

Analysis of the Outcome Generating Process of 5S-KAIZEN-TQM*¹ Approach in Hospitals*²

Operational consultant: World Business Associates Co., Ltd.

● Background and purpose

Since 2007, JICA has conducted the “Program of TQM for Better Hospital Services”^{*3} at healthcare and health facilities (hereafter, “hospitals”) in 15 African countries, and supported the enhancement of hospital management and improvement of hospital services by adopting the 5S-KAIZEN-TQM Approach. These activities have achieved significant outcomes, including the establishment of self-sustaining KAIZEN efforts at some hospitals. However, only few analyses have been conducted on the process through which outcomes emerge, and on the standard forms of

project design and indicators. This evaluation reviewed a series of projects associated with the Program through: (1) a literature review; (2) interview survey of experts in Japan; and (3) field survey in Tanzania and Senegal. The evaluation analyzed the process through which the adoption of the 5S-KAIZEN-TQM Approach generated outcomes. In addition, to serve as an aid to resolve the challenges facing hospitals in developing countries, a logic model and sample standard indicators were proposed for formulating new projects as well as conducting M&Es at individual hospitals.

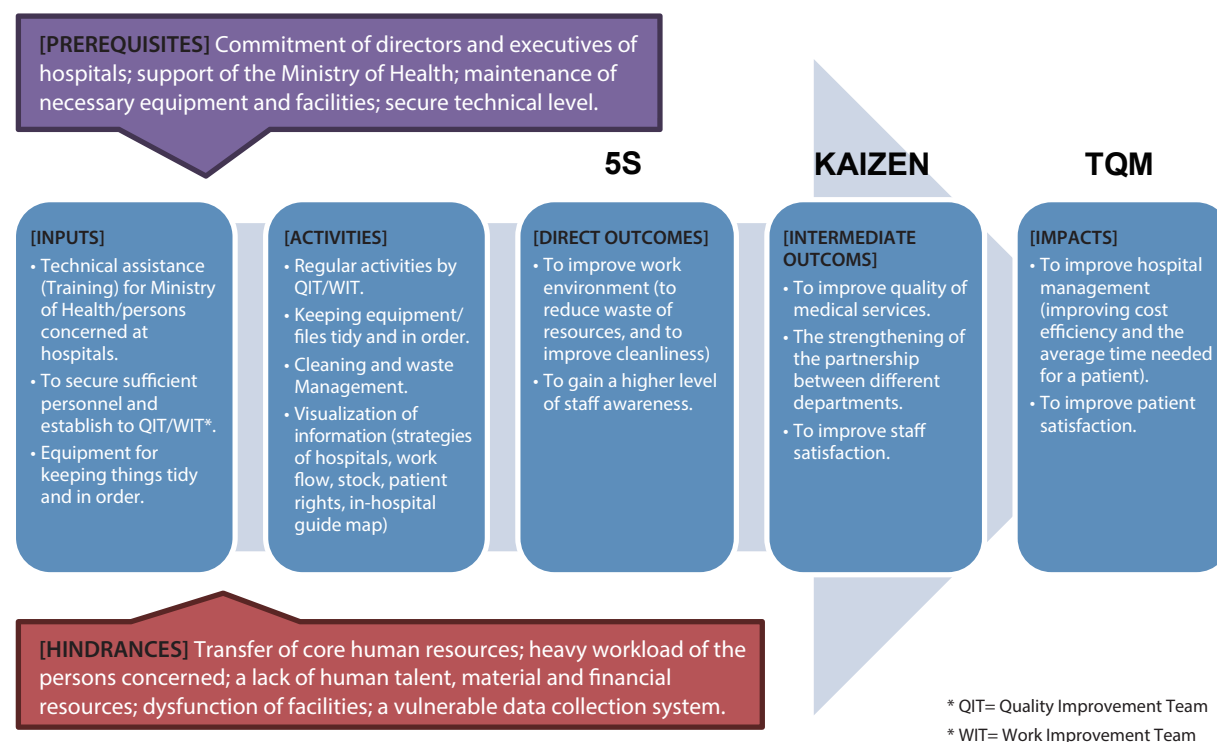
● Analysis results

(1) Logic of outcome generation by adoption of the 5S-KAIZEN-TQM Approach at hospitals

The field survey found that despite the severe shortages of resources at each hospital, outcomes were observed, such as a reduction in the waiting time of patients, decrease in excessive inventory, and increase in the number of approved applications for medical insurance deductions. In light of this outcome

generation situation, the following logic model was developed, taking a variety of elements into consideration, such as the health policy of each country, the hospital’s location (capital, rural area), management system (national, regional, semi-private), size (large hospital, medium-sized hospital, health center, health post), and socioeconomic situations (Figure 1).

