in a target area are subject to these factors. Table 2 shows examples of indicators in major service sectors.

Table 2 Examples of standard indicators of the effects of rural electrification

Services (example)	Direct effects (Introduction/use of new devices caused by electrification)	Indirect effects (Improved services through the use of new devices)	Long-term effects (Effects of improved services)
Education	The number of schools that installed electric lights in classrooms (the number and rate of classrooms) The number of schools that installed PCs, etc.	Improvements in the use of classrooms (increase in the number of classes and study hours, etc.) Improvements in teaching methods	Increase in the school attendance rate Promotion of literacy education, etc.
Health	The number of health centers that installed a refrigerator, night lighting and other necessary items	Prolonged operation hours Improvements in storage of vaccines and medicines, etc.	Increase in the number of patients who had medical consultations Increase in the number of vaccinations provided, etc.
Economy	The number of devices installed for the production and processing of work The number of devices installed for preservation and storage The number of devices installed for new services	Prolonged operation and work hours Increase in the quantity of output Increase in the kind and number of products and commodities Increase in the quality of production and consumption, etc.	Increase in the number of consumers and service users Increase in sales, etc.

(3) M/P review results

Concerning important prerequisites and external conditions in the validity of the realization of effects, decision criteria and thoughts on prioritized matters in the target region are not sufficiently recorded in most M/Ps. As a general tendency, policies/

plans/forecasts on the supply side are given priority as criteria. Most studies are not necessarily carried out to survey consumers' viewpoints and essential prerequisites. Major review results are shown in Table 3.

Table 3 Outline of M/P review results

Elements reviewed		Results			
Elec	Demand	• Analyses of both on-grid and off-grid systems are carried out from the viewpoints of suppliers and consumers. The off-grid system is analyzed more from the viewpoint of consumers.			
trification	Technical/financial relevance	 Only current situations are analyzed to forecast the stability of power supply. Financial relevance is regarded as important for the on-grid system. Technical relevance is regarded as important for the off-grid system. 			
plan	Socioeconomic effect	 There is a limited socioeconomic effect on forecasts and analysis to enhance the social effect for the on-grid system. Compassion for the poor and the social effect are being considered for the off-grid system. 			
Opera	Workability	• Only current situations are analyzed for the on-grid system to find out workability of relevant institutions and coverage of interior wiring charge.			
erational system	Management and maintenance	 For the on-grid system, the management capability of operational institutions and the systems to collect charges are not considered. The ability for continual payment of electric charges is not analyzed but only current situations are reviewed. These matters are analyzed for the off-grid system. The proper use of electricity and information on safety are not analyzed for the on-grid system. But this is not the case for the on-grid system. A maintenance system carried out by residents is considered for the off-grid system. 			

(4) Important notices in examining a rural electrification project

In implementing a project after drawing up a plan, it is important to carry out a study from the viewpoints of consumers

of electricity in addition to the operational structure of power suppliers. In terms of the relevance, effectiveness and sustainability of rural electrification, important notices from the viewpoints of power suppliers and power consumers are listed in Table 4.

Table 4 Viewpoints in examining a rural electrification project

Items	Power suppliers	Power consumers	
Relevance of electrification	Policy: status of rural electrification in the electricity policy/development plan, support from donors, etc. Needs: circumstances in the overall power demand of the needs electricity through rural electrification Method for electrification: comparison with alternative plans, budgetary balance between technical relevance and rural electrification plan	Policy: status of a given region in regional/community development (other infrastructural/social services), support from other donors/NGOs Needs: potential demand for electricity in socioeconomic activities and production activities and the possibility of its development Method for electrification: suitability to potential patters of power consumption	
Effectiveness of electrification	Workability of operational institutions: project planning ability and technical ability Stability of power supply: <on-grid> power supply capacity (quantity supplied, transmission loss, outage etc.) <off-grid> supply capacity of power sources, stability of supply</off-grid></on-grid>	Affordability: connection to distribution network, interior wiring expenses, external supports (grants, donors, NGOs etc.), equipment expenses (cooperation with relevant institutions) Ability to use: knowledge and skills related to the productive use of electricity, external support	
Sustainability	On-grid: Management and maintenance ability of power suppliers (installation of transmission network, maintenance and management of staff, technical ability, etc.) On-grid: ability of local authority/community in management and maintenance (structure, technical ability, ability to collect charges etc.) external support (cooperation with the government, power industry, donors/NGOs)	Affordability: setting of power charges, ability of payment, incentive for payment	

Ex-Post Evaluation on Budget Support Loans*1

Summary of the Analysis

(1) Background

A brief summary of Budget Support Loans is as follows (See the table on the next page).

