Ex-Post Project Evaluation 2012: Package II-3 (India, Sri Lanka, Vietnam, Indonesia)

September 2013

JAPAN INTERNATIONAL COOPERATION AGENCY

IC NET LIMITED

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Preface

Ex-post evaluation of ODA projects has been in place since 1975 and since then the coverage of evaluation has expanded. Japan's ODA charter revised in 2003 shows Japan's commitment to ODA evaluation, clearly stating under the section "Enhancement of Evaluation" that in order to measure, analyze and objectively evaluate the outcome of ODA, third-party evaluations conducted by experts will be enhanced.

This volume shows the results of the ex-post evaluation of ODA Loan projects that were mainly completed in fiscal year 2010, and Technical Cooperation projects and Grant Aid projects, most of which project cost exceeds 1 billion JPY, that were mainly completed in fiscal year 2009. The ex-post evaluation was entrusted to external evaluators to ensure objective analysis of the projects' effects and to draw lessons and recommendations to be utilized in similar projects.

The lessons and recommendations drawn from these evaluations will be shared with JICA's stakeholders in order to improve the quality of ODA projects.

Lastly, deep appreciation is given to those who have cooperated and supported the creation of this volume of evaluations.

September 2013

Masato WATANABE
Vice President
Japan International Cooperation Agency (JICA)

Disclaimer

This volume of evaluations, the English translation of the original Japanese version, shows the result of objective ex-post evaluations made by external evaluators. The views and recommendations herein do not necessarily reflect the official views and opinions of JICA. JICA is not responsible for the accuracy of English translation, and the Japanese version shall prevail in the event of any inconsistency with the English version.

Minor amendments may be made when the contents of this volume is posted on JICA's website.

JICA's comments may be added at the end of each report when the views held by the operations departments do not match those of the external evaluator.

India

Ex-Post Evaluation of Japanese ODA Loan Project

Micro, Small and Medium Enterprises Energy Saving Project

External Evaluator: Yumiko Onishi, IC Net Limited

0. Summary

In India, rapid economic growth in recent years has led to an increase in energy consumption, thereby making the promotion of energy efficiency through energy saving an urgent task. The Micro, Small and Medium Enterprises Energy Saving Project ("the project") provides medium- and long-term financial assistance to micro, small, and medium enterprises (MSMEs) in India for their energy saving efforts. It also provides assistance for strengthening loan appraisal capacity of the executing agency and Participating Financial Institutions (PFIs) and promotes awareness of energy saving among the MSMEs. The project is in line with the development policy and development needs of India as well as the ODA policy of Japan; thus, this project is highly relevant. In the project, the impact of trainings related to strengthening loan appraisal capacity of the executing agency and PFIs is limited. However, the amount of energy consumption actually reduced through energy saving loan is higher than planned. This has had some impacts on the environment; moreover, from the perspective of the sustainable development of the MSMEs, there has been some increase in profitability, and the competitiveness of the MSMEs has been strengthened through energy saving initiatives. Through the implementation of the project, the objectives have largely been achieved; thus, the effectiveness and impact of the project are high. The efficiency of the project is also high since both project cost and project period are as planned. With regard to the sustainability of the project, there are no specific issues related to the institutional and technical aspects of operation and maintenance. However, considering the financial status of some of the PFIs and the fact monitoring of revolving and debt recovery status is not possible, the sustainability of project effect is fair.

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

1. Project Description

Energy saving machine purchased by one of the end user companies (paper industry)

Automobile component produced by one of the end user companies

1.1 Background

In India, the rapid economic growth in recent years has led to an increase in energy consumption, thereby making it essential to promote energy efficiency through energy saving for stable energy supply and environmental sustainability for the future. The energy consumption of Indian manufacturing sector, including the MSMEs, was estimated to be 40-50% of total energy consumption[1]. However, the MSMEs have been consuming energy in an inefficient manner compared to large enterprises, mainly due to obsolete machines, and it was believed that they have a high potential for improving energy efficiency.

Given these circumstances, the Government of India has been promoting efficient use of energy through the enactment of the Energy Conservation Act and Integrated Energy Policy. The government has also been giving the MSMEs priority for lending based on the Micro, Small, and Medium Enterprises Development Act. However, due to the limited capacity of the MSMEs to access finance needed for capital investment related to energy saving, limited skills and know-how, as well as low awareness of the importance of energy saving, the initiatives on energy saving have not expanded.

1.2 Project Outline

The objective of the project is to promote energy saving among MSMEs by providing medium- and long-term financial assistance to MSMEs needed for their energy saving initiatives, strengthening the loan appraisal capacity of SIDBI, the executing agency and PFIs, and strengthening their awareness towards energy saving, thereby contributing to environmental improvement and economic development in the country as well as addressing climate change.

Loan Approved Amount/Disbursed Amount	30,000 million yen /30,000 million yen
Exchange of Notes Date/ Loan Agreement Signing Date	October 2008/November 2008
Terms and Conditions	Interest Rate: 0.3% Repayment Period: 15 years (Grace Period: 5 years) Conditions for Procurement: Untied
Borrower / Executing Agency	Small Industries Development Bank of India (SIDBI)/SIDBI Guarantor: the President of India
Final Disbursement Date	November 2010
Related Projects	<Japanese ODA Loan Projects> ・Small Scale Industries Development Program (1)-(6) ・Micro, Small and Medium Enterprises Energy Saving Project Phase II (2011-2014)

[1] Source: the Government of India, Twelfth Five Year Plan.

	<Other international donors> ・Micro, Small and Medium Enterprises Financing and Development Project (Financing by IBRD and KfW and technical assistance by DFID and GIZ) ・Financing Energy Efficiency Project in Micro, Small and Medium Enterprises Sector (KfW)

2. Outline of the Evaluation Study

2.1 External Evaluator

Yumiko Onishi, IC Net Limited

2.2 Duration of Evaluation Study

Duration of the Study: September 2012 – July 2013

Duration of the Field Study: December 1–12, 2012, and February 17–25, 2013

2.3 Constraints during the Evaluation Study

In the ex-post evaluation, end user companies that obtained financial assistance by availing the energy saving loan as part of the project were interviewed either directly or through a questionnaire to grasp the impact of energy saving and ascertain the level of customer satisfaction, among other things. There are over 3,000 end user companies in the project and the selected sample size for the evaluation is 45. Since many of the end users were not aware that the loan they have taken was assisted by a Japanese ODA Loan, some of them declined to give the interview. Since part of the effectiveness and impact is evaluated on the basis of the information collected from the end users with such constraints, the evaluation result does not necessarily reflect the comprehensive situation of the project.

3. Results of the Evaluation (Overall Rating: A[2])

3.1 Relevance (Rating: ③[3])

3.1.1 Relevance with the Development Plan of India

(1) Promoting Energy Saving

At the time of the appraisal, the goal of the Indian government was to "achieve 20% energy efficiency by FY 2017," which is mentioned in the Eleventh Five Year Plan (April 2007 to March 2012). In addition, the government planned to control the energy demand through energy saving based on the Integrated Energy Policy, which was announced in 2006. Furthermore, in addition to Bureau of Energy Efficiency's (BEE) ongoing effort for improving the efficient use of energy, the government announced that it would consider introducing market mechanisms, tax reliefs, and tax incentives for energy saving equipments in the National Climate Change Action Plan of 2008. In the Twelfth Five Year Plan (April 2012 to March 2017), announced at the time of the ex-post evaluation, it is mentioned

[2] A: Highly satisfactory; B: Satisfactory; C: Partially satisfactory; D: Unsatisfactory

[3] ③: High; ②: Fair; ①: Low

that to strike a balance between economic growth and environmental sustainability, it is necessary to promote energy saving in every possible manner. Accordingly, the project is relevant at the time of the ex-post evaluation.

(2) MSME Development

Development of MSMEs is considered to be a key to economic growth in the Eleventh Five Year Plan and the government has targeted an annual growth of 15% during the period. Subsequently, priority is given to the development of MSMEs in the Twelfth Five Year Plan also and the government aims to improve productivity and competitiveness of the MSMEs, upgrade technology and promote export. Based on the MSME Development Act of 2006, medium enterprises have been added to the definition of MSMEs in India. With the implementation of the Act, the scope of government assistance to the MSMEs has also expanded.

Considering above, the project is highly relevant with the development plan of India at the time of the appraisal and the ex-post evaluation.

3.1.2 Relevance with the Development Needs of India

At the time of the appraisal, due to rapid economic growth, the energy consumption in the country was increasing at the rate of 7% per annum in manufacturing sector[4], thereby making it essential to promote energy efficiency through energy saving to ensure a stable energy supply and environmental sustainability for the future. In particular, energy usage by the MSMEs was said to be inefficient mainly due to slow investment in energy saving equipments and the use of obsolete machines, and their potential for improvement was considered to be high. Given such circumstances, the Government of India has been promoting efficient use of energy and giving priority for lending to MSMEs based on the MSME Development Act. However, due to the MSMEs' limited capacity to access finance needed for the investment related to energy saving equipment, their limited skills and know-how, as well as low awareness of the importance of energy saving, the initiatives on energy saving have not gained much ground.

According to the report published by the Ministry of MSMEs in 2009, the advance from public sector banks to the MSMEs increased from INR 460.4 billion in 2000 to INR 1,852.1 billion in 2009; however, in the same period, the share of credit to the MSMEs against total amount of the loan declined from 12.5% to 10.9%, indicating mismatch between the increase in amount of advance given to MSMEs and their share of credit against total amount of the loan. In the study conducted by United Nation's Industrial Development Organization (UNIDO) in 2011 targeting MSMEs in India, the limited access to credit was indicated as the biggest obstacle for MSMEs in achieving efficient use of energy, making it clear the importance of strengthening energy saving loans for the MSMEs[5]. In addition, the project has been completed earlier than planned due to tremendous demands for financial

[4] Source: the Government of India, 12th Five Year Plan.

[5] 'Approach to energy efficiency among micro, small and medium enterprises in India: Result of a field survey', UNIDO Working Paper 8/2011.

resources from the MSMEs (for details, see the section on Efficiency). As evident from above, there is a high demand for strengthening energy saving loans for MSMEs even at the time of the ex-post evaluation.

3.1.3 Relevance with Japan's ODA Policy

One of the priority areas of Japan's Country Assistance Policy for India (May 2006) was the "improvement of the poverty and environmental issues." The Japan International Cooperation Agency (JICA) is targeting assistance to tackle environmental issues and climate change as a priority area and is also aiming to introduce energy saving technology in the industrial sector. As the project aims to provide mid- to long-term financial resources to achieve energy saving among the MSMEs, it is relevant to Japan's ODA policy.

The project has been highly relevant with the country's development plan, development needs, as well as Japan's ODA policy; therefore its relevance is high.

3.2 Effectiveness[6] (Rating: ③)

The project provided financial resources to the MSMEs for investment in energy saving equipment (sub-project). The loans for such energy saving equipment were provided as two-step loans through the executing agency, SIDBI, or as three-step loans through on-lending from SIDBI to the selected PFIs to the MSMEs.

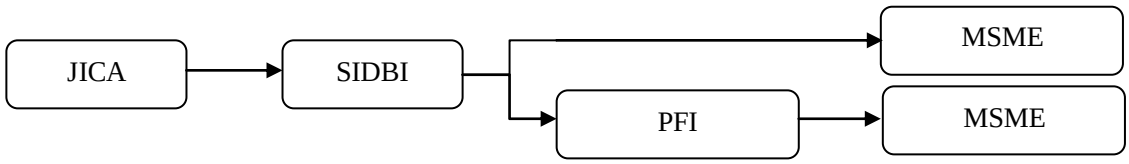


Figure 1: Financing scheme under the project

In addition to the two-step and three-step loans under the Japanese ODA Loan, the project had inputs from technical assistant (TA) consultants who conducted energy saving awareness campaigns targeting MSMEs, updated the Energy Saving Equipment List (ESEL)[7] and conducted capacity building training on energy saving loan appraisal for SIDBI and PFIs (for details on technical assistance, see the section on Efficiency).

3.2.1 Quantitative Effects (Operation and Effect Indicators)[8]

In the project, the target for the amount of energy consumption reduction was to be calculated at the beginning of the project as an operation and effect indicator. However, according to SIDBI and TA

[6] Sub-rating for Effectiveness is to be put with consideration of Impact.
[7] In order to provide information for staffs of the financial institutions and for the MSMEs, the list contains information on the energy saving equipments that can be financed by the project, their specifications and equipment suppliers.
[8] Figures related to disbursement and reduction on energy consumption indicated in the report refer to the achievement arising only from the primary lending to MSME and do not include achievement from revolving of the fund.

consultants[9], the target was not established since it was impossible to calculate the amount of energy saved from the project because the amount of energy consumption varies from industry to industry, and differs depending on the kind of energy saving equipment used by end users, while the energy saving loan was made available to various industries and used to procure various types of energy saving equipments. At the same time, the appraisal document mentions the energy saving benchmark of 10% at the time of project completion (based on the Indian policy target to "achieve 20% energy efficiency by FY 2017," as mentioned in the Eleventh Five Year Plan) and it can be considered as the project target. The amount of energy consumption reduction from the energy saving equipments installed in the project is shown below[10].

Table 1: Energy consumption reduction from the project

Average energy saving rate	35.67%
Annual reduction on electric energy consumption	477.71 MkWh
Annual reduction on thermal energy consumption	446,474.00 MkCal

Source: SIDBI (Questionnaire interview)

At the time of the appraisal, 10% reduction in energy consumption was considered to be the benchmark target. Given that the average rate of energy saving from the project was 35.67%, it can be said that the project has achieved a higher level of energy saving than the plan. According to the Confederation of Indian Industry, the potential for energy consumption reduction of MSMEs through energy saving is estimated to be 1,000 MW per annum[11]. At the same time, the electric and thermal energy consumption reduction from the project is equivalent to 119 MW when converted to MW[12], the project has contributed to 12% of the energy saving potential of MSMEs. Considering that the number of end users covered by the project is less than 1% of all the MSMEs in the country, it is evident that the amount of energy saved through the project is considerably large[13].

3.2.2 Qualitative Effects

(1) Improving Awareness of Energy Saving among the MSMEs

At the time of the ex-post evaluation, 45 end user companies who availed financial assistance from the project were interviewed either directly or through questionnaire to collect information on reasons for availing the energy saving loan and their satisfaction with respect to the loan scheme

[9] TA consultants were hired by technical assistance for the Japanese ODA Loan scheme. TA consultants are also engaged with Phase 2 of the project.