Figure 1 Logic of outcome generation from introducing 5S-KAIZEN-TQM Approach to hospitals



*1 “5S-KAIZEN-TQM” refers to a stepwise approach of adopting the three methods of 5S (sort [seiri], set in order [seiton], shine [seiso], standardize [seiketsu], and sustain [shitsuke]), KAIZEN (a system of continual undertaking by an organization to improve its business activities and process), and TQM (total quality management).

For the details, see: <http://www.jica.go.jp/activities/issues/health/5S-KAIZEN-TQM/pdf/leaflet.pdf>.

*2 For the full report, see JICA’s website: http://www.jica.go.jp/english/our_work/evaluation/tech_and_grant/program/thematic/c8h0vm000001rgwp-att/2013_01.pdf.

*3 For an outline of the “Program of TQM for Better Hospital Services,” see: http://www.jica.go.jp/english/our_work/thematic_issues/south/project06.html (English).

(2) Trends in the project designs

The following trends were observed in the project designs of hospitals aimed at enhancing the quality of healthcare and health services through the adoption of the 5S-KAIZEN-TQM Approach:

1. Outcome indicators tend to be established at the level of outputs of 5S activities. Relatively few indicators are established for the effects at the KAIZEN level of work processes.
2. Most hospitals do not have means to gauge basic effect indicator data, such as "ratio of hospital infection," "medical accident ratio," and "financial data," and this poses as a setback to the establishment of indicators.
3. High impact level indicators which are difficult to achieve, such as "patient satisfaction," are included in the overall goals of projects. Therefore, in some cases, there is a jump in the logic between project purposes and overall goals.
4. In some cases, the "core problems" facing hospitals and the logic for resolving them through the adoption of 5S-KAIZEN-TQM are not always reflected clearly in the project design. However, it must be kept in mind that even in cases where the core problems are known, projects to resolve them are not necessarily implemented for strategic reasons.
5. The project design does not always set forth a clear logic for transitioning from improving the workplace environment ("5S

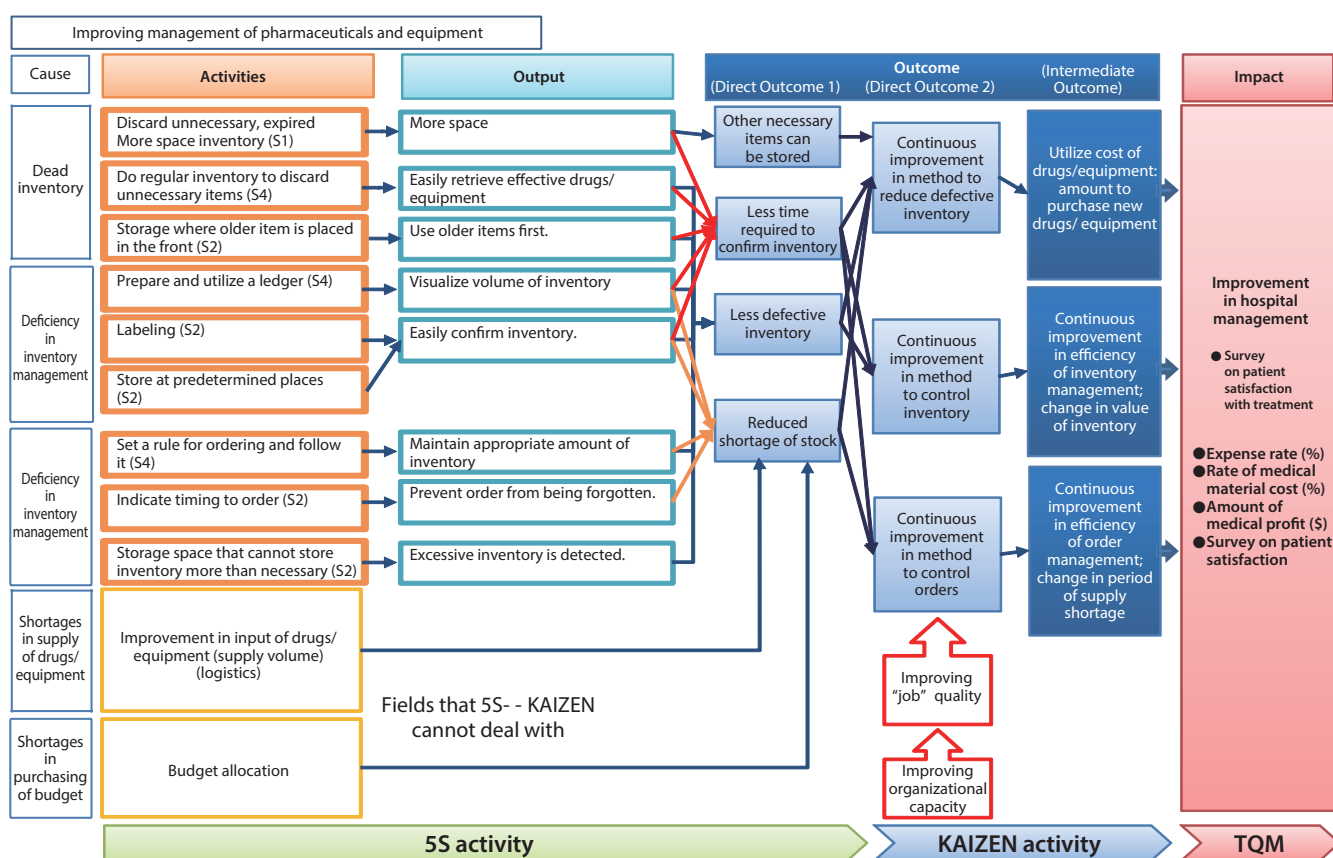
for the material environment") to improving the work process ("5S of work process").