The Development Policy Support Program (DPSP) for the Philippines aimed to fill the country's financial gap as well as to promote the Philippine government's various reforms based on the following pillars: maintaining macroeconomic and fiscal stability; enhancing governance and anti-corruption strategies in public financial management; strengthening the investment climate and infrastructure development; and increasing social inclusion. Targets for improvement (policy actions) have been developed to achieve such policy and institutional reforms.

The Emergency Budget Support loans for Vietnam, Indonesia and the Philippines (hereinafter referred to as the "three Southeast Asian countries") aimed to facilitate the economic recovery of each country through the provision of necessary funding to promote the implementation of their economic policies (economic stimulus measures) in response to the global financial and economic crisis after the Lehman Shock in 2008.

(2) Evaluation Framework *2 and Policy

The ex-post evaluation on the Philippines DPSP was conducted focusing attention on three perspectives in analyzing achievements: (1) policy effects (policy change and changes on the ground through policy reform); (2) flow-of-funds effects (effects of DPSP funding from the macroeconomic perspective); and (3) institutional effects

(changes in implementing mechanisms and framework to pursue policy and institutional reform). It should be noted that the analysis, including the review of the state of the reform progress, attempted to cover the overall reform areas of DPSP support, since policy and institutional reform initiatives through the DPSP are integrated with the government's own reform program. In addition, the scope of the ex-post evaluation included reform progress after the DPSP loan support period ended since reform itself was an evolving and ongoing process at the time of the ex-post evaluation.

Evaluation of the Emergency Budget Support loans extended to the three Southeast Asian countries was conducted, focusing particular attention on the funding effects. Analysis was done based on each country's context, with cross-country, comparative perspectives. A comprehensive review was first made of each economic stimulus package adopted by each country in response to the global financial and economic crisis after the Lehman Shock. Then relevant indicators were identified to measure effects, and quantitative and qualitative evaluations were made as far as possible. In doing so, a review was conducted on the contribution of Japanese ODA Loans to the total budget required for the economic stimulus packages by calculating the ratio of the amount of assistance provided by JICA and by the co-financiers. In addition, some considerations have been given to "with and without" situations: (1) what would have happened if the economic stimulus packages were not implemented; and (2) what would have happened if it were not for the Japanese ODA Loans.

Analysis Results

(1) Analysis Results

Supporting the reform process through the DPSP framework is considered relevant. Reform areas targeted by DPSP assistance have been in line with the Philippine government's development policy, needs and priorities. The policy actions which have been discussed in the Philippines Development Forum among the government and development partners were structured based on the government's action plans, and supported the achievements of assistance objectives directly. Furthermore, the DPSP fund was provided in a timely manner to fill the financial gap of the Philippine government, and the size of the DPSP fund was relevant in light of the size of funds provided by other donors (the Asian Development Bank and the World Bank). The policy actions in the four DPSP reform areas: (1) maintaining macroeconomic and fiscal stability; (2) enhancing governance and anti-corruption strategies in public financial management; (3) strengthening the investment climate and infrastructure development; and (4) increasing social inclusion; have been fulfilled, and steady progress of reform can be observed. It is particularly worth noting as one of the DPSP achievements relating to "(3) strengthening the investment climate" that progress has been seen towards resolving the VAT refund issues — reducing the duration of refund time as well as shifting to cash refund which Japan has been attaching great importance to for some

time. Behind the achievements lies the fact that continuous policy dialogue on policy actions through the DPSP framework has secured high-level commitment within the government, and has signified justification for implementing the said actions in and outside the government. In addition, reform progress has been monitored and shared within the government, headed by the Department of Finance with the participation of relevant departments and agencies, and among the government, and the development partners have also contributed to reform progress. However, there are actions in which tangible effects on the ground have not yet clearly been observed at the time of the ex-post evaluation and therefore, continued reform efforts are expected. That said, if it were not for the DPSP, reform progress could have been slower than the current situation in some areas, and thus, the DPSP is deemed to have made a contribution as a policy reform support tool.

The effectiveness of the funding in the form of Emergency Budget Support loans to the three Southeast Asian countries is considered to be high. Under the international financial/economic crisis of the time, each of the countries was extremely limited in its means of acquiring a financial budget. In such a situation, the funds were given immediately to each of the programs after the loan agreement was signed. They were used as part of the fiscal

^{*1} General budget support is an aid modality which involves direct provision of funding to the state treasury of the recipient country as a part of government revenues, without being earmarked for specific activities. It contributes to the facilitation of the reform progress through the promotion of policy dialogue and supports policy and institutional reforms which the recipient countries have been undertaking.

^{*2} The evaluation methods of budget support are not necessarily established internationally.