[10] Estimated based on 67 selected sample sub-projects. Electric and thermal energy consumptions of the sample sub-projects before and after installing the energy saving equipment were compared and the energy saving amount for each sample sub-project was calculated. Based on the energy saving amount from the sample, the energy saving for similar sub-projects were calculated and finally the total energy saving for the entire project was estimated.

[11] "Energy Efficiency – India" Confederation of Indian Industry, 2005.

[12] Calculation (for the project): (1) Annual electric energy reduced 477.71M kWh = 477,710,000 kWh/24 (hour/day)/ 350(working day/year)/1,000 (kw/Mw) = 56.87MW. (2) Annual thermal energy reduced 446,474M kCal = 446,474,000,000 kCal/860 (kCal/kWh)/24 (hour/day)/350 (working day/year)/1,000 (kw/Mw) = 61.80 MW. (1) + (2) =118.76MW

[13] The total number of end users of the project is approximately 3,000. According to the estimate of the Ministry of MSMEs, the total number of MSMEs in the country in FY 2010 was 31 million.

among other things[14]. In the interview survey, 42 out of 45 end users responded that they were aware of energy saving before project implementation. Since the proprietors of the end user companies are highly educated and standards such as emission of pollutants for each industry are specified under the pollution control laws in the country which the end users must comply, the end users seemed to be highly aware of energy saving and environmental protection. Out of 45 end users interviewed, 15 participated in the awareness campaign of the project, out of which 13 responded that by attending the campaign, their awareness of energy saving was further enhanced. According to SIDBI, some of the MSMEs were hesitant about the project since installing energy saving equipment often entailed changing manufacturing technology and enhancing production scale. Through the awareness campaigns, there has been an improvement in the understanding of energy saving initiatives MSMEs can practice and benefits arising from it, thereby resulting in some MSMEs availing the energy saving loans.

(2) Strengthening MSME Energy Saving Loan Appraisal Capacity of Financial Institutions (SIDBI and PFIs)

In the project, SIDBI provided energy saving loans to over 2,000 sub-projects. According to SIDBI, the loan appraisal officers have become more efficient and effective in implementing energy saving loan appraisal through the project. Moreover, the loan appraisal and disbursement processes have become more efficient at the institutional level; however, improving specific areas such as reducing the time taken for loan appraisal remains unrecognized. Forty-eight SIDBI branches have participated in the project, and the number of sub-projects approved and branches are shown in Table 2 below. There are a few branches that have approved more than 100 sub-projects while many others have had less than 10 sub-projects.

Table 2: Number of sub-projects approved at SIDBI branches

No. of Sub-projects	No. of Branches
More than 100	3
80~99	2
60~79	1
50~59	1
40~49	5
30~39	4
20~29	5
10~19	8
Less than 10	18

Source: SIDBI

Note: Above figure excludes 838 loans given through a taxi association.

With the objective of enhancing the capacity of SIDBI and PFIs, the TA consultants held two

[14] As referred in the column at the end of the report, the samples were selected mainly from automobile industries located in New Delhi and Bangalore area that have experience of trading with Japanese companies. Out of the 83 end users contacted, interviews were conducted with 45 end users who agreed to participate.

training programmes each for Clean Development Mechanisms (CDM)[15] and energy saving loans. The training participants were mostly SIDBI staff. The training programme included introduction of energy saving technologies and case studies. Since it has taken time to coordinate aspects such as designing training contents and securing the venue, all the four training programmes were conducted in 2011 after project completion; however, only by definition of project completion the training programmes were conducted beyond the project period. Since all the training programmes were conducted after project completion, they have not contributed to improving the SIDBI staff's loan appraisal capacity in Phase 1 of the project. As the training included introduction of energy saving technologies and specific case studies, it would have been beneficial if they had been conducted at an earlier stage in the project.

Taking the above discussion into consideration, it can be said that the effect of capacity building of SIDBI and PFIs for energy saving loan appraisal to the MSMEs under the project was limited.

(3) Accelerating the Effort for Efficient Use of Energy

Through the interviews conducted with end users at the time of the evaluation, it was evident that out of 45 end users interviewed, 17 have taken their own energy efficiency initiatives apart from the sub-projects such as regular monitoring of electricity consumption and switching to CFL bulbs[16]. Satisfied with the performance of the energy saving equipment installed under the project and improvement in product quality, more than 100 end users of SIDBI have taken energy saving loans again.

3.3 Impact

3.3.1 Intended Impacts

3.3.1.1 Environmental Improvement

As an example of energy saving loan contributing to environmental improvement, SIDBI has provided a loan to a taxi association to procure over 800 compressed natural gas (CNG) taxis. Furthermore, Delhi Financial Corporation (DFC), a PFI, has extended loans to over 500 auto-rickshaws to convert from diesel to liquid petroleum gas (LPG) fuel. Compared to diesel, LPG is considered to emit a lower amount of harmful gases after combustion. Therefore, it can be said that the project has contributed to improving the environmental condition to a certain extent.

3.3.1.2 Sustainable Economic Development

(1) Improving the Profitability and Competitiveness of MSMEs

Among the 45 end users who participated in the direct or questionnaire interview, 42 responded

[15] CDM is one of the global warming combat mechanisms defined by Kyoto Protocol to reduce green house gases. Industrialized countries with CO_2 cap may purchase the amount of carbon emission reduced from the developing countries that are not meeting the emission allowance.

[16] Compact florescent light, a type of energy saving light.

that the loan from the project has contributed to improving the company's performance. Out of the 42, 33 end users indicated benefits from the project such as improvement in product quality by installing energy saving equipment, obtaining new contracts due to increased customer satisfaction and expansion of the business by rationalizing the production process.

Not many end users have maintained a record of the amount of energy consumption and energy cost associated with production before and after the implementation of the sub-project. And the per unit electricity price increased during the project period; therefore, it is not possible to estimate the actual changes in energy cost incurred during production. At the same time, due to reduced energy consumption after the installation of energy saving equipment, there should be a general reduction in energy cost for producing the same quantity of products. Better product quality and reduced production cost because of improved energy efficiency may have contributed to providing MSMEs in India with a competitive edge, as they have been recently facing severe competition not only domestically but also internationally. For example, Company A, an end user, that manufactures cardboard boxes has availed the project loan to install an energy saving machine that automates the production process of cardboard boxes. As shown in Table 3, by installing the energy saving machine, the company's electricity consumption has reduced, and as a result, electricity charge has also reduced. The electricity charge for manufacturing one cardboard box has reduced by 40% and the company's productivity has increased by almost eight times.

Table 3: Energy consumption and electricity charge of Company A

	Before	After
Energy consumption (per 1 ton of cardboard box)	78.00 kWh	49.00 kWh
Electricity charge (per 1 cardboard box)	Rs. 0.40	Rs. 0.25

Source: Company A

(2) Creating Employment Opportunities

While there is possibility of reduction in employment due to upgrading and rationalizing production technology as a result of installing energy saving equipment, out of 45 end users interviewed for the ex-post evaluation, the number of employees has increased in two-third of the end user companies after sub-project implementation. According to SIDBI, out of 2,133 end users, 34% of them have utilized financial assistance from the project to establish new businesses. Therefore, considering the fact that establishing new businesses would have created new employment, it can be said that the project has also contributed in generating employment opportunities.

3.3.1.3 Contribution to Climate Change

According to the hearings conducted from SIDBI and BEE, the project has had no specific impact on policies related to climate change and other environmental protection standards in the country.

3.3.2 Other Impacts

According to SIDBI and PFIs, JICA's *Guideline for Confirmation of Environmental and Social Considerations* (April 2002) was explained to end user companies at the time of loan appraisal. Before loan disbursement, candidate sub-projects were required to adhere to requirements from the Pollution Control Board and submit a copy of the pollution control certificate to the financial institution. Sub-projects were appraised in line with the JICA's guideline on social and environmental consideration and no negative impacts were observed. There was no resettlement and rehabilitation associated with land acquisition in the project.

In the project, the effect of strengthening energy saving loan appraisal capacity of SIDBI and PFIs is limited. However, the amount of energy saving achieved through the energy saving loan to MSMEs is above the targeted level and there is also some impact in terms of environmental improvement. Further, from the viewpoint of sustainable development of MSMEs, there has been a certain increase in profitability and productivity and MSMEs have gained a competitive edge through energy saving initiatives. This project has largely achieved its objectives; therefore, the project's effectiveness and impact are high.

3.4 Efficiency (Rating: ③)

3.4.1 Project Outputs

3.4.1.1 Financing Scheme

As shown in Figure 1, the project has provided mid- to long-term finance to MSMEs through SIDBI to the end user as two-step loan or from SIDBI to PFIs and then to the end users as three-step loan. There was no change in the financing scheme between the plan made at the time of appraisal and in the manner the project was actually implemented. Table 4 presents the list of PFIs that participated in the project, the number of sub-projects covered under the project and the disbursement.

Table 4: Sub projects and disbursement under the project

Institution[17]	Sub-projects	Disbursement (INR10 million)
SIDBI	2,133	883
IREDA	25	200
APSFC	35	69
DFC	586	6
KSFC	134	55
TIIC	151	50
WBSFC	15	15
SB	460	405
Total	**3,539**	**1,683**

Source: SIDBI

Since the network of SIDBI's branches is limited to 103, by bringing other PFIs on board, the project was able to extend the loans to wider geographical areas. Most State Financial Corporations (SFCs) like Andhra Pradesh State Financial Corporation (APSFC) and Karnataka State Financial Corporation (KSFC) have extensive coverage in specific geographical areas compared to SIDBI and have a strong relationship with the MSMEs in the area. Hence, the participation of other financial institutions enabled the project to serve more clients.

3.4.1.2 Eligible Sub-Projects

The project has targeted MSMEs across India and loans were provided to those who passed the loan appraisal process of SIDBI or relevant PFI. The definition of MSME according to the MSMEs Development Act of 2006 is presented in the following table.

Table 5: Definition of MSME

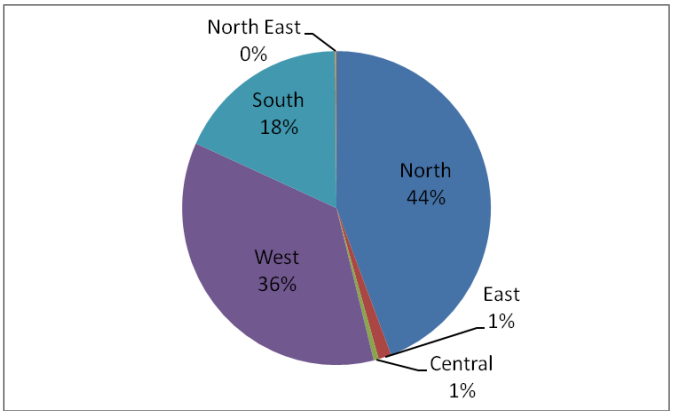
	Micro	Small	Medium
Manufacturing sector	Less than INR 2.5 million	Less than INR 50 million	Less than INR 100 million
Service sector	Less than INR 1.0 million	Less than INR 20 million	Less than INR 50 million

Source: the Government of India
Note: The values in the table refer to investment in plant and machinery.

Eligible sub-projects are capital investment in energy saving equipment listed in the ESEL which is specifically prepared for the project. Except for arms, narcotics, and any other unlawful businesses, there was no restriction on the target industry; and the loans were given mainly to the industries with

[17] Expanded names of PFI are as follows:
IREDA: Indian Renewable Energy Development Agency
APSFC: Andhra Pradesh State Financial Corporation
DFC: Delhi Financial Corporation
KSFC: Karnataka State Financial Corporation
TIIC: Tamil Nadu Industrial Investment Corporation
WBSFC: West Bengal State Financial Corporation
SB: Syndicate Bank

large energy consumptions. Energy saving loans were actually extended to various industries including auto ancillaries, textile, food processing, and medical equipment. Further, SIDBI provided loans mainly to industries such as auto ancillaries, textile, engineering, iron and steel casting, and forging. Figure 2 depicts the geographical spread of SIDBI loans. Eighty percent of the lending was concentrated in the north and west India where many of the industrial areas are located.



Source: SIDBI

Figure 2: Geographical spread of SIDBI's lending (based on lending amount)

3.4.1.3 Lending Terms and Conditions

According to the plan at the time of the appraisal, lending terms such as interest rate and repayment period were to be decided at the discretion of SIDBI and the relevant PFI as a general rule. By availing soft loans from the Japanese ODA Loan, SIDBI was able to extend loans to MSMEs at a lower-than-normal lending rate, thereby increasing the incentive of MSMEs to procure energy saving equipment. During the project period, SIDBI's lending rate to end users varied from 9.5% to 11.5%. Further, the lending rate from the PFIs to end users ranged from 11% to 14% (for details of lending terms and conditions, see Comparison of the Original and Actual Scope of the Project at the end of the report).

In the interviews with end users (45 end users), 56% responded that a low lending rate was the deciding factor for availing the energy saving loan. The fact that the project allowed end users to utilize the loan to procure energy saving equipment as additional equipment instead of making it obligatory to replace the existing low-efficiency equipment has also encouraged MSMEs to avail energy-saving loans[18].

[18] According to SIDBI, a similar financing scheme assisted by other donor makes it mandatory to replace the existing low-efficiency equipment as they give importance to short-term energy saving benefit and the implementation of the scheme has been reported to be slow.

3.4.1.4 Technical Assistance

The TA consultants associated with the project conducted the following activities:

(1) Energy Saving Awareness Campaign for MSMEs

According to SIDBI, 28 energy saving awareness campaigns for the MSMEs were held during the project. Existing industrial clusters in the country were selected for the campaigns based on criteria such as high energy consumption and energy saving potential. At the campaign, in addition to providing the information on the energy saving loan of the project, energy saving initiatives in industrial clusters and the energy saving potential of the industry were presented. The awareness campaigns also served as a publicity tool for the energy saving loan. In particular, in the latter half of the project, the loan was promoted more effectively by holding focus group discussions with influential persons related to MSMEs such as the representatives of industrial clusters, chartered accountants and energy auditors. In the areas where the awareness campaigns were conducted, number of sub-projects is comparatively large in respective SIDBI branch. For instance, out of 23 branches that manage the areas where the awareness campaigns were conducted, 17 branches have approved more than 20 sub-projects. In contrast, out of 25 branches in whose areas the awareness campaigns were not conducted, only 4 has more than 20 sub-projects, indicating the effect of the awareness campaign.