6. The achievement of final outcomes is facilitated if synergistic effects are produced with non-5S-KAIZEN-TQM related efforts aimed at improving hospital functions (in particular, improvement of the technical level and renovation of facilities and equipment).

(3) Improving the quality of hospital services using the 5S-KAIZEN-TQM Approach: Logic model and model standard indicators

In light of (1) and (2) and taking into consideration the 5S-KAIZEN-TQM projects implemented at individual hospitals, the evaluation compiled logic models of the outcome generation process, model standard indicators, and points to note. Figure 2 is a proposed logic model for the management of pharmaceuticals and equipment, one of the six major issues hospitals face (medical accidents, hospital infection, management of pharmaceuticals and equipment, improvement in job efficiency, improvement in job quality, and improvement in organizational capacity) (N.B. Only some of the indicators are listed here; for the logic models of the other issues, see the report).

Figure 2 Proposed logic model for problem solving using 5S-KAIZEN-TQM Approach: "Improving management of pharmaceuticals and equipment"



Analysis on the Improvement of Management System for Utilizing Lessons Learned in PDCA Cycle

Operational consultant: OPMAC Corporation

● Background of the study

JICA, from both inside and outside of the organization, is increasingly demanded to further strengthen the PDCA (Plan-Do-Check-Action) cycle and enhance the quality of projects. It is therefore incumbent on JICA to make additional improvements to its projects through evaluations. This requires that JICA draws on "lessons learned" – JICA's unique pool of knowledge acquired through more than 40 years of implementing diverse projects in developing countries. This knowledge shall be used to

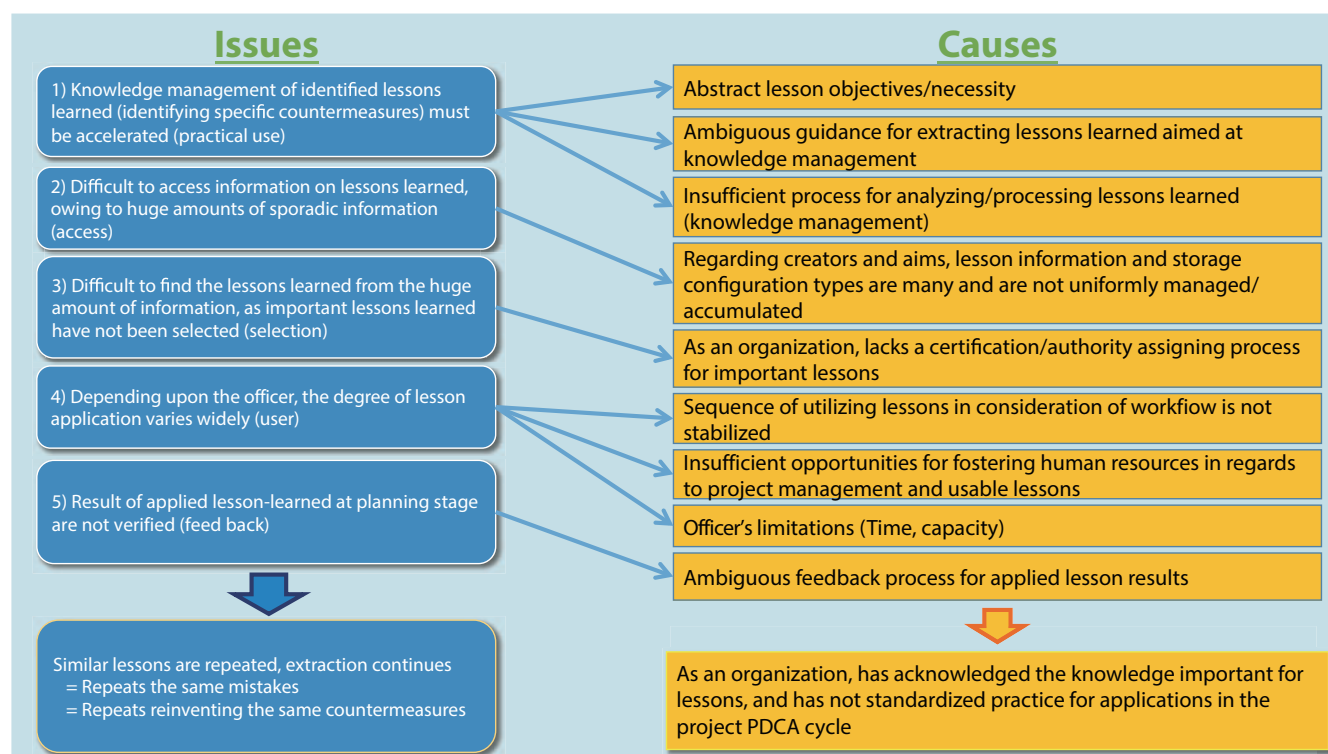
present solutions to complex and difficult development issues of developing countries, and to strengthen mechanisms for providing more appropriate assistance. This study was carried out to: (1) analyze how JICA currently draws on lessons learned; and (2) review examples of the use of lessons-learned and project risk management at other organizations so that it contributes to improve the management system for utilizing lessons learned in PDCA cycle.