Category	General Budget Support Loan		Emergency Budget Support Loan		
Country	The Philippines		Vietnam	Indonesia	The Philippines
Program	Development Policy Support Program II (DPSP II) Development Policy Support Program III (DPSP III)		Eighth Poverty Reduction Support Credit with Economic Stimulus Support	Economic Stimulus and Budget Support Loan	Emergency Budget Support Japanese ODA Loan
Loan approved amount/ Disbursed amount*	9,293 million yen	9,220 million yen	47,900 million yen	9,361 million yen	13,830 million yen
Loan agreement signing date	March 2009	March 2010	November 2009	December 2009	March 2010
Terms and conditions	Interest rate: 1.4%, Repayment period: 30 years (Grace period: 10 years) General untied		Interest rate: Yen LIBOR (6 months), Repayment period: 15 years (Grace period: 3 years) General untied		
Final disbursement date	March 2009	March 2010	November 2009	December 2009	March 2010
Executing agency	Department of Finance (DOF)		State Bank of Vietnam (SBV)	National Development Planning Agency (BAPPENAS)	Department of Finance (DOF)

^{*} All disbursed amounts are the same as approved amounts, respectively

funds necessary for the measures to stimulate the economy in each of the countries under the global financial and economic crisis. Through this financial backup, it was possible to implement the designated measures to stimulate the economy at the appropriate time for each country. As a result, the economy in each country has quickly recovered from the economic crisis through the years of 2009 to 2010. In each of these Emergency Budget Support loans provided to the three Southeast Asian countries, the size of the funds and the timing of their provision were appropriate, and this increased the possibility of foreseeing the financial management situation in each country, as well as supported the implementation of the measures to stimulate the economy. Had it not been for the programs, it is possible to think that each country might have had difficulty in securing an alternative funding source, considering the financial environment then. This would in effect have adversely influenced the implementation of measures to stimulate the economy, as well as the quick recovery from the economic crisis and sustained economic growth.

One of the reasons that Emergency Budget Support loans have effectively contributed to the economic recovery of each country is considered to be the improved public expenditure management of each country, which has helped to implement public works and expedite budgetary spending in a timely manner. It is considered that the enhancement of public financial management in each country, utilizing the existing framework of policy-support-type budget support, such as the DPSP, has played an instrumental part in the implementation of their economic stimulus packages in a smooth manner. Hence it can be considered as a good example of policy support and budget support working together to enhance the effectiveness of each intervention in a timely and flexible manner at a time of economic crisis.

(2) Implications for Future Budget Support

During the pre-crisis period, policy-support-type budget support is an effective means to secure finances as well as a tool to enhance reform enforcement in recipient countries, and the latter can be considered as added value to the aforementioned budget support. However, because policy actions are integrated with the government's own reform program and direct links cannot be found between funds and policy actions, many government officials have been grappling with reform efforts without recognizing the existence of budget support. That said, it is a good idea to utilize budget support to further educe its added value through securing high level commitment in the government in order to facilitate the reform process. As such, there is room to contrive ways to create incentives for line ministries and agencies to consciously participate in policy-support-type budget support, by considering ways to strengthen the link between policy and funding, while maintaining general budget support modality.

It might be the case that no such a framework as policy-support-type budget support exists, when JICA may consider Emergency Budget Support in the future. One of the major purposes of Emergency Budget Support is to provide quick financing as a countermeasure to crisis, and therefore the timing of fund provision is very important to enhance the effectiveness of such support. In this respect, it is appropriate that the administrative requirements for the provision of funding should be as simple and as flexible as possible in order to provide necessary funding at the proper timing. Furnishing the program setting in advance, during the precrisis period, would make the process more transparent as well as make it easier for the borrower to compare the several funding opportunities that are available. It is also expected to reduce the operational costs for both JICA and borrowers.

Summary of Emergency Budget Support Loans (Column)

The financial crisis triggered by subprime lending in the United States in 2007, followed by the collapse of Lehman Brothers Holdings Inc. in September 2008, developed into a global financial/economic crisis. Emerging Asian countries with rapidly growing economies were not immune from the effects of the global economic crisis. The slowdown of exports and investment through the decline in real demand worldwide, lower tax revenues, and its impact on the real economy in countries including Japan, Europe and the United States greatly affected them. It was an urgent issue in emerging Asian countries to support the economy through the rapid implementation of

measures and policies, in order to limit the negative impact of the global financial and economic crisis, and to promote the recovery of the economy as soon as possible.

Against this backdrop, the Japanese government, during the London Summit of April 2009, announced that they were prepared to provide support of more than 1.5 trillion yen in total ODA for the promotion of strengthening growth and domestic expansion in Asia itself, and introduced the framework of the Emergency Budget Support Loan, utilizing the scheme of Japanese ODA Loans.