(2) Updating ESEL

The ESEL was the first of its kind in India and the list included energy saving equipments and technologies for many industries such as textile, automobile components, food processing, casting and forging, pharmaceuticals, and printing. The list was compiled based on the information provided by ongoing energy saving projects of the government, energy saving equipment suppliers, and opinions of MSMEs and also includes information on the specifications of the equipment and contact details of the suppliers. The equipments on the list are selected taking into consideration the unique situations of MSMEs such as the energy consumption pattern, their business scale and technology employed. In particular, they were selected based on the equipment suppliers' sales network in the country and quality control certification (ISO9000) among other things. For some of the equipments listed in the ESEL, their effect of energy saving was verified by visiting the equipment users during the project. The list was updated 10 times during the project. The ESEL was prepared with objective to provide information regarding eligible energy saving equipments and its performance to loan appraisal officers of financial institutions and the MSMEs. It was particularly helpful for the loan appraisal officers of SIDBI and PFIs to determine if candidate sub-projects are eligible to avail the energy saving loan. At the same time, according to some of the equipment suppliers at the time of the ex-post evaluation, there were certain suppliers who were not aware of the project and the ESEL[19].

[19] Some of the suppliers expressed that had they known about the project, they could have introduced equipments that were in line with the needs of MSME and could have introduced energy saving loans to their MSME customers.

(3) CDM Registration Related Support

TA consultants also undertook activities related to registering a CDM project. Four industrial clusters were selected within the country and the possibility of formulating the CDM project at cluster level was explored[20]. Out of the four, one was selected and a project design document was prepared in order to register as a CDM project. Since registering a CDM project is a long process, the process was not completed at the time of the ex-post evaluation; however, according to the TA consultants, the process of registering will continue. Nevertheless, the amount of green house gases is lowering due to economic slowdown, and as a result, demand for carbon credit is reduced and the price in CDM market is also lowering. Given such situation in the CDM market, it is unclear whether the CDM project will be successfully registered for CDM.

(4) Other Technical Assistance

Apart from the technical assistance mentioned above, TA consultants have undertaken monitoring of social and environmental impact, monitoring of operation and effect indicators, and capacity building of SIDBI and PFIs[21].

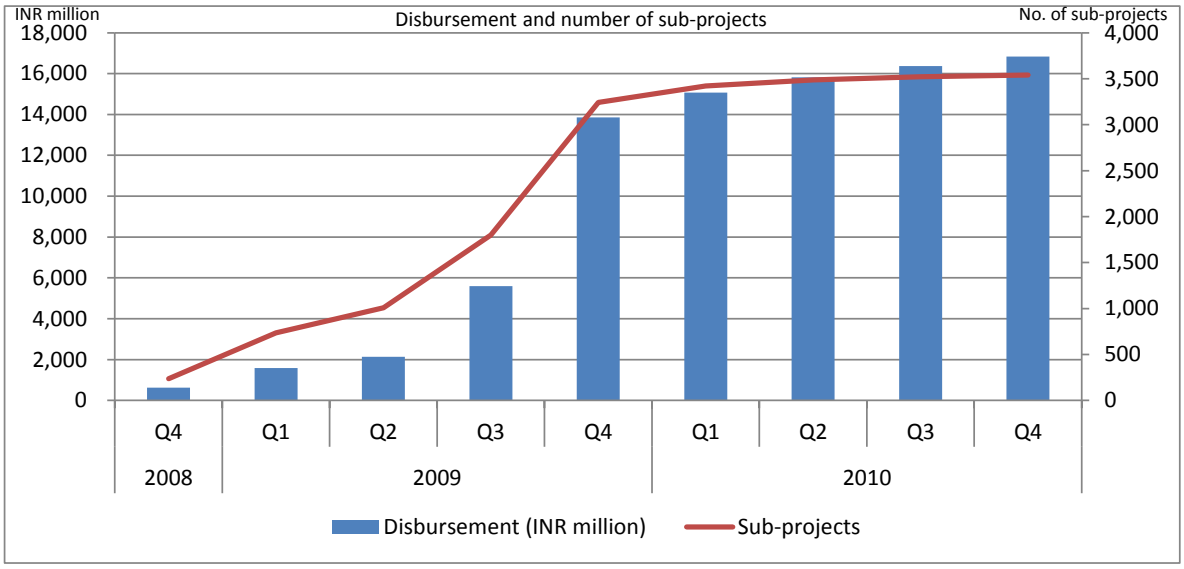
3.4.2 Project Inputs

3.4.2.1 Project Cost

At the time of the appraisal, the project cost was JPY 31,593 million (out of which the Japanese ODA Loan accounted for JPY 30,000 million) and the actual disbursement was JPY 31,228 million as planned.

[20] For the project industrial clusters of foundry, rolling mill, ceramic, and steel re-rolling mill were selected with high potential for CDM project.

[21] For monitoring the social and environmental impact, priority was given to the end users of leather and foundry industries where there is a relatively large environmental impact. Twenty samples were selected from among the end users and ambient air quality, noise level and water quality were tested. Details on monitoring of operation and effect indicators as well as capacity building of SIDBI and PFIs are described in the section on Effectiveness.



Source: SIDBI

Figure 3: Disbursement and sub-project implementation under the project

3.4.2.2 Project Period

At the time of the appraisal, the planned project period was 36 months from October 2008 to September 2011. For the project, project completion was defined as the last disbursement from JICA to SIDBI, the executing agency. The project began in November 2008, and although the capacity building of SIDBI and PFIs by TA consultants were still ongoing, the last disbursement was made in November 2010. Therefore, the project was completed 11 months earlier than the plan. At the beginning of the project, due to the world financial crisis, the borrowings from the MSMEs were slow; however, through efforts such as soliciting more participation from PFIs and publicizing energy saving loans through awareness campaigns, the disbursement from JICA was completed in November 2011. Lending from SIDBI and PFIs to end users continued even after project completion; however, according to the information provided by SIDBI, the last lending was made in March 2011 and therefore, duration of the project was as planned.

Both project cost and project period were as planned, therefore efficiency of the project is high.

3.5 Sustainability (Rating: ②)

3.5.1 Institutional Aspects of Operation and Maintenance

SIDBI, the project executing agency, was established in 1990 as a development bank to promote the development of small-scale industries in India. As was planned at the time of the appraisal, the project was implemented under the direction of the Chief General Manager of the Resource Management Department and the coordination with PFIs was the responsibility of the Chief General Manager of the Credit Department. As of March 2011, the total number of SIDBI employees was 1,032 and it has 103 branches across the country. The Energy Efficiency Cell, which was established under the SIDBI's Credit Department as the section in charge of the project, was upgraded to Energy

Efficiency Centre (EEC) in October 2010. The EEC has 12 employees and it reviews the lending and debt recovery status every two weeks. Monitoring of the debt recovery status from the end users is the responsibility of respective branch from which the loan was given. In the future, it is expected that the EEC will change its name to Sustainable Finance Vertical and expand its services beyond energy efficiency to provide financial services that are socially and environmentally sound.

In terms of selecting the PFIs, those with prior experience of dealing with SIDBI on a regular basis and those that are financially sound were selected. In order to secure the network that covers MSME clusters where the demand for financial resources is high, financial institutions that possess such network were given importance. Further, smooth repayment from PFIs to SIDBI was also one of the important requirements; thus, the financial institutions that fulfilled SIDBI's minimum internal rating were selected. Finally, seven financial institutions that met these criteria and expressed interest were selected. For PFI selection process, SIDBI's Refinance Department and branch in charge of lending coordinated with the PFIs. Loan appraisal and debt repayment status in PFIs are monitored along with other financial products at branch level. The progress is reported monthly from head offices of PFIs to the SIDBI's Refinance Department through SIDBI's coordinating branches. In SFCs, a representative appointed by SIDBI is assigned as board member and the project is also monitored in the SFC's regular meetings.

It must be noted that staff turnover is very low in SIDBI and PFIs and the problems associated with manpower shortage are not reported. The employees have university degrees and internal trainings are conducted regularly for them; thus, they appear to have sufficient knowledge required to implement their duties.

3.5.2 Technical Aspects of Operation and Maintenance

In SIDBI, most tasks related to loan appraisal and debt recovery are the responsibility of branches. According to SIDBI, the employees possess sufficient skill to conduct daily tasks and continuous trainings are also conducted for them. For updating of the ESEL, the TA consultants continue to update the list since the Phase 2 of the project is under implementation.

In SIDBI's operational manuals, the criteria for loan approval for the MSMEs are clearly described and along with other guidelines, the manual seem to be utilized well by the employees. Table 6 presents the criteria for loan screening which is defined for each financial scheme.

Table 6: Example of mid- and long-term loan screening criteria (SIDBI)

Parameters	Norms
Debt Equity Ratio	2:1
Debt Service Coverage Ratio	1.5:1
Borrower's contribution	
New entity	33%
Existing entity	25%
Asset coverage	
New entity	1.4
Existing entity	1.3
Existing entity with CGTMSE[22] coverage	1.2
Service sector	1.75

Source: SIDBI Loan Policy

SIDBI also checks the balance sheet of end user company at the time of loan appraisal. The final interest rate on lending and collateral are decided based on the end user's previous loan repayment record. Depending on the amount of loan, the approval is made at a different level within SIDBI. For example, when the loan amount is INR 10 million or less, the assistant general manager of the respective branch has sanctioning power, while a loan size up to INR 50 million is approved by the deputy general manager, and larger loans get sanctioned at SIDBI head office's credit committee and even by the executive committee.

According to PFIs, loan policy and guidelines are in place and they are well utilized by the staffs. KSFC screens loan applications from technical, financial, and legal viewpoints. In each branch, there are technical, financial, and legal experts; moreover, in case there are loan applications that are difficult to be screened with internal expertise, KSFC has an arrangement with universities and research institutions to seek expert assistance. For the energy saving loan, apart from the fact that the loan is available only for the equipments listed in the ESEL, employees of branch offices implement the process of loan screening and loan collection in almost the same manner as for other loans. By using the ESEL, loan officers were able to confirm whether the candidate sub-project is eligible for project financing.

Since the criteria for loan approval and sanctioning authority are clearly indicated in operation manuals and guidelines of SIDBI and PFIs, there are no technical issues.

3.5.3 Financial Aspects of Operation and Maintenance

SIDBI has maintained a stable financial condition from the time of the appraisal to the ex-post evaluation. SIDBI's equity ratio is approximately 20% and non-performing assets (NPA) are less than 1%. Considering that State Bank of India—India's largest commercial bank—and the Industrial Development Bank of India (IDBI), SIDBI's predecessor, have an equity ratio of a little over 10% in recent years and their respective NPA in FY 2011 was 1.82% and 1.61%, it is evident that SIDBI's financial situation is rather healthy. Table 7 shows the major financial indicators of SIDBI and the

[22] The Credit Guarantee Fund Trust for Micro and Small Enterprises (CGTMSE) is a Government of India scheme in which the government provides a guarantee on behalf of MSME as security against the loan.

PFIs.

Table 7: Financial indicators of SIDBI and PFIs

Institution	Return on Asset (%)	Non-Performing Assets (%)
SIDBI	2.00	0.28
IREDA	3.30	5.31
APSFC	2.84	2.87
DFC	1.84	9.43
KSFC	0.50	3.72
TIIC	3.45	2.98
WBSFC	1.44	15.00
SB	0.76	2.40

Source: SIDBI and PFIs
Note: The financial indicators from each institution are either from FY 2010 or FY 2011.

SIDBI's return on assets (ROA) in FY 2011 was 2% and most of the PFIs have similar ROA. However, DFC and West Bengal State Financial Corporation (WBSFC) have NPA of 9.43% and 15%, respectively. Since the average NPA of India's 48 public and private commercial banks in the last three years is a little more than 1%, the financial performance of these PFIs is not necessarily sound[23]. However, the PFIs were selected based on the SIDBI's internal rating system and debt repayment from PFIs to SIDBI, including from DFC and WBSFC, have not experienced any problem thus far.

3.5.4 Debt Recovery Status

Table 8 presents the debt recovery status from the PFIs to SIDBI in cases where the repayment has already begun. As was explained above, there is no problem associated with the repayment even from DFC and WBSFC whose NPA are relatively high.

Table 8: Debt recovery status from PFIs to SIDBI

Unit: INR

PFI		FY 2010	FY 2011	FY 2012
DFC	Due amount	3,148,750	1,259,000	1,259,000
	Repaid amount	3,148,750	1,259,000	1,259,000
WBSFC	Due amount	40,098,305	38,454,401	36,105,514
	Repaid amount	40,098,305	38,454,401	36,105,514
SB	Due amount	−	670,900,000	894,700,000
	Repaid amount	−	670,900,000	894,700,000

Source: SIDBI

In the project, a Special Account was established. According to the appraisal plan, in addition to the Special Account, revolving fund account was to be established, which would be managed by

[23] Source: Indian Bank's Association

SIDBI and external audit was to be conducted each year. According to SIDBI, the Special Account was audited each year by an external auditor. With regard to the revolving fund, the revolving fund account was not established, since it was believed that the status of the revolving fund could be monitored from data system of SIDBI even without a dedicated account. However, due to SIDBI's system, it is not possible to identify the status of the revolving fund or debt recovery pertaining only to the project; thus, neither is actually monitored.

PFIs' principal collection rate is indicated in Table 9. As indicated in the table, only three PFIs have the data on principal collection rate pertaining to the sub-projects implemented under the project. Other PFIs are not monitoring the information such as principal collection rate and sub-projects with arrears because the Reserve Bank of India (RBI) announced financial parameters that need to be disclosed by financial institutions in July 2012. In the RBI circular, disclosure and reporting of principal collection rate and arrears are not made obligatory; therefore, institutions like SIDBI and Syndicate Bank do not maintain record of the related data, not only for the project but for the entire institution as well.

Table 9: Principal collection rate

Unit: %

PFI	FY2009	FY2010	FY2011
IREDA	64.82	68.01	76.73
APSFC	72.08	82.08	77.72
DFC	93.00	95.00	97.00
KSFC	88.75	56.94	61.35
TIIC	76.92	78.14	87.15
WBSFC	—	58.06	100.00

Source: PFIs

* Figures for IRED, DFC and WBSFC are only for the project. For other PFIs in the table, the principal collection rate is for the entire institution as the data pertaining to the project are not available.