● Summary of the study results

(1) Analysis of use of lessons learned at JICA

This study found that JICA has a system of referring to lessons learned primarily at a project's plan stage, and implemented and applied this system to a certain level. However, the system was not

necessarily utilized consistently. Furthermore, the system was not used adequately in the post-plan stages. The issues identified and their causes are shown in the diagram below.



(2) Use of lessons learned and risk management methods at other organizations

As case studies of other organizations, the study referred to private sector examples of project management and risk management, as well as the use of lessons learned and risk management methods of other donors (World Bank, Asian Development Bank) and of medical institutions. From these case studies, the following were identified as points JICA may take stock of for strengthening its lessons learned system:

1. Systematic management, amassment, and application of lessons learned and risks through project management and risk management (project formulation and project management);
2. Use of template for making content of lessons learned and risks uniform, and sharing it with stakeholders;

(3) Proposal for improving the lessons learned system

In light of the above results, the following improvements were proposed to strengthen the lessons learned system.

Improving processes of knowledge management and use of lessons learned

(introduction of lessons learned system [LLS])

1) Process of knowledge management of lessons learned

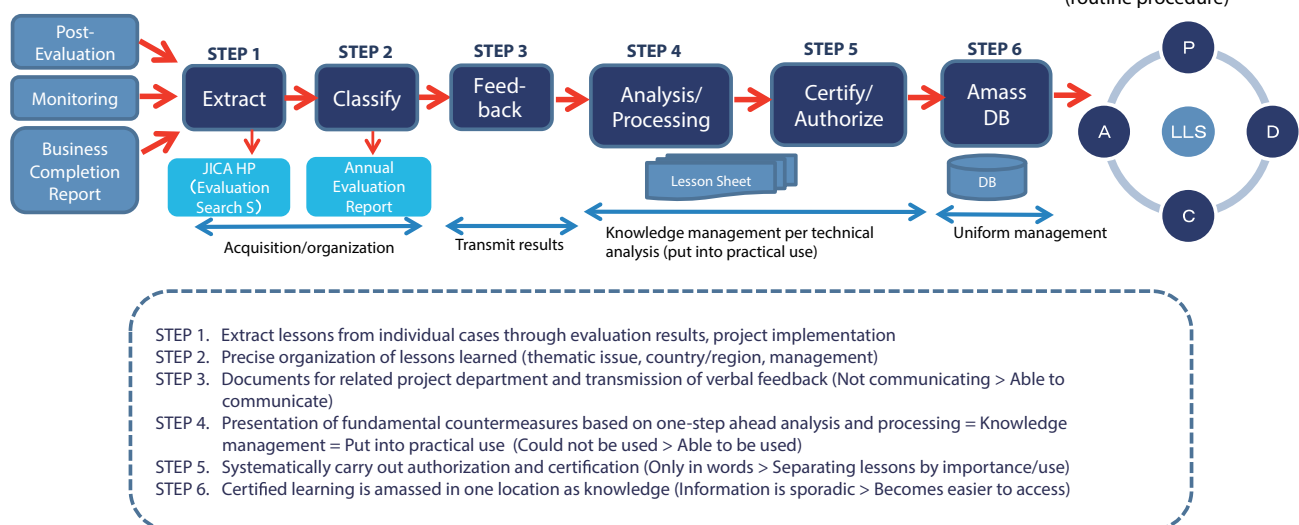
To promote knowledge management (practical use) of lessons learned and strengthen the lessons learned system, the study proposed that JICA make clear the purpose and necessity of lessons learned as well as the definition of the lessons learned

3. Application of lessons learned to project formulation by reflecting knowledge of experts with wealth of experience;
4. Thorough instillation of lessons learned policy by top management, and built-in motivation for using lessons learned through checks by senior employees and supervisors;
5. Integrated management and compilation of lessons learned information, and improved information search capabilities;
6. Sharing of lessons learned information through seminars and workshops; and
7. Training based on clear guidelines, and human resource development based on case studies.

that should be extracted. The extracted lessons learned should be classified and analyzed, and its results should be appropriately communicated to project departments. Lessons learned should be processed into highly versatile and practical knowledge, and authorized and accumulated as an organization. Following this process, JICA should verify the use and effectiveness of the lessons learned which were drawn upon in a project's PDCA cycle, and feed back the results. For these steps, the study proposed that the following knowledge management process of lessons learned be established as routine procedure.

After Improvement

—Standardization of the lesson knowledge management process in the **three areas of Thematic issue/Country/Management**



2) Process of drawing on usable lessons learned in PDCA cycle

The process of drawing on usable lessons learned in a project's PDCA cycle should be routine procedure of project management. The primary items of the proposed process are shown in the right table.

To ensure that stakeholders are motivated to use lessons learned and that their capabilities are enhanced for the functioning of these processes, the study proposed that evaluation management training be given as required training. The study also proposed that project management training shows ways of making use of lessons learned.

Stage of PDCA cycle	Ways of drawing on lessons learned
Plan (P)	During project formulation and project screening, draw on lessons learned deemed as knowledge and identify risks
Do (D)	List on the monitoring sheet the status of the use of lessons learned and risks referred to at the plan stage
Check (C)	Review and evaluate results of drawing on lessons learned
Action (A)	Reflect effective lessons learned into project guidelines used at the project formulation stage, e.g., Thematic Guidelines and JICA Country Analysis Paper

Analysis on the Public Financial Management of Developing Country Government to Ensure Sustainability of Development Effectiveness

Operational consultant: System Science Consultants Inc.

● Summary of the study

In this study, public financial management (hereafter, PFM) by developing country governments is identified as a potential risk and external factor. In order to ensure more appropriate risk management at each stage of a project's PDCA cycle, the study

was undertaken to examine countermeasures for potential risks attributable to PFM at each PDCA stage (project identification and formulation, planning and design, implementation, after completion), and to create a checklist.

● Study framework and policy

(1) The results of ex-post evaluations of projects (FY2009-2011, 285 projects), the results of terminal evaluations of Technical Cooperation projects (FY2007-2012, 320 projects), and JICA's Annual Evaluations Reports from the past ten years were reviewed. Projects were chosen in which financial capacity and sustainability were highly correlated, and 15 main issues were identified.

(2) Some of the main issues identified in (1) were verified by field studies in Bangladesh and Cambodia. Good practices, reference projects, and countermeasures were presented in light of the results of the project reviews and field studies.

(3) Based on the countermeasures presented in (2), a checklist for each of the PDCA stages was created.

● Study results

(1) 15 main issues in relation to project implementation

The 15 main issues were classified into four broad categories, namely, "funded by own funds," "funded by government budget," "maintenance and management expenses," and "nature of project," as shown in Table 1.

Table 1 Classification of main issues

Classification	Category	Main issue
Funded by own funds	Supply-demand(Sales volume)	1. Divergence between projected and actual demand
	Supply-demand (Price)	2. Low pricing 3. Low wish to pay fee
	Management agency	4. Unstable financial situation of management agency
Funded by government budget	Authority pertaining to budget and own funds	5. Lack of authority to self-manage revenue
	Decision-making process	6. Restrictions on consensus formation authority
		7. Incomplete budget consultations
		8. Uncertain decision-making process
	Budget expenditure procedure	9. Inadequate awareness of budget flow of C/P agency
Maintenance and management expenses	Information sharing	10. Planning and design exceeding financial capability of C/P agency
		11. No information sharing on JICA's project expenses
Nature of project	Repair costs	12. Lack of budget for large-scale repair
	Development of project model	13. Inadequate substantiation of project model
	Policy of partner country	14. Project is given high priority but has inadequate budget allocation
	Urgency	15. Project with priority given to urgency

(2) Countermeasures by main issue

Based on the review results, countermeasures for the main issues were identified for the "planning," "implementation," and "after completion" stages. Below are sample countermeasure proposals.

- At the planning stage, JICA shall make clear the expenses that the counterpart will need to bear for the project's implementation, and hold talks and examine whether the counterpart government is able to deal with and pay for such items from the following perspectives (proposed countermeasure for main issue 10).
 - JICA shall explain the operation, maintenance, and management expenses and expenses necessary for renewal, repair, etc. which the counterpart government needs to

pay for after the project's completion. Agreements, such as the consensus formation document, shall state that the counterpart will continue to take budgetary measures after the project's termination.