Considering above, some problems have been observed in terms of the financial status of some PFIs and monitoring of revolving funds and debt recovery situations. Therefore, the sustainability of the project effect is fair.

4. Conclusion, Lessons Learned and Recommendations

4.1 Conclusion

In India, rapid economic growth in recent years has led to an increase in energy consumption, thereby making the promotion of energy efficiency through energy saving an urgent task. The project provided medium- and long-term financial assistance to MSMEs in India for their energy saving efforts. It also provided assistance for strengthening loan appraisal capacity of the executing agency and PFIs and promoted awareness of energy saving among the MSMEs. The project is in line with the development policy and development needs of India as well as the ODA policy of Japan; thus, this project is highly relevant. In the project, the impact of trainings related to strengthening loan appraisal capacity of the executing agency and PFIs is limited. However, the amount of energy consumption

actually reduced through energy saving loan is higher than planned. This has had some impacts on the environment; moreover, from the perspective of the sustainable development of the MSMEs, there has been some increase in profitability and the competitiveness of the MSMEs has been strengthened through energy saving initiatives. Through the implementation of the project, the objectives have largely been achieved; thus, the effectiveness and impact of the project are high. The efficiency of the project is also high since both project cost and project period are as planned. With regard to the sustainability of the project, there are no specific issues related to the institutional and technical aspects of operation and maintenance. However, considering the financial status of some of the PFIs and the fact monitoring of revolving and debt recovery status is not possible, the sustainability of project effect is fair.

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

4.2 Recommendations

4.2.1 Recommendations to the Executing Agency

(1) According to the interviews with end users, the project has undoubtedly contributed to reducing energy consumption and making energy use more efficient. However, the number of end user companies is very small in relation to the MSMEs in the country; thus, environmental improvement at the national level is yet to be realized. Therefore, in order to further promote energy efficiency and contribute to environmental sustainability through energy saving, it is expected that financial services like providing energy saving loans will continue considering the energy saving loan mechanisms and additional initiatives based on the approach and success cases of the project, thereby extending loans to more MSMEs. With regard to the executing agency, as EEC will be upgraded to Sustainable Finance Vertical, it is expected to utilize the approaches and mechanisms that were proven successful in the project in similar initiatives.

(2) The introduction of ESEL was effective in implementing smooth loan appraisal in the project, despite it being the first such initiative in the country. However, there were certain suppliers of energy saving equipment who were not aware of the project. Some of the suppliers have long-standing relationships with MSMEs and are able to suggest the use of equipment that meets the needs of MSMEs. Thus, strengthening cooperation with suppliers, particularly those listed in the ESEL is desirable.

4.2.2 Recommendations to JICA

There is no specific recommendation to JICA.

4.3 Lessons Learned

(1) In the project, since the branch network of the executing agency was limited, the project was promoted using the branch network of the PFIs. By utilizing a network that is wider and more deeply rooted in the community compared to that of the executing agency alone, the project was possibly

implemented more efficiently and effectively.

(2) The energy saving loan provided through the project allowed the MSMEs to use old equipment in addition to the new equipment procured under the project instead of replacing the old equipment with new. This has promoted the use of energy saving loan among the MSMEs. The executing agency has also indicated this as an advantage of the project as some other international donor has a similar financial scheme that requires old equipment that tends to be less efficient to be discarded with emphasis on short-term impact of energy saving. Considering that the business of MSMEs is growing and that they require additional equipment for business expansion, the financial products that require them to replace old equipment are not necessarily attractive. Therefore, financial products that consider the needs of MSMEs are highly desirable.

(3) The lending to the MSMEs was effectively implemented by including technical assistance to the project. Energy saving awareness campaigns did not only enhance the understanding towards energy saving among the MSMEs but also prompted them to take energy saving initiatives through presenting specific activities and indicating their benefits. Further, in the areas where the awareness campaigns were conducted, the number of subprojects is relatively higher compared to the areas without the campaigns. This indicates that the awareness campaigns have accelerated the lending to the MSMEs. As seen in the project, provision of technical assistance with due consideration to needs of the MSMEs to compliment Japanese ODA loan project is expected.

(4) Although it was believed that the status of revolving fund can be monitored in the executing agency at the time of the appraisal, there is actually no system to monitor the status of revolving fund. Moreover, it is not necessarily possible to monitor the status of debt recovery from the end users. In two-step loan project, it is desirable to agree among the project related agencies on responsibility of monitoring the revolving fund and debt recovery including its method and duration, thus establishing the monitoring system.

BOX: The Results of Examining the Ripple Effects of Two-Step Loan Projects

The ripple effects of two-step loan projects were examined for three projects that were selected out of the FY 2012 Ex-Post Evaluations, namely the "Micro, Small and Medium Enterprises Energy Saving Project" in India, the "Small and Micro Industries Leader and Entrepreneur Promotion Project (III)" in Sri Lanka, and the "Small and Medium-Sized Enterprises Finances Project (II)" in Vietnam, all of which are yen-loan projects. The following are the three main areas studied.

- The relationship between the subject projects and the degree to which the business development service (BDS) market has developed in the respective countries[24]
- The macro-political and financial effects of two-step loan projects
- Whether or not local Japanese-affiliated companies benefited from the projects through supply chains which include end users

[24] For the purpose of this detailed analysis, BDSs were defined as follows. In principle, BDSs are services which help companies to grow and become competitive. They include training, consulting, marketing assistance, information provision, legal and accounting services, technical development and dissemination. However, they do not include financial assistance ("The Follow-up Study Report for Projects in Mining and Manufacturing Industries" [Japan International Cooperation Agency, August 2003], p. 87).

1. The Relationship between Two-Step Loan Projects and the Degree to Which the BDS Has Developed

The following explains the degree to which the BDS market has developed and the characteristics of the BDS providers in the three countries.

In Vietnam, it is reported that BDS sales account for about 1.5% of GDP. The main tasks of the BDS providers include the following: mediating clients and assisting market development; creating personal connections between companies; giving advice on government rules and regulations; training; consulting on marketing, management strategies and business management; and assisting with the preparation of financial statements. Government-managed agencies, trade associations and business organizations preceded other types of organizations in providing BDS, but their services had some room for improvement[25]. The number of private BDS provider companies has gradually increased in recent years and they have begun to provide high-quality services to relatively large corporations. In India, there are various actors who provide BDS including government agencies, business organizations, private firms, research institutes, NGOs, and individuals. BDS providers provide services in various fields such as accounting and marketing, assistance for export procedures, and training programs. More than 14,000 BDS providers are registered on the web portal operated by the Small Industries Development Bank of India (SIDBI). In Sri Lanka, it is reported that there are between 300 and 500 BDS providers nationwide. They are generally classified into government-managed providers, private providers, and NGOs. There are no significant differences in the types of services provided, but the fees and quality levels vary significantly.

Next, when we look at the overall situation of these three countries regarding the relationship between BDS and end user companies in two-step loan projects, it cannot be said that the end user companies have been utilizing BDS frequently but the end users who ever used BDS replied that the BDS were effective. In addition, end users, including those that had not used BDS, expressed an interest in using it from now on. Although there are a certain number of BDS providers in Vietnam, only one company out of 50 replied that it contacted a (private) BDS provider to receive advice on business in the questionnaire survey. BDS was not essential for the development of vast majority of end users. There are, however, quite a few end users which are interested in the use of BDS in the future. In India as well, except for the services of daily administration such as accounting and tax reporting, the use of BDS for the purpose of business improvement is limited.(Eight companies out of 45 replied that they used BDS.) The fact that micro, small and medium enterprises (MSMEs) do not know the existence of BDS and how to access BDS providers is a major obstacle to BDS utilization. Meanwhile, more than a half of the end users who did not use BDS are interested in the future use of BDS. In Sri Lanka, the questionnaire survey confirmed that the use of BDS by end users is limited and only 3 companies out of 50 used BDS. A major problem is that MSMEs are not

[25] In interviews, many stakeholders stated that the content of seminars and consulting provided by government-managed agencies, trade associations and business organizations is very basic and not practical. On the contrary, private BDS providers seem to have many MBA holders and deliver services that meet the international standards.

familiar with what a BDS is and how they can access it. However, many end users want to use BDS when their business becomes stable.

Although JICA implemented relevant projects for supporting BDS providers in Vietnam and Sri Lanka, these projects did not create any particular synergistic effect with the two-step loan projects. The reason is that the projects were conducted separately and no joint activities between them were organized. In India, such relevant project for supporting BDS providers has not been implemented by JICA.

Accordingly, the two-step loan projects have realized a certain level of effect even without BDS, as confirmed by the individual ex-post project evaluations. However, it does not mean that MSMEs in all three countries have no need for BDS. It is still possible that, in the future, MSMEs will actively utilize BDS to enhance the quality of their businesses. The following three factors should be regarded as basically common in all three countries: (1) MSMEs have needs for BDS after growing to a certain level; (2) it is confirmed that utilizing BDS has provided a certain level of effect; and (3) matching between MSMEs with needs for BDS and BDS providers is not sufficient but can be improved, because companies are interested in the use of BDS.

2. Macro Policies and Two-Step Loan Projects

The two-step loans carried out in the three subject projects have not provided any ripple effects in the governmental policies of India or Sri Lanka; this was confirmed by the interviews with officials responsible for financial policies. Nor do they seem to have provided any clear effects in the policies of Vietnam. However, according to officials of Vietnam's Ministry of Finance and Ministry of Planning and Investment, the success in JICA's two-step loan projects in the country appears to have had a certain amount of influence on the recently announced plan of "SMEs (Small and medium-sized enterprises) Development Funds".

In all three countries, we were unable to confirm any particular effect such as increased financing to MSMEs by financial institutions which did not participate in the two-step loan projects. Financing by the two-step loan projects is not remarkably different to existing schemes of private financial institutions for financing companies except for the fact that financing in India was limited to investment in the procurement of energy-saving equipment. On the other hand, there are advantages to the two-step loan projects such as having relatively low interest rates for Vietnam and India, and a longer repayment period in Sri Lanka.

3. Beneficial Effects to Local Japanese-Affiliated Companies of Two-Step Loan Projects

In Sri Lanka, there is no local Japanese-affiliated company in the end users' supply chain. We confirmed the presence of a few local Japanese-affiliated companies in the end user companies' supply chain in Vietnam and India by conducting questionnaire surveys to end users, but it is very rare that local Japanese-affiliated companies are customers of end users. In conclusion, we were unable to fully confirm benefits for Japanese-affiliated companies by the two-step loan projects.

Comparison of the Original and Actual Scope of the Project

<table>
<tr><th>Item</th><th>Original</th><th>Actual</th></tr>
<tr><td>1. Project Outputs
(1) Financing scheme</td><td>Two-step loan from SIDBI to end users and three-step loan from SIDBI through PFIs to end users</td><td>As planned</td></tr>
<tr><td>(2) Terms and conditions
a. Eligible sub-projects</td><td>Capital investment for equipment listed in ESEL specifically prepared for the project.</td><td>As planned</td></tr>
<tr><td>b. Eligible end users</td><td>MSMEs as defined by the Ministry of MSMEs.</td><td>As planned</td></tr>
<tr><td>c. Eligible industries</td><td>Mainly energy intensive industries. Arms, narcotics and other unlawful business are excluded.</td><td>As planned</td></tr>
<tr><td>d. Geographical area</td><td>All over India</td><td>As planned</td></tr>
<tr><td>e. PFIs</td><td>Financial institutions meeting SIDBI’s selection criteria.</td><td>As planned</td></tr>
<tr><td>g. Terms and conditions</td><td>Terms such as interest rate and repayment period are decided by each financial institution.

<u>Interest rate</u>: 1 to 2% below SIDBI’s ordinary loan.

<u>Repayment period</u>: To be decided with about 10 years as upper limit.</td><td><table><tr><th></th><th>Interest rate (%)</th><th>Repayment (maximum)</th></tr><tr><td>SIDBI</td><td>9.5-11.5</td><td>7 years</td></tr><tr><td>IREDA</td><td>11.5-13.75</td><td>10 years</td></tr><tr><td>APSFC</td><td>13-14</td><td>8 years</td></tr><tr><td>DFC</td><td>12.25</td><td>4.7 years (56 months)</td></tr><tr><td>KSFC</td><td>12.25-12.5</td><td>6 years</td></tr><tr><td>TIIC</td><td>12.25-13.25</td><td>7 years</td></tr><tr><td>WBSFC</td><td>11-13.25</td><td>5 years</td></tr><tr><td>SB</td><td>11.5-13.5</td><td>7 years</td></tr></table></td></tr>
<tr><td>(3) Technical assistance</td><td>• Energy saving awareness campaigns for MSMEs
• Update ESEL
• Monitor social and environmental impact
• Monitor operation and effect indicators
• Capacity building of SIDBI and PFIs
• CDM activities</td><td>As planned</td></tr>
<tr><td>2. Project Period</td><td>October 2008–September 2011 (36 months)</td><td>November 2008–November 2010 (25 months)</td></tr>
<tr><td>3. Project Cost

Amount paid in Foreign currency</td><td>30,093million yen</td><td>30,093million yen</td></tr>
</table>

Amount paid in Local currency	1,500 million yen (INR 591 million)	1,135 million yen (INR 591million)
Total	31,593 million yen	31,228 million yen
Japanese ODA loan portion	30,000 million yen	30,000 million yen
Exchange rate	INR 1 = 2.54 yen (As of June 2008)	INR 1 = 1.92 yen (Average between November 2008 and November 2010)

Democratic Socialist Republic of Sri Lanka

Ex-Post Evaluation of Japanese ODA Loan Project

"Small and Micro Industries Leader and Entrepreneur Promotion Project (III)"

External Evaluator: Hiromi SUZUKI S., IC Net Limited

0. Summary

This project aims to develop and expand the production infrastructure and improve the technical and financial management capacity of micro, small and medium-sized enterprises (MSMEs) [1] in Sri Lanka, as well as the financial capacity of Participating Credit Institutions (PCIs) by providing MSMEs with low-interest funds and technical support.