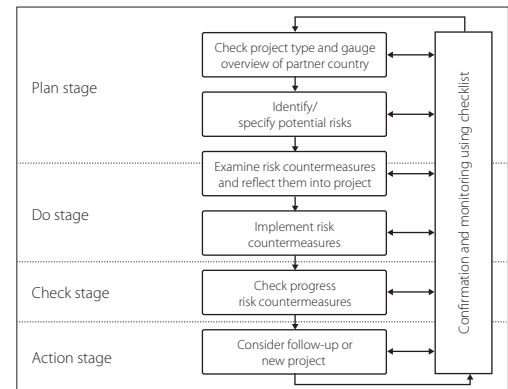
- Criteria for cost sharing between JICA and the C/P agency shall be developed based on the level of development of the partner country and the level of difficulty of paying for the counterpart government. If necessary, JICA shall bear the costs initially, and then gradually introduce a cost sharing plan that shifts the burden to the counterpart government in phases.
- If a detailed plan of the project's activities has not been established at the monitoring phase of an ongoing project, JICA

shall consider modifying the system so that by within six months of the project's commencement, the counterpart is informed

of the details of the expenses it will need to bear (proposed countermeasure for main issue 11).

(3) Proposed checklist

- At the plan stage, a checklist is used to identify potential risks, consider countermeasures, and reflect them into the project. At the do stage, risk countermeasures are implemented and their status is checked. Below is an example of the proposed checklist.



Checklist for reaching consensus on budget outlays of the counterpart

Preparatory Survey and detailed planning stage	Do stage	Check stage	Action stage
<p>□ Q3 The operation, maintenance, and management expenses and other budgetary outlays that the partner country should pay for during and after the project, as anticipated from the scale of the project activities, are clear.</p> <p>□ Q4 The partner country government agency that will make budgetary outlays during and after JICA's implementation of the project is clear.</p>	<p>□ Q3 The partner country government is bearing expenses in accordance with the cost sharing plan and agreement reached during planning. Or, the partner country government is late in making payments but countermeasures have been agreed upon through routine monitoring meetings, etc. involving agencies which determine the partner country's payment of aforementioned expenses and the payers.</p> <p>□ Q4 If it is deemed that the partner country government is unable to pay for the items in Q3 throughout the project period, modify the project plan to one in which the expenses are of a scale and content appropriate for the partner country government, and agree on the plan.</p>	<p>□ Q3 Pursuant to the items agreed upon during planning, the partner country government conducted checks from the following perspectives:</p> <ul style="list-style-type: none"> The partner country government is bearing expenses in accordance with the agreement reached during planning. The partner country government is late in making payments but countermeasures were agreed upon through routine monitoring meetings, etc. involving agencies that determine the partner country's payment of aforementioned expenses and the payers. Due to a significant change in the budget of the partner country government, JICA has confirmed with the partner country government its reasons and future measures, and has exchanged a written agreement. <p>□ Q4 Because the decision-making body for the budget changed after the project's termination due to decentralization, etc., JICA has requested the implementing organization to swiftly submit information necessary for the new decision-making body to take budgetary measures.</p>	<p>□ Q3 If the project's implementing organization changed from the C/P agency, or there was a shakeup in the central membership of the C/P agency, after the project's termination due to an election, decentralization, etc., the local JICA office will explore new assistance for the continuation of the project's activities and for the operation, maintenance, and management of facilities and equipment.</p> <p>□ Q4 If carrying out a follow-up or continuation project, the local JICA office will share information to enable the counterpart government to prepare the budget application ahead of schedule, taking into account the counterpart's budget application process.</p>

(4) Good practices and reference projects

Good practices and reference projects were compiled for each main issue. Below is an excerpt of good practices.

Good Practice of Main Issue 10: Planning and Design that Take Account of the C/P Agency's Financial Capability

(Technical Cooperation Project) The Project for Improving Maternal and Child Health Service in Rural Areas in Cambodia

This project was carried out for the purpose of "Maternal and newborn care service in the model sites is improved, whose results are integrated into models and reflected in the national programs (National programs under NMCHC, particularly National Reproductive Health Program)." From the stage of establishing a detailed plan, a project design was created based on the sector problem analysis. With regard to the project's financial sustainability, the terminal evaluation stated that, "(Cambodia) expressed to continue the activities started in the project period by using government Annual Operational Plan funds, and therefore, the project's financial sustainability is high. However, the activities may be given a lower priority on the budget vis-à-vis other activities, and the disbursement of the planned budget is unpredictable."

Meanwhile, the evaluation praised the project approach, stating, "the project is very significant in that it showed an effective approach to improve district health systems without large financial inputs." Regarding factors that increased the project's efficiency, the evaluation stated as follows: "First, the Cambodian government shared a high percentage of the costs. Secondly, the project carried out relatively low cost counterpart trainings, conducting several study tours at model sites and third country trainings using the technical exchange scheme, instead of conducting costly training in Japan." Maternal and child health administrators held regular meetings with birth attendants of health centers. Proactive technical assistance was provided, including lectures to health center birth attendants by inviting skilled birth attendants from hospitals, as well as new supervisions. The evaluation found that sustainability was ensured by limiting activities to those which could be paid for by provincial budgets (e.g., conference fee).

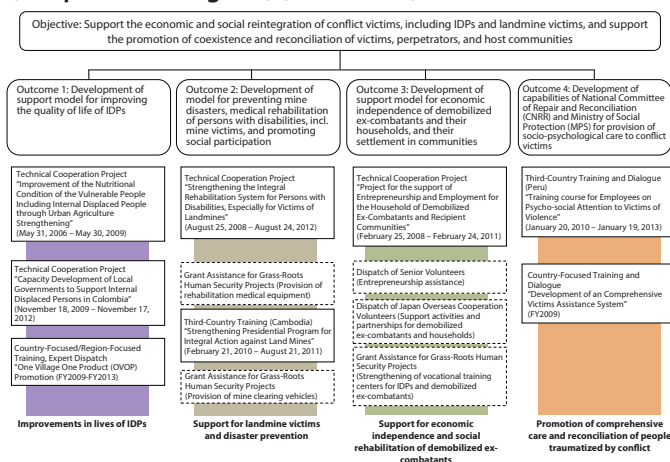
The project plan ensured sustainability by minimizing the costs necessary for the project's maintenance and management and the continuation of the activities after completion. The project was thus deemed as a good practice in the implementation of activities customized to the financial capacity of partner countries.

Evaluation of Cooperation Program “Support to the Victims of Armed Conflict and Their Coexistence and Reconciliation” in the Republic of Colombia

● Background of the study

In the Republic of Colombia, internal conflict has persisted for more than 50 years. To support the peacebuilding efforts of the Colombian government, JICA implemented the “Support to the victims of armed conflict and their coexistence and reconciliation” (right diagram) under a five-year plan from FY2008. JICA defines a Cooperation Program as a “strategic framework to support achievement of particular mid and long-term development objectives in a development country.” Lessons learned from pilot evaluations of Cooperation Programs are reflected when formulating other Cooperation Programs. In this context, upon the termination of this Cooperation Program, a study was conducted to review and carry out a pilot evaluation of the program’s performance and outcomes, and extract lessons learned and recommendations for future cooperation.

Republic of Colombia: Support to the victims of armed conflict and their coexistence and reconciliation (Cooperation Program) (2008-2012)



● Methodology of the pilot evaluation of the program

The pilot evaluation of this program was designed to assess the contribution of JICA's Cooperation Program, namely, to assess the extent to which it contributed to promoting the coexistence and reconciliation of conflict victims in Colombia (evaluation based on the “concept of contribution”). The evaluation process consisted of the following steps:

- (1) Confirmation of the positioning: Consistency of JICA's program with the peacebuilding efforts of the Colombian government and donors, and if the program addressed issues of higher priority.
- (2) Verification of strategic aspect: Consistency of the program scenario and appropriateness of the implementation process.
- (3) Verification of results/outcomes: Effectiveness of program performance and outcomes.
- (4) Evaluation based on the concept of evaluation: A comprehensive evaluation was conducted on how the program's outcomes contributed to promoting the coexistence and reconciliation of conflict victims in the country during the program period.

Overview of peacebuilding in Colombia

The following observations were made regarding the situation of the internal conflict and peacebuilding in Colombia:

- Significant progress towards peacebuilding
Peace negotiations between the Revolutionary Armed Forces of Colombia and the Colombian government started. The government formally acknowledged there was an internal conflict, and is taking steps to award compensation and restitute land to the victims as a national policy. The number of victims of landmines has been declining after peaking in 2005/2006, and the landmine clearance work is making progress.
- Meanwhile, these efforts have not led to the complete resolution of the conflict. The conflict has not ended in all parts of the country, including rural areas.
Armed groups occupy mining and manufacturing lands and control communities. There is a tendency that the number

of each internally displaced persons group is increasing. Challenges exist, including the rejoining of armed groups and crime organizations by demobilized ex-combatants.

Positioning of the program

During the program's planning stage, JICA conducted a Peacebuilding Needs and Impact Assessment (PNA) and analyzed the conflict situation in Colombia. As a result, the program gave priority to addressing the socioeconomic issues caused by the conflict in the country. The program was positioned appropriately vis-à-vis the peacebuilding efforts of the Colombian government and donors for the following reasons:

- (1) The program was implemented when the coexistence and reconciliation of conflict victims were pivotal (Colombia had the world's largest number of landmine victims and largest number of IDPs, and localized conflicts were continuing);
- (2) The program's activities were consistent with the related policies of the Colombian government and changes in the legal system during the program period, and the program is praised by Colombia; and
- (3) The program targets sub-issues addressed also by other donors as well as measures and the budget of the Colombian government.