This project was carried out in accordance with the development policy and development needs of the Sri Lankan Government; its consistency with Japan's ODA policy is ensured as well, therefore its relevance is high. This project had two types of outputs: "general loans" and "technical transfer loans." However, while the demand for general loans was high, technical transfer loans made little progress. With no other major changes to the loan scheme, loan terms or target businesses, and because the project was, on the whole, carried out as plan, both in terms of project period and project cost, its efficiency is high. With respect to the effect of the project, although the number of jobs created was significantly higher than planned, because the loan amount per end user was higher than originally expected, the total number of loans did not reach the target number. In addition, because technical transfer loans did not grow as much, the project was not linked to the promotion of exports as well as the strengthening of the technical and financial management capacity of MSMEs With regard to the project impact, when compared with the distribution of the regional gross domestic product (GDP), a more well-balanced distribution of loans by region can be seen. In relation to the industrial distribution, the loans are focused on manufacturing industries and services, which are the industries that were targeted by the project. In sum, the project effectiveness and impact were fair. It should be noted that the executing agency of this project changed immediately before the completion of the project. There were no organizational, technical or financial problems with the executing agency or PCIs which conducted the first round of loans. However, as for the executing agency that is in charge of the forthcoming second round of loans, concerns remain about their organizational and technical capacity because there are few personnel with expertise on MSME management and finance, and therefore sustainability of the project effect is fair.

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

[1] The target beneficiaries in this project have been stipulated as "companies whose fixed assets (excluding land and buildings) after the loan do not exceed 20 million rupees." However, with no standard definition in Sri Lanka for micro, small and medium-sized enterprises (MSMEs), and given the fact that the above eligibility criteria for end users includes, not only small enterprises, but also medium-sized enterprises and micro enterprises, it was decided to standardize the target beneficiaries in this ex-post evaluation, not as "small enterprises," but as "micro, small and medium-sized enterprises (MSMEs)."

1. Project Description

Figure 1: Machinery Acquired with the Project's loan (Rrice flour factory in Gampaha)

Figure 2: End user's Garment Factory (Kurunegala)

1.1 Background

MSMEs in Sri Lanka cover a wide variety of industries such as agriculture, mining, manufacturing, construction and services, and are an important segment for increasing employment, increasing income, reducing poverty and regional development. They also play a major role in the economic growth of Sri Lanka. However, despite the Sri Lankan Government having continuously implemented development policies, institutional improvements and promotion measures related to MSMEs for many years, there had not been sufficient growth in this segment at the time of the project's appraisal around 2004. Possible reasons for this situation were pointed out to be the limited availability of funds for MSMEs for capital investment and long-term working capital; and limited access to funds due to strict loan terms, such as interest rates and collaterals.

On the other hand, following the February 2002 cease-fire agreement, the Sri Lankan Government has been undertaking a variety of initiatives aimed at building peace. In this sense, the "Distribution of Peace," through assistance activities such as support for micro enterprises in the northern and eastern conflict areas, was also a pressing need. Furthermore, with the abolition of the Multi Fibre Arrangement (MFA) at the end of 2004, there were concerns about the impact that such an event would have on the textile industry, which was an important export industry. Consequently, urgent support was needed, not only for the textile industry, but also for the strengthening of competitiveness, development of new markets, as well as new products of the MSMEs. JICA had previously provided highly concessionary funds by means of two-step loans through the Small & Micro Industries Leader & Entrepreneur Promotion Project (I) (1997-2001) and the Small & Micro Industries Leader & Entrepreneur Promotion Project (II) (2002-2006), and in order to meet the MSMEs' needs for funds, and to achieve a well-balanced economic growth, including the growth of MSMEs, there was a substantial need to continue with such assistance through this project.

1.2 Project Outline

The objective of this project is: (1) to develop and expand the production base of MSMEs; (2) to improve the technical and financial management capacity of MSMEs; and (3) to improve the financial

capacity of the PCIs, by providing MSMEs with low-interest funds and technical support, thereby contributing to the well-balanced economic growth of Sri Lanka.

Loan Approved Amount / Disbursed Amount	9,619 million yen / 9,612 million yen
Exchange of Notes Date / Loan Agreement Signing Date	November 2004 / December 2004
Terms and Conditions	Interest rate: 0.75% Repayment period: 40 years (Grace period: 10 years), General untied
Borrower / Executing Agency	Government of the Democratic Socialist Republic of Sri Lanka / Ministry of Industry and Commerce (MIC)
Final Disbursement Date	December 2010
Related Projects	【Japanese ODA loans】 • "Small & Micro Industries Leader & Entrepreneur Promotion Project I" (Loan Agreement: 1997) • "Small & Micro Industries Leader & Entrepreneur Promotion Project II" (Loan Agreement: 2000) 【Technical cooperation】 • "Dispatch of Advisors for SME Development and Investment Promotion (2008-2010)"

2. Outline of the Evaluation Study

2.1 External evaluator

Hiromi SUZUKI S. (IC Net Limited)

2.2 Duration of Evaluation Study

Duration of the Study: September 2012 – July 2013

Duration of the Field Study: January 13–27, 2013 and March 17–24, 2013

2.3 Constraints during the Evaluation Study

As a result of the general election in April 2010, government entities in Sri Lanka underwent a major reorganization. As a consequence, the Ministry of Small and Medium Enterprise Development (MSMED), which had been the executing agency for this project since the time of the appraisal, was reorganized into the Ministry of Industry and Commerce (MIC) in July 2010. With this reorganization, handing over of the project from the MSMED to the MIC was not sufficient in many aspects, which became a constraint in conducting the ex-post evaluation. As the project was close to completion, the impact of the ministerial reorganization on the actual implementation of the project was limited, but the biggest constraint in conducting the ex-post evaluation was the lack of ownership by the MIC.

Especially in the beginning of the evaluation study, it took longer than usual to gain the understanding from the executing agency so that it would make the necessary arrangements to receive the evaluation team. This resulted in additional time and effort of the evaluation team in providing proper guidance to the executing agency. Moreover, in reference to the operational indicators of the loans, only data for 2011 were available for all seven Participating Credit Institutions (PCIs) during the period of the duration of the evaluation study. Because actual consecutive annual data for basic operational indicators could not be gathered for all PCIs, the analysis on the actual status and forecast of the project's loan management had to be based on a comparison of two points in time, namely, the target value for 2009 and the actual value for 2011.

3. Results of the Evaluation (Overall Rating: B[2])

3.1 Relevance (Rating: ③[3])

3.1.1 Relevance to the Development Plan of Sri Lanka

At the time of appraisal, Sri Lanka had established a framework called "Creating Our Future, Building Our Nation: Framework for Economic Growth and Poverty Reduction" (July 2004), whose goal was to achieve poverty reduction through economic growth. To this end, the said framework set a target annual growth rate of 6-8%, increasing new investment from about 25% of GDP to 30% in three years. Aimed at achieving these goals, an emphasis was placed on the role and development of MSMEs as central to economic development. Specific policies were raised for the development of small and medium-sized enterprises (SMEs), including the establishment of the Federation of Chambers of Commerce and Industry of Sri Lanka, SME development centers in each of the 25 provinces and industrial parks in rural areas. Furthermore, the SME Bank was established in 2005 for the purpose of providing SMEs with credit guarantees and loans at preferential interest rates.[4]

The national development policy at the time of evaluation was the "Mahinda Chintana: A Ten Year Horizon Development Framework 2006-2016", which states that the economic growth of the past 25 years has widened income disparities and regional disparities, without contributing to poverty reduction. It aims for a balanced regional development by focusing on four priority areas, namely, increasing investment in regions that are behind in development, developing the SME sector, promoting agricultural development, and further expanding public services. According to this framework, MSMEs[5] are positioned as a driving force, indispensable for the well-balanced economic

[2] A: Highly satisfactory, B: Satisfactory, C: Partially satisfactory, D: Unsatisfactory
[3] ③: High, ②: Fair, ①: Low
[4] Absorbed into the Lanka Puthra Bank in 2007.
[5] Currently, there is no uniform definition for MSME in Sri Lanka. The main MSME definitions that exist are the following four: (1) Mahinda Chintana: a "Small and Micro enterprise" is defined as having annual sales between 100 million to 2 billion rupees, or fixed assets between10 million to 400 million rupees. (2) Central Bank of Sri Lanka: A "Small enterprise" is defined as a company with annual sales of 600 billion rupees. (3) NEDA: A "Micro enterprise" is defined as a company with five or less employees and fixed assets of 5 million rupees or less excluding land and buildings. A "Small enterprise" is defined as a company having more than five to less than 100 employees and fixed assets of 100 million rupees or less excluding land and buildings. A "Medium enterprise" is defined as having more than 100 to 300 employees and fixed assets of more than 400 million rupees. (4) Department of Census and Statistics: classification is based on number of employees, but definition varies between type of statistics.

growth of Sri Lanka. It proposes to provide MSMEs with comprehensive support including financial, management, marketing and technical support, as well as by promoting links with large-scale enterprises and multinational enterprises in Sri Lanka, and by adopting appropriate quality standards, environmental standards and tariffs, so as to protect MSMEs from unfair competition from low prices and low quality products. In 2006, the National Enterprise Development Authority (NEDA) was established under the MIC as the responsible body of the Small and Medium Enterprise Policy. NEDA's specific action plans include formulation and implementation of the Small and Medium Enterprise Policy and the Micro Enterprise Policy[6], enabling better access for SMEs to finance, development of a credit guarantee scheme, introduction of a credit rating scheme, promotion of Business Development Services (BDS[7]), provision of information related to management, marketing and technical training, and mediation with BDS providers. On the other hand, in the "Monetary and Financial Sector Policies for 2013 and Beyond – Road Map 2013," which was announced by the Central Bank of Sri Lanka in January 2013, measures for strengthening support for SMEs include the provision of loans at preferential interest rates, simplification of loan procedures, training to build financial management capacity, and comprehensive support for new MSME businesses.

As mentioned above, given that the MSME sector within the Sri Lankan economy has consistently occupied an important position from the outset of the appraisal to present, and given that it has always been viewed as an important sector of the Sri Lankan national development plan, the consistency between this project and Sri Lanka's development policy can be said to be ensured.

3.1.2 Relevance to the Development Needs of Sri Lanka

SMEs in Sri Lanka play an extremely important role in increasing employment, increasing income, reducing poverty and regional development. Especially in the manufacturing industry, according to the 2009 industrial statistics[8], SMEs accounted for 94% of all enterprises, 31% of all employment, and 37% of industrial production value added. Even compared to the 96%, 32% and 20% at the time of appraisal, it is clear that SMEs still play an important role in the Sri Lankan economy.

At the time of appraisal, with the support of international donors such as JICA and the Asian Development Bank (ADB), the Sri Lankan Government had continuously implemented development policies, institutional improvements and promotion measures related to SMEs, and a framework was in the process of being developed. Despite this, the growth of SMEs was not enough in comparison to large-scale enterprises. There was a strong need for access to financial services by SMEs, especially for medium-term and long-term funds (capital investment, long-term working capital, etc.). This is

[6] Under the guidance of the Advisor for SME Development and Investment Promotion from JICA, the Small and Medium Enterprise Policy (draft) was prepared in September 2009, but has not been enforced at the time of evaluation

[7] Business Development Services (BDS) are services that provide assistance for the growth and competitiveness of businesses. It includes services such as support for training, consulting, marketing; providing business information, legal and accounting services as well as technical development support. However, it excludes financial support (JICA, "Follow-up Study Report of the Mining and Manufacturing Industry Project" August, 2003, p.87)

[8] The Census of Industries defines SMEs as those enterprises with up to 100 employees. Department of Census and Statistics, "Census of Industries 2003/04" and "Annual Survey of Industries 2010.

clear from the fact that the allocation of the funds under the Small & Micro Industries Leader & Entrepreneur Promotion Project (II) (hereafter referred to as the previous phase), which is the second phase of the project subject to this evaluation, finished in less than two years, much earlier than originally anticipated. There were a number of factors underlying these needs. One, the volume of loans offered by the state-owned development banks, whose objective is the provision of medium-term and long-term funds, was no more than 10% of the total of financial institutions. Therefore, when MSMEs borrowed from commercial banks, their lack of collateral meant a large margin was applied to the market interest rate, and hence their access to funds was limited. Second, there was no long-term lending because the long-term finance market was undeveloped. Third, financial institutions lacked the ability to identify good standing SMEs. These factors had still not changed that much at the time of evaluation. Because the long-term finance market was undeveloped, SME financing was dependent on donor funds like this project. In addition, loan terms continue relying on using land and buildings as collateral. Among other factors that still exist from the time of the appraisal are; insufficient MSMEs financial management knowledge; insufficient managerial and technical skills and know-how necessary for the development and marketing of new products; no efficient value chains have been created; upstream and downstream linkages with large-scale domestic and foreign enterprises are still limited as well as market scale.

As mentioned above, two of the main factors hindering the growth of MSMEs, both at the time of appraisal and the ex-post evaluation, are their insufficient access to finance and their inadequate management skills, knowledge and know-how. Therefore, the provision of low-interest funds for the purpose of developing and expanding the production infrastructure of MSMEs and improving their technical and financial management capacity through this project is consistent with the development needs of MSMEs.

3.1.3 Relevance to Japan's ODA Policy

The Country Assistance Policy for Sri Lanka (2004) and the Mid-Term Strategy for Overseas Economic Cooperation Operations (1999), which were current at the time of appraisal, mentioned support for strengthening private-sector access to funds and for strengthening supporting industries through the development of SMEs. In the JICA's Country Assistance Strategy for Sri Lanka, support that covers MSMEs are also included under the priority areas such as "support for nation-building and improvement of living conditions," "improving the capacity to acquire foreign currency" and "poverty alleviation." As can be seen, Japan's aid policies for Sri Lanka have included the development of MSMEs, improvement of MSMEs' access to funds, and development of regional and local industries as policy objectives, and hence the consistency between this project and Japan's ODA policy has been ensured.

In light of the above, this project has been highly relevant to the country's development plan, development needs, as well as Japan's ODA policy, therefore the relevance is high.

3.2 Effectiveness (Rating: ②)

This project was carried out as a two-step loan, whereby the borrower, namely the Sri Lankan Government, re-lends funds to MSMEs through Participating Credit Institutions (PCIs). Eligible MSMEs were companies whose fixed assets, excluding land and buildings, after the loan do not exceed 20 million rupees. Target sectors were manufacturing industry and services, and/or businesses that would contribute to the promotion of exports and employment creation. Two categories of loans were provided: "general loans" for developing and expanding the production base of MSMEs; and "technical transfer loans" for improving their technical and financial management capacity (for details please refer to "3.4.1.1 Loan Scheme"). There was a strong need for the former, and as mentioned below, it led to the development and expansion of production infrastructure of MSMEs. However, the latter failed to take off, and did not lead to improvements of technical and financial capacity in the way intended by the project.