Strategic aspect of the program

The program was planned according to a coherent policy based on the PNA analysis. On the other hand, the plan did not include any specific coordination among projects that have cross-cutting outcomes. Thus, there was room for further consideration regarding the composition of projects and the objective achievement scenario. During the implementation process, appropriate implementation and management were conducted, including PNA updates during the program period, mid-term review, and said terminal evaluation. During the program period, Colombian government agencies were well acquainted with their own projects but were not well-versed in the overall picture of JICA's program.

Results/outcomes of the program

The primary achievements and outcomes of the program were as follows:

- While this program directly benefited only a limited number of victims and perpetrators, it developed a foundation for a model to support the social integration and economic aspects of victims and perpetrators in all categories;
- The program produced effects through some model projects (e.g., promotion of urban agriculture which contributes to the nutritional improvement of IDPs, development of medical rehabilitation model). The models also covered surrounding communities and were effective in preventing the isolation of victims and perpetrators and decreasing bias; and
- The program enhanced the capabilities to provide the socio-psychological care needed by victims and perpetrators in all categories.

Contribution of the program

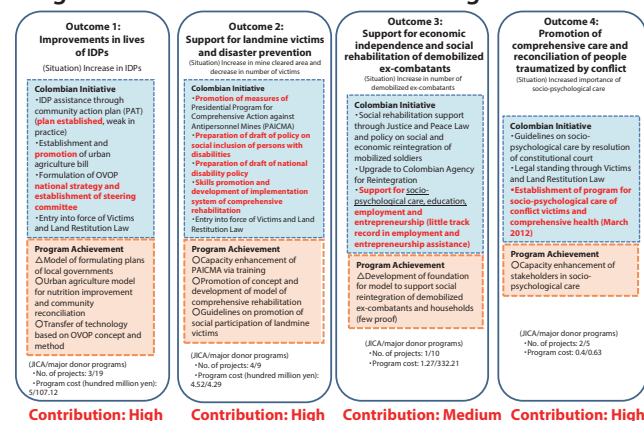
The contribution of the program was evaluated by reviewing the relationship between the program's achievements and outcomes and the progress of the efforts of the Colombian government towards the coexistence and reconciliation of conflict victims in Colombia. The evaluation found that for each of the outcomes, the program contributed directly and indirectly to promoting the coexistence and reconciliation of conflict victims in Colombia (see right diagram).

Recommendations

Upon the termination of the program, a "regional development program" is expected to be formulated. As Colombia's peacebuilding is in a transition period, this study makes the following recommendations for the next program:

- (1) The peacebuilding element should continue to be incorporated into security measures and considerations of project beneficiaries; and
- (2) The program should coordinate with regions and organizations that were covered by this Program for increasing the efficiency of the use of inputs.

Program's Contribution to Peacebuilding in Colombia



● Feedback for program formulation, implementation, and evaluation

(1) Suggestions for program formulation

- Establish appropriate indicators, and present a clear logic for scenario leading to the achievement of Cooperation Program objectives from individual projects.
- Select target policy issues, and confirm in advance relevant information at the program formulation stage.

(2) Suggestions for program implementation

- Share program information with partner country government and other donors, and promote synergistic effects through coordination.
- Monitor information on relevant sectors and information on changes in the external environment for program operation and management.

(3) Feedback on program evaluation method

- In cases where the program's maturity is in the development phase, the evaluation should place greater weight on carrying out an evaluation aimed at improving program by forming lessons learned and recommendations, than on an evaluation that summarizes the results (overview evaluation).
- Evaluations should account for the characteristics of sectors (take into account differences in characteristics between sectors with sector-wide approach and peacebuilding sector)

▶ Evaluation Framework of Cooperation Program

Contribution means an idea where the plausibility of causality between the progress of a development issue and the outcome of an agency can be verified by clearly recognizing them separately.

Plausibility of causality is verified from the following aspect:

- (1) Positioning in the development strategies: Where JICA's cooperation project is positioned in the development strategy of the country concerned;
- (2) Strategy of Cooperation Program: If the program as a whole had a consistent approach and if the program made appropriate modifications to the plans and implementation process according to the situation; and
- (3) Concrete results and outcomes from implementation of Cooperation Program.

In JICA's operations evaluation, the above-mentioned *positioning* and *strategy* as well as *outcomes* are reviewed and

analyzed. High plausibility of causality can be concluded if the program addresses priority issues in development strategies of the country concerned and produces prominent outcomes, as well as makes improvements to development challenges.

Evaluation framework: Program evaluation based on concept of contribution