3.2.1 Quantitative Effects (Operation and Effect Indicators)

With respect to the operational indicators at the outset of the appraisal, the planned values in the fifth year following the commencement of loans (2009) were set, using the 2003 actual values in the Phase II of the project as the baseline (reference value). As for the effect indicator, the forecast value was similarly set based on the 2003 actual value of Phase II of the project. However, since only three out of seven PCIs were able to provide actual values for 2009 for each of the indicators[9], for this evaluation, the weighted averages of the actual values for 2011 of all seven PCIs for the cumulative cash recovery rate, infection number ratio (ratio of non-performing sub-loans to total number of loans) and principal infection ratio (ratio of non-performing sub-loans to the total amount of all outstanding loans) were calculated, and compared with the planned values[10].

[9] The MIC, which is the new executing agency, made an effort in 2012 to collect the operational and effect indicators of each PCI for various years, however, it failed to provide a clear formula for these indicators. As a result, the collected data was calculated based on different formulas, with the exception of three PCIs, these data could not be used for this ex-post evaluation. During the ex-post evaluation a request was made to the remaining four PCIs to recalculate, however, due to time constraints, this was not possible.

[10] In this project the participation of each PCI in the total amount of loans vary significantly: while there is a PCI with a share of 40%, there is a PCI with just 1%. In reference to these three indicators, it was necessary to reflect such differences in share, thus instead of a simple arithmetic average it was decided to use a weighted average.

Table 1: Operational and Effect Indicators

Indicators	2003 Reference value**	2009 Planned value***	2011 Actual value+
Operational Indicators			
Number of loans	4,083	8,937	4,749
Total amount of loans (million rupees)	3,511	9,112	9,245
Average amount per loan (thousand rupees)	860	1,020	1,950
Cumulative cash recovery rate (%)	92%	92%	95%
Infection Number Ratio (Ratio of non-performing* sub-loans to total number of loans (%)	5.6%	5.6%	6.7%
Principal Infection Ratio (Ratio of non-performing* sub-loans to the total amount of all outstanding loans, %)	3.3%	3.3%	7.4 %
Effect Indicator			
Number of jobs created at MSMEs (persons)	18,672	37,000	66,312

Source: Reference and planned values are based on appraisal documents. Actual values are based on information provided by the executing agency and PCIs

* "Non-performing" refers to those debts in arrears by six months or more.

** Actual value (baseline) as of 2003 during the previous phase.

*** Forecast value for the fifth year following the commencement of loans.

\+ Weighted average of seven banks.

With regard to the operational indicators, at the outset of the appraisal, it was forecasted that loans averaging 1.02 million rupees would be provided to each of the 8,937 end users, which was more than double the reference number of 4,083 end users. However, in fact, loans averaging 1.95 million rupees were provided to each of 4,749 end users, which is virtually the same number of end users as the 2003 reference value. Despite achieving the planned value for the total amount of loans, the number of end users receiving direct assistance was only 53%, considerably less than the planned value. The cumulative cash recovery rate was 95% achieving the target, but the infection number ratio (6.7%) was slightly lower than the planned value. On the other hand, the principal infection ratio was 7.0% exceeding the planned value of 3.3% by far. All in all, the result fell short of planned operations. As mentioned below, because the infection number ratio was less than 3.3% for three out of seven PCIs, no significant issues can be foreseen for the future.

Looking at the effect indicator, the number of jobs created was 173% of the planned value (66,312 jobs) which is a considerable effect.

3.2.2 Qualitative Effects

3.2.2.1 Initially Anticipated Qualitative Effects

Following are the four qualitative effects that the project was expected to have on MSMEs and PCIs. Evaluation was conducted based on the information gathered through interviews to end users[11], PCIs as well as the results of the impact evaluation survey of the first round of loans.[12]

(1) Increase the capital investment of MSMEs: According to the end user survey, 90% of respondents stated that they had increased production capacity thanks to loans provided by this project, and 80% stated that they had achieved improvements in production techniques. Similarly, the impact evaluation survey points out comments from end users such as "productivity improved and production costs were reduced", "we were able to purchase efficient machinery", and thus the project has been shown to be sufficiently effective in increasing the capital investment of MSMEs.[13]

(2) Increase the amount of exports by MSMEs: By improving the production capacity and quality through the project loans, exports by MSMEs were expected to be promoted. However, the end user survey confirmed that there were zero cases in which the loans led to increased exports. The majority of end users sell their products wholesale to local retail stores. There were some end users that have started doing business with large-scale domestic enterprises, but these have not led to exports.

(3) Improve the technical and financial management capacity of MSMEs: The aim of this project was to improve the technical and financial management capacity of end users by utilizing technical transfer loans for the employment of BDS providers. However, there were only six technical transfer loans, accounting for less than 1% of all loans. The factors behind this situation are that the demand for general loans was high; PCIs' efforts to promote technical transfer loans through publicity, provision of information and awareness campaigns did not lead to stimulation of needs; and when compared to the necessity for capital investment, the MSMEs' needs for technical transfer was relatively low. According to the interview-based survey to end users, some of the factors that respondents gave as current weaknesses of their own enterprise included: management and/or financial aspects (76%), marketing (26%), quality of products (16%) among others.

[11] The direct interview-based survey of end users was carried out on 50 enterprises from mid-January to mid-February 2013. The 50 enterprises were sampled considering region, industry and number of employees.

[12] Taking into consideration the experiences from the project's Phase I and II and with the purpose of periodically monitoring the effects of the project, the previous executing agency conducted an Impact Evaluation Survey in 2010 for the loans provided in 2009. The external evaluators were two lecturers from the University of Sri Jayewardenepura. The content of the survey was as follows: of the 480 loans given in 2009 (approximately 1 billion rupees), 140 end users were selected a year later in 2010 to be interviewed on the effect of eight items (employment creation including women's participation, new businesses, increase in sales and productivity, improvement in business, reduction of transaction costs, improvement in profitability, training / human resource formation and introduction of IT systems. Technical transfer loans were not covered in the survey). (Jayantha Fernando, A. Anil and A.G. Dayananda. *Impact Monitoring Survey report on Small and Micro Industries Leader and Entrepreneur Promotion Project (III), Final Report.* March 2011)

[13] According to the impact evaluation, approximately 50% of end users who received loans in FY2009 responded that they used the loan on purchasing equipment.

Seventy-six percent of end users also responded that they hoped to utilize BDS providers for technical guidance on marketing and production process. This result reflects the fact that, although companies have the need, the project did not lead to support the improvement of the technical and financial management capacity of end users as intended. One particular result that was also obtained in the impact evaluation survey was that "there is still room for improvement in the MSMEs accounting and finance capacities." On the other hand, according to the results from the PCIs questionnaire survey, all seven banks responded that the financial capacity of end users had "improved." The reasons given were "since it is necessary for MSMEs to prepare financial statements and business plans in applying for the loan, their capacity improved through opportunities of getting advice from banks and accountants", "many end users have taken the opportunity of the loan to purchase and utilize accounting software." With regard to improvements in technical capacity, similarly all seven banks responded that the capacity of end users had "improved very much." The reason given for this was that, in the majority of cases, the loans had been used to purchase materials and equipment, and because end users were now able to purchase new equipment, they were also sometimes required to undertake the training that accompanied the new equipment (offered by manufacturers and providers). In sum, although a certain degree of improvement in technical and financial management capacity through the project can be recognized, the technical transfer loans did not lead to support the improvements in these capacities.

(4) Improve the financial capacity of PCIs: The PCIs have already participated in the previous phases of this project, namely "Small and Micro Industries Leader and Promotion Project I and II" (1997-2006), thus improvements in their financial capacity are thought to have already been realized at the time the project was completed. When asked about the effects of the project at the moment of completion in the questionnaire-based survey, five PCIs responded that their capacity had "improved very much" due to such effects as expansion of their loan portfolios and improvements in their liquidity. The remaining two banks responded that effects had been "improved to a certain extent" because the number of loans was limited; and because the PCI had already been actively lending to MSMEs since Phase I and II of this project and their financial capacity had already been improved, so there were no particular effects worth pointing out. As for the five banks that considered that their financial capacity had improved, the skills that were most improved were credit risk analysis and loan screening.

In the impact evaluation survey, other effects such as improvement in women's employment opportunities and reduction of opportunity costs were also mentioned in addition to the above four qualitative effects that were expected at the appraisal stage.

3.2.2.2 Effects from Cooperation with Other Aid Schemes

With respect to other aid schemes related to this project, the "Advisor for SME Development and Investment Promotion" was dispatched to NEDA for a two-year period from December 2008 to December 2010 as a technical cooperation project. The main activities of the advisor were to review the legal system, policies and measures related to SME development, to identify and analyze the needs related to SME promotion, to check the authority and resources of NEDA, and to check the policies and support measures of other related organizations. The purpose of the work conducted by the advisor was to establish the legal framework and structures necessary for the further growth of the SME sector. Thus, it was not possible to confirm the direct cooperation and synergistic effects with this project. However, it can be said that the advisor's recommendations related to human resources development for managers (establishment of an SME Development Support Centre) and SME financial policies (in particular, the introduction of an SME Credit Guarantee System) as future issues to be addressed by Sri Lanka will be very useful in implementing similar projects in the future.

3.3 Impact

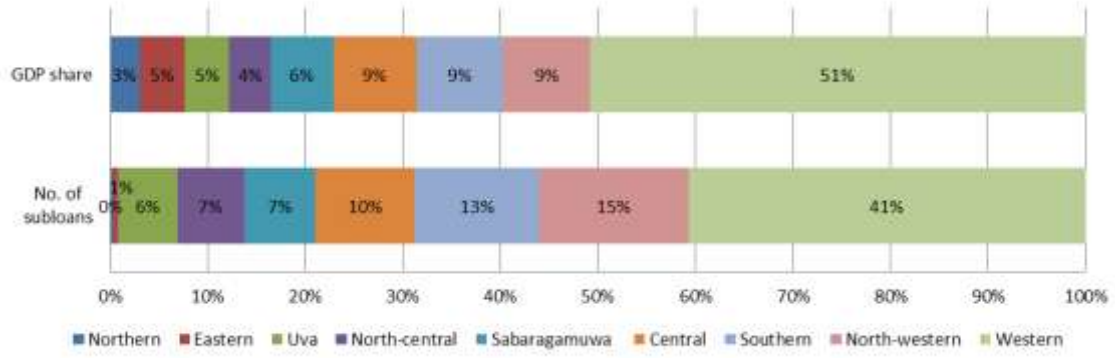
3.3.1 Status of the Impacts

Following are the three intended impacts of this project.

(1) Well-balanced economic growth of Sri Lanka[14]

As shown in Figure 3, 41% of the sub-loans in this project were concentrated in the Western Province (Colombo, Gampaha and Kalutara), with the remainder 15% being distributed in the North Western Province (Kurunegala and Puttalam), 10% in the Southern Province (Galle and Matara in particular), and 8% in the Central Province (Kandy in particular). However, by comparing the regional distribution of loans against the provincial distribution of GDP, we can see that, in fact, the provincial distribution of sub-loans is more well-balanced than the provincial distribution of GDP, apart from in the conflict areas of the Northern Province and the Eastern Province. Nevertheless, it is difficult to ascertain the degree to which the project contributed to the regional economies as well as the precise causal relationship.

[14] Although there is no specific definition for "well-balanced" in the appraisal documents, since the mitigation of any sense of unfairness among regions is mentioned, this ex-post evaluation focused on regional disparities and biases of industrial distribution.



Source: Central Bank of Sri Lanka, *Economic and Social Statistics of Sri Lanka 2012*

Figure 3: Comparison of the distribution of project loans and GDP provincial distribution

On the other hand, looking at the distribution of number of loans across different industries, agriculture, livestock and fishery industries accounted for 9%, manufacturing industry for 50%, and services for 41%. In other words, manufacturing and service industries, which were the industries targeted by the project, accounted for 91% of the total number of loans, meaning that the project was conducted as planned in terms of industrial distribution.

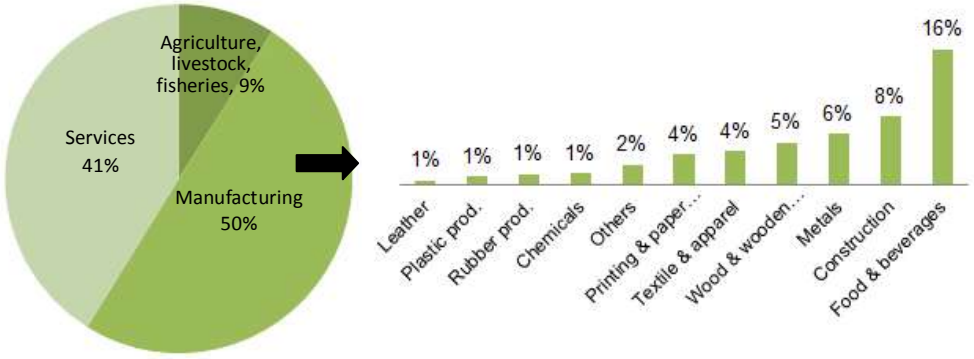
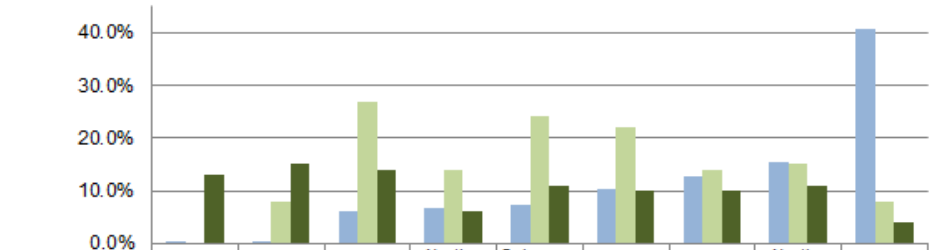


Figure 4: Distribution of number of project loans by type of industry

(2) Alleviation of poverty through low-income earners and the impoverished benefitting from the loans and through the creation of jobs

As described earlier, the number of jobs created by this project was significantly higher than planned, at well over 60,000 as of 2012. Since there is no clear data on whether the indirect beneficiaries employed by the end users of this project can be classified as being impoverished, it is not possible to accurately ascertain the degree of poverty alleviation resulting from low-income earners and the impoverished having received the benefits of the loans and through job creation from this project. Comparing the distribution of number of loans through the project against the distribution of the Head Count Index (HCI), although the number of sub-loans were concentrated in the Western Province, which had the lowest HCI in 2006, in 2009, one year prior to the conclusion of the project, the HCI in the other provinces (except the Eastern Province) had also improved. The Sri Lankan Government has been undertaking a variety of initiatives aimed at poverty alleviation, and although it

is not possible to pinpoint the direct causal relationship between this project and the HCI's improvement, it appears that the project contributed as one of those initiatives, albeit in a limited manner.



	Northern	Eastern	Uva	North-central	Sabaragamuwa	Central	Southern	North-western	Western
No. of subloans	0.3%	0.5%	6%	7%	7%	10%	13%	15%	41%
HCI2006/07*	0%	8%	27%	14%	24%	22%	14%	15%	8%
HCI2009/10	13%	15%	14%	6%	11%	10%	10%	11%	4%

Source: Department of Census and Statistics Sri Lanka, Poverty Indicators 2006/07 and 2009/10
* There is no 2006/07 HCI data for the Northern Province as it was a conflict area.

Figure 5: Distribution of project loans and HCI

(3) Establishment of peace and promotion of reconstruction by including former conflict areas in the scope of the project

An impact initially anticipated in the project was "to distribute peace in a visible form to the people of Sri Lanka, to mitigate any sense of unfairness among regions and ethnic groups, and to contribute to the establishment of peace and promotion of reconstruction, by including former conflict areas in the scope of the project." However, it was May 2009 when the end of hostilities was declared, and because about 90% of loans in this project had already been approved by then, it was unavoidable that the share of sub-loans in the former northern and eastern conflict areas was limited to 0.3% and 0.5% respectively.[15]

3.3.2 Other Impacts

An environmental expert was included among the staff at the Project Management Unit (PMU), and appropriate environmental and social considerations were taken in selecting the sub-projects based on the "Environmental Guidelines of the Japan Bank for International Cooperation"(April 2002, hereafter referred to as "JICA Environmental Guidelines"). In the site visits conducted at some MSMEs during the ex-post evaluation, it was confirmed that on the whole, appropriate environmental

[15] In Sri Lanka, over a 25-year period from 1983, the Liberation Tigers of Tamil Eelam (LTTE) was in a state of civil war with the government as it waged a campaign for the separation and independence of the northern and eastern areas. The LTTE was an anti-government armed group of the minority Tamil people, who live mostly in the north and east of Sri Lanka. However, in May 2009, the government forces repressed the LTTE, bringing the civil war to an end (Ministry of Foreign Affairs, "Country and Regional Affairs" (http://www.mofa.go.jp/mofaj/area/srilanka)).

and social considerations were taken in the operation and management of the equipment acquired through the project[16].

In addition, it was confirmed through interviews to PCIs that in this project there were no land acquisition and resident relocation.

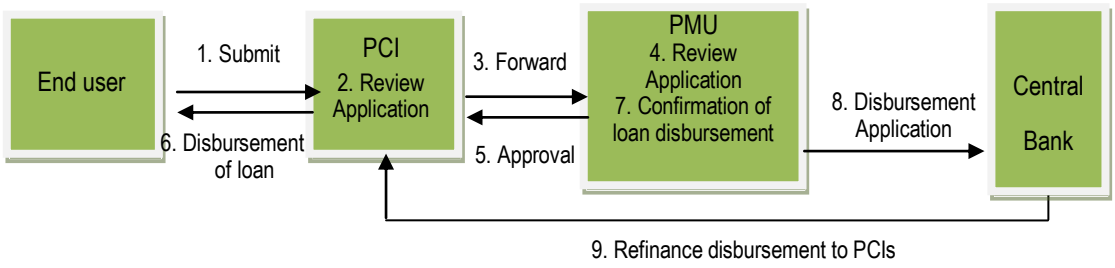
In light of the above, this project has somewhat achieved its objectives, therefore its effectiveness is fair.

3.4 Efficiency (Rating: ③)

3.4.1 Project Outputs

3.4.1.1 Loan Scheme

The project was implemented as a two-step loan as shown in Figure 6.



Source: Based on appraisal documents and interviews to PCIs

Figure 6: Loan Scheme of the Project

As for the loan terms set by the PCIs to the end users, they were set as planned. All PCIs set a maximum interest rate of 9%, a repayment period of maximum10 years (with a grace period of two years), and a maximum loan amount of 10 million rupees (maximum 75% of project cost). The target end users were those enterprises whose fixed assets after the loan (excluding land and buildings) were 20 million rupees or less, with priority given to loans that contribute to the manufacturing industry and services as well as export promotion and job creation. In terms of businesses targeted, the condition was that the business be one for which the loan would be contribute to qualitative and quantitative improvements in production capacity, improvements in operational capacity, and better added value to products or services.

In this project, two categories of loans were provided: "general loans" as funds for the purchase of fixed assets such as buildings and materials purchase of vehicles, and long-term working capital, excluding acquisition of land and commercial buildings for rent out purposes; and "technical transfer loans" to cover the costs of management, financial and technical training, costs for employing consultants, and costs for purchasing quality-control equipment. Technical transfer loans were

[16] However, during the ex-post evaluation site survey, a specific case where a PCI (mainly the branch level staff) gave instructions to improve treatment of smoke and safety management of employees was identified. It should be noted that these issues were due to equipment other than the ones purchased with the loan of this project.

designed to primarily support the intangible aspects of general loans, but very few were given—only six of 4,749 loans (Table 2).[17]

Table 2: Number of sub-loans, approved amounts and disbursed amounts by PCI

PCI	Small and Micro Industries Leader and Entrepreneur Promotion Project (III)					
				Technical transfer loans		
	Number of loans*	Approved amount (million rupees)	Disbursed amount (million rupees)	Number of loans	Approved amount (million rupees)	Disbursed amount (million rupees)
Bank of Ceylon	827	1,757	1,577	2	4	4
Commercial Bank of Ceylon	1,561	4,218	3,702	0	0	0
DFCC Bank	937	1,880	1,678	2	5	5
Hatton National Bank	78	190	134	0	0	0
National Development Bank	368	801	691	0	0	0
Regional Development Bank	340	184	149	0	0	0
Sampath Bank	632	1,532	1,358	2	5	5
Total	4,749	10,562	9,245	6	14	14

*According to the PMU database, the number of approved loans was 4,805. This table has been prepared based on data adjusted after comparing the PMU database against the information provided by each PCI.

Similarly, there were few technical transfer loans during the first two phases of this project. As recommendations to promoting technical transfer loans, it was suggested that the cost of PCI procedures be curbed; that there be publicity, information provision and awareness rising; and that there be more coordination between PCIs and technical training service providers. However, it was clear from interview-based surveys of end users and PCIs that the idea of paying for training and technical services had still not taken root right after this phase of the project had started, and that expenditure on human resources development and the like was not recognized as an investment. Although PCIs did engage in publicity, information provision and awareness rising, these were not sufficient to the development of needs, and so did not result in the utilization of technical transfer loans.

3.4.1.2 Characteristics of End Users[18]

As mentioned before, target end users were those enterprises whose fixed assets after the loan (excluding land and buildings) were 20 million rupees or less. However, there were no specific plans

[17] Given the lack of progress in the take up of technical transfer loans, in 2007, part of the technical transfer loans were transferred to general loans. After this, the executing agency also applied for the disbursement of technical transfer loans as general loans, and given that Japanese ODA loans for both categories had the same terms and conditions, fund allocation for both types of loans was consolidated into one in July 2009 (when the project's progress was at 77%). Given these developments, it is not possible to ascertain the precise number of technical transfer loans and the purposes for which they were used.

[18] Some characteristics (number of employees, net sales) could not be precisely ascertained using the database provided by the PMU. A request was made to the PCIs to provide information on these characteristics in the questionnaire-based survey for PCIs based on a 10% sample of the total number of loans of each PCI. Information was provided by all banks, except the Regional Development Bank (RDB). The total sample size (number of loans) was 1,896. The RDB was unable to respond before the end of the survey period because it would have required the collection of pre-merger data. Although the sample size of the end user survey conducted separately was 50, similar results were obtained for end user's characteristics.

set on how the loan should be used (i.e. creation or expansion of a business), and on the size of the MSME based on the number of employees.

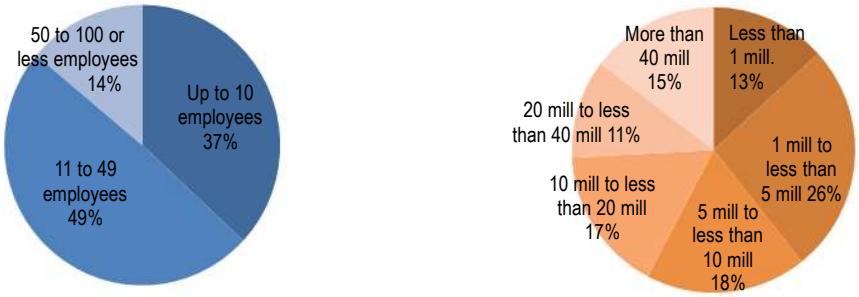
As shown in Table 3 below, those cases where the end user's investment purpose was to start a new business accounted for 24% of the total of approved loans.[19] The main factors that loans to new business were limited were that most PCIs gave loans to end users who were already part of their customer base, and that most entrepreneurs considering starting up a new business did not own any land, buildings or other tangible fixed assets which were required as collateral.

Table 3: Number of approved loans by type of business

Type of business	Number of approved loans	
New business	1,158	24%
Business expansion	3,647	76%
Total	4,805	100%

Source: Based on the PMU database.

As shown in Figure 7, the distribution of end users by number of employees and sales scales of enterprise covered by this project were micro enterprises of ten employees or less (37%), small enterprises of between 11 and 49 employees (49%), and medium-sized enterprises of between 50 and 100 employees (14%), showing that the project reached the targeted scale of companies. As for the distribution of net sales, sales of 10 million rupees or less accounted for 58%, which was the majority.

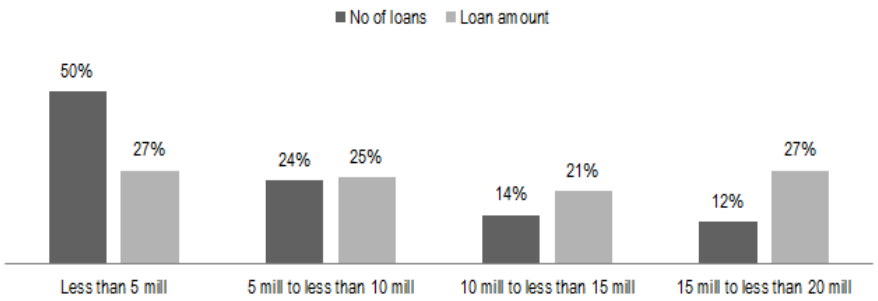


Source: Based on the results of the PCI questionnaire survey (for details refer to foot note 17)

Figure 7: Distribution of end users by the number of employees and net sales (rupees)

On the other hand, the distribution of loans according to the scale of fixed assets was as shown in Figure 8. In terms of the number of loans, 50% of end users were enterprises with fixed assets of 5 million rupees or less; whereas in terms of the amount of loans, there was roughly an even distribution of 20-27% regardless of the scale of fixed assets. In this project, different from the previous phases, the objective was to reduce the loan amount per end user, so as to include more end users. In this respect, it was necessary to provide more loans to companies with fixed assets of up to 5 million rupees.

[19] The only verifiable information on new business and business expansion was the number of approved loans from the PMU database. As for the information by disbursement it was impossible to collect it even from PCIs databases.



Source: Based on PMU and PCI databases.

Figure 7: Distribution of project loans by end user's amount of fixed assets (rupees)

3.4.2 Project Inputs

3.4.2.1 Project Cost

All project costs were covered by the Japanese ODA loan. Actual project cost was 9,612 million yen, lower than the planned value of 9,619 million yen.

3.4.2.2 Project Period

The project period was as planned at the outset of the appraisal. It covered a total of 72 months, from the signing of the loan agreement on December 7, 2004, to the final disbursement date of December 9, 2010.

Both project cost and project period were mostly as planned, therefore efficiency of the project is high.

3.5 Sustainability (Rating: ②)

3.5.1 Institutional Aspects of Operation and Maintenance

3.5.1.1 Institutional Aspects of Operation and Maintenance of the First Round of Loans

a. PMU: The executing agency during implementation was established in the then MSMED. This previous PMU was strengthened with additional personnel as planned at the time of the appraisal, and was staffed with a total of 20 members, including finance and environmental experts and a disbursement coordinator. Based on the interview surveys of PCIs and of individual loan managers, it can be surmised that staffing was satisfactory. Based on the reports of each PCI, the PMU had built and managed a database on all loans given to end users, providing necessary guidance to PCIs with low recovery rates.
b. PCI: Of the 11 banks that had initially been listed as candidate PCIs at the time of appraisal, a total of seven banks participated as PCIs: Bank of Ceylon, Commercial Bank of Ceylon, DFCC Bank, Hatton National Bank, National Development Bank (NDB), Regional Development Bank (RDB)

and Sampath Bank.[20] Since all banks had also been participating as PCIs (as the executing agency in the case of the NDB) during the first two phases of the project, they had already accumulated experience and expertise. Thus no significant issues were identified with regard to their ability to screen individual loans[21] and their capacities to manage loans (manage end user loan data, check the progress of businesses covered by the loans, visit borrowers, etc.). Every year and every half-year, in addition to checking whether each PCI had cleared the selection criteria, the PMU also verified the business conditions and loan recovery status of the PCIs. Accordingly, PCIs maintained a certain level of capacity, and hence there are no major problems with regard to the operation and maintenance capacity of PCIs.

c. Policy Coordination Committee: This committee was established as a body to review MSME-related policies, and to make adjustments in order for this project to be operated while maintaining consistency with those policies. The committee was comprised of the executing agency, the Department of External Resources (ERD, Ministry of Finance and Planning), the Industrial Development Board (IDB), the Central Environmental Authority (CEA), the Small Business Chamber of Commerce (SBCC), the PMU and PCIs, and it was expected to meet once a year. According to the interview-based survey of PCIs, the committee was established and convened meetings as planned.[22]

3.5.1.2 Institutional Aspects of Operation and Maintenance of the Second Round of Loans (the Revolving Fund)

a. PMU: The executing agency in charge of monitoring the recovery of the first round of loans as well as the operation and management of the second round of loans of the revolving fund is the PMU established in the MIC. Management of loans of the first round of loans is also among the responsibilities of the current PMU, but according to interviews to the PMU and PCIs, it was clear that this has not been done as required.

In reference to the second round of loans, the plan at the time of appraisal was to set up an account called the "Small & Micro Industries Leader & Entrepreneur Promotion Project Revolving

[20] Of these 11 candidate banks, three ended up not participating. The Seylan Bank and the Sabaragamuwa Development Bank failed to meet the selection criteria for PCIs (have reported profits for at least the last two years, have a non-performing loan ratio of less than 10%, and have a ratio of non-performing loans to the total amount of all loans of less than 15%). As for Ruhunu Development Bank, agreement could not be reached. In May 2010, the Kandurata Development Bank and the Wayamba Development Bank merged with four other regional development banks into a single bank, designated as the Regional Development Bank. The Hatton National Bank became eligible in July 2006.

[21] Refers to the screening of aspirant enterprises, taking into account their economic profitability and financial stability. Specific items to be evaluated (return on investment, liquidity, debt coverage, etc.) had been agreed upon in the operating instructions between the PCIs and the PMU.

[22] It had been intended that the minutes of the Committee proceedings would be kept by both the executing agency and JICA. However, because these minutes could not be obtained during this survey, some of the facts could not be confirmed based on such minutes.

Fund (III)" at the Central Bank, and to manage the second round of loans.[23] Loans were to be managed with the same terms, conditions and objectives as the first round of loans, with the operation and maintenance also to be carried out by the previous PMU that managed the first round of loans. Nevertheless, despite there being demand for loans on the part of enterprises, the second round of loans had not been launched as at the time of evaluation, and neither had operation of the revolving fund.

Because their sense of ownership of this project had not reached an adequate level when the MIC took over this project, it was found through interviews that the priority within the ministry for commencing operation of the revolving fund had been not so high. However, it should be noted that the MIC did prepare a document called the "Credit Assistance Project for the SME Sector" as a plan for commencing the revolving fund in May 2011, and submitted this together with its Operating Instructions to the Ministry of Finance and Planning. The Operating Instructions described the detailed requirements of the second round of loans shown in Table 5. The "loan terms" and "loan categories and objectives" remain unchanged, but the other items have been updated to reflect the lessons learned and recommendations of the previously mentioned impact evaluation survey. From August 2011, although time was necessary to make revisions and adjustments between the MIC and the Ministry of Finance and Planning, specifically to the loan terms and the operating structure, and official approval to commence the revolving fund was received from the Ministry of Finance and Planning on January 30, 2012. With approval granted, initially the aim was to start the revolving fund in May 2012. However, a request was received from the Attorney General asking for changes to the wording of the loan agreement, and a request was received from the Department of External Resources (Ministry of Finance and Planning) asking for changes to the loan details. As at the time of this ex-post evaluation, the MIC was awaiting the decision of the Cabinet. The expected start date was April 2013. The details of the second round of loans are indicated in Table 4. The "loan terms" and "loan categories and objectives" remain unchanged; the other items do reflect many of the lessons learned and recommendations of the aforementioned impact evaluation survey. [24] However, in reference to the technical transfer loans which were not taken up as expected throughout all the phases of the project, concrete details on its role and promotion methods (trainings to PCI staff, orientation meetings and promotional activities to MSMEs, linkage between PCIs and BDS) are not included.

[23] Refers to using a revolving fund to manage the surplus funds arising due to the gap between the repayment period of loans to end users (10 years) and the repayment period of the Japanese ODA loan (40 years), and to provide those funds again to other SMEs as secondary or as second round of loans. It should be noted that the ex-post evaluation report of the project's Phase II stated that there were delays in starting the operation of some of the Phase II secondary loans. The NDB, which was the executing agency during this phase, confirmed that although there had been delays, these had concluded in December 2012.

[24] In the plan prepared in May 2011, it was proposed to clearly define the industries eligible for loans as well as the allocations to new businesses and to female entrepreneurs. It also proposed including a societal role in the selection criteria for PCIs in order to encourage participation by regional development banks that have experience lending to the non-manufacturing sectors and to micro enterprises in the northern and eastern areas. However, these proposals were not reflected in the Operating Instructions.

Table 4: Implementation details of the revolving fund

Loan terms	I. Sri Lankan Government refinance to Participating Credit Institutions (PCIs) • Interest rate: General loans: 4.5%, technical transfer loans: 3% • Repayment period: 10 years (grace period: 2 years) II. Sub loans from PCI to end users • Interest rate: General loans: maximum of 9%, technical transfer loans: 5% • Repayment period: General loans shall not exceed 10 years (grace period: 2 years); long-term working capital and purchase of vehicles: shall not exceed five years. Technical transfer loans shall not exceed 7 years (grace period: 2 years)
Loan categories and objectives	• General loans: improving production capacity, improving product quality, strengthening competitiveness • Technical transfer loans: improving the accounting, business and technical skills of end user personnel through the use of consulting services, and purchasing equipment for managing quality
Target beneficiaries	• Enterprises whose fixed assets after the loan (excluding land and buildings) are 1.5 million rupees or less
Priority industries	• Textiles, apparel, packaging, rubber, leather, food, timber and mining (A total of 17 industries are included in the industries eligible for loans, such as tea, coils and crafts, but the MIC has defined those listed above as priority industries.)
Priority regions	• The Western Province has already received adequate support, and the loans given to this province shall be limited to a maximum of 20% of the total amount. Support shall be provided to other provinces, and in particular, to rural areas.
Target business	• Priority to be given to new business. • Business in which the loan would be conducive to qualitative and quantitative improvements in production capacity, improvements in operational capacity, or better added value to products (and/or services)
Target items	• Funds for the purchase of fixed assets such as buildings and materials, funds for the purchase of vehicles, and long-term working capital (excludes funds for acquiring land and commercial buildings for rent out purposes).
Maximum loan amount	• General loans: 5 million rupees. 80% of the costs to be funded by the project and 20% by the PCIs. • Technical transfer loans: 2.5 million rupees

Source: "Small and Micro Industries Leader and Entrepreneur Promotion Project (III)Operating Instructions," MIC, version provided in March 2013.

With regard to the institutional aspects of operation and maintenance of the revolving fund, the current PMU is staffed with a total of seven personnel: one project director, three assistants and three office workers. In order to strengthen the PMU, plans are in place to hire one deputy project director, a financial expert and a monitoring officer. As for the members of the previous PMU they were dismissed because the MSMED itself was dissolved and because of the policy that, regardless of the type of project, priority should be given to civil servants over external human

resources if continuous employment is to be provided by a project. Recognizing the loss in expertise caused when the previous PMU was dissolved, the new PMU plans to appoint a public servant as the deputy project director.

b. PCI: All PCIs that have the interest in participating in the revolving fund should clear the PCI selection criteria. The PMU plans to be monitoring the PCI's management and loan recovery status.

c. Policy Coordination Committee: The same organizational arrangements are expected to take place as the first round of loans. According to interviews, JICA is also to be participating in the Committees meetings.

3.5.2 Technical Aspects of Operation and Maintenance

(1) PMU: The three assistants at the current PMU are all university graduates, but few of them have the necessary knowledge on SME management and finance thus it would be difficult to describe the current PMU as being equipped with the skills necessary to operate and maintain the revolving fund. If these personnel are going to continue carrying out the operation and maintenance, then it is imperative that they upgrade their skills through training, etc. At the time of the evaluation, these personnel were not given the opportunity to attend trainings on SME management and finance. Furthermore, the only document that would serve as a manual for the operation and maintenance of the revolving fund was the operating instructions of the project. In addition, there was no shared data system common to the PMU and PCIs by which the details of individual sub-loans can be input and output. Since such details were managed using Excel, there is room for improvement with regard to the development of a proper IT infrastructure. Specifically, the introduction of a Management Information System (MIS) is needed.

(2) PCI: There are no significant issues with regard to implementing and managing the revolving fund in this project. Five of the seven PCIs have more than 20 years of experience in SME finance, and the other two banks have from 16 to 20 years of experience. Also, all of the banks have participated either as a PCI or as the executing agency since Phase I of this project, and are very familiar with the schemes of the project. According to the interview-based survey of PCIs, four out of seven PCIs mentioned credit analysis as an area that needs further improvement, and steps for improvement have already been taken through OJT and other training. Each PCI's training achievements are disclosed in their annual reports. Furthermore, their training has become more substantial, covering such topics as SME finance, loan scoring, financial statement analysis, risk management and preparation of business plans among others. The training is targeted at participants both inside and outside the PCIs, such as the SME banking managers at PCI branches as well as SME owners. In sum, there are no particular problems with regard to the skills at PCIs for operating the revolving fund.

3.5.3 Financial Aspects of Operation and Maintenance

(1) PMU: In the 2013 national budget, a total of 1,900 million rupees has been budgeted for the operation and maintenance of the revolving fund for the four years from 2012 to 2015 as part of the MIC budget (approved already by the Parliament), securing the financial sustainability.

(2) PCI: The Central Bank of Sri Lanka requires all financial institutions to have a capital adequacy ratio (the ultimate ability of a financial institution to make payments) of at least 5%. However, all PCIs have already a ratio of at least 10% (Table 5). All banks, apart from the RDB, have a high loan-deposit ratio, and all banks have a ratio of non-performing loans between 2-4%, meaning that all PCIs are mostly stable. According to the domestic ratings provided by the rating agency, Fitch Ratings Lanka Ltd., the RDB has a rating of BBB+, and the other six banks are rated at least AA, serving as further evidence of the stability of these banks. It is worth mentioning that the RDB has been appointed by the government as the main financial institution to cater the MSMEs. Thus, their financial status is expected to further improve through financial support from the government. In sum, the financial sustainability of the PCIs is secured and no issues are foreseen in the management of the first round of loans of this project.

Table 5: Main PCI indicators (FY2011)

Financial institution	Rating*	Capital adequacy ratio**	Loan-deposit ratio (%)	Ratio of non-performing loans (%)
BOC	(AA+ Stable)	11.6	80	3.2
CBC	(AA Stable)	12.1	83	4.1
DFCC	(AA Stable)	28.0	93	4.0
HNB	(AA- Stable)	14.5	82	3.9
NDB	(AA Stable)	11.3	130	1.4
RDB	(BBB+ Stable)	10.8	10	2.3
Sampath	(AA- Stable)	10.2	87	2.7

* Fitch National Rating, as of January 2013
** Capital Adequacy Ratio Tier I

3.5.4 Status of the Repayment of Debt

Table 6 indicates the data on the delinquent and non-performing loans for FY2011, for which information was available for all PCIs. Six banks had a capital recovery ratio of more than 90%, while BOC's ratio was 88% slightly below compared to the rest. DFCC had a Principal Infection Ratio of 16%, slightly higher than the rest of the PCIs. Based on the financial status of the PCIs, it could be said that the project's ratio of non-performing loans could have been kept at a lower rate. However, since no year on year data on the basic operational indicators could be collected for all PCIs, analysis on the management of the loans, based on the trend of operational indicators could not be conducted. However, as mentioned earlier, it can be said that the financial sustainability of all PCIs is secured.

Table 6: Ratio of delinquent and non-performing loans of the project for FY2011

Financial institution	Infection Number Ratio (Ratio of non-performing* sub-loans to total number of loans)	Principal Infection Ratio (Ratio of non-performing* sub-loans to the total amount of all outstanding loans)	Cumulative loan recovery rate**
BOC	12.4%	2.5%	88.0%
CBC	3.3%	4.4%	97.5%
DFCC	4.8%	16.0%	97.0%
HNB	0.0%	0.0%	94.7%
NDB	12.2%	8.4%	93.0%
RDB	3.0%	3.8%	93.0%
Sampath	9.9%	11.1%	94.1%

* Non-performing: debts in arrears by six months or more
**Cumulative loan recovery rate = Cumulative amount of capital recovered ÷ Cumulative amount of loans.

In sum, although financial sustainability of the project is secured, some problems have been observed in terms of the institutional and technical aspects of the operation and maintenance, therefore the sustainability of the project effect is fair.

4. Conclusion, Lessons Learned and Recommendations

4.1 Conclusion

This project aims to develop and expand the production infrastructure and improve the technical and financial management capacity of micro, small and medium-sized enterprises (MSMEs) in Sri Lanka, as well as the financial capacity of Participating Credit Institutions (PCIs) by providing MSMEs with low-interest funds and technical support.

This project was carried out in accordance with the development policy and development needs of the Sri Lankan Government; its consistency with Japan's ODA policy is ensured as well, therefore its relevance is high. This project had two types of outputs: "general loans" and "technical transfer loans." However, while the demand for general loans was high, technical transfer loans made little progress. With no other major changes to the loan scheme, loan terms or target businesses, and because the project was, on the whole, carried out as plan, both in terms of project period and project cost, its efficiency is high. With respect to the effect of the project, although the number of jobs created was significantly higher than planned, because the loan amount per end user was higher than originally expected, the total number of loans did not reach the target number. In addition, because technical transfer loans did not grow as much, the project was not linked to the promotion of exports as well as the strengthening of the technical and financial management capacity of MSMEs With regard to the project impact, when compared with the distribution of the regional gross domestic product (GDP), a more well-balanced distribution of loans by region can be seen. In relation to the industrial distribution, the loans are focused on manufacturing industries and services, which are the industries that were targeted by the project. In sum, the project effectiveness and impact were fair. It should be noted that

the executing agency of this project changed immediately before the completion of the project. There were no organizational, technical or financial problems with the executing agency or PCIs which conducted the first round of loans. However, as for the executing agency that is in charge of the forthcoming second round of loans, concerns remain about their organizational and technical capacity because there are few personnel with expertise on MSME management and finance, and therefore sustainability of the project effect is fair.

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

4.2 Recommendations

4.2.1 Recommendations to the Executing Agency

(1) In order to smoothly carry out the management and maintenance of the revolving fund, the PMU needs to be organized by securing personnel with expertise in SME management, finance and IT among other areas. Since the project director already has numerous duties besides this project, it is necessary that the deputy project director specialize in the management, operation and maintenance of the revolving fund, establishing a structure in which duties can be carried out in an efficient manner.

A Management Information System (MIS) connecting the PMU with PCIs needs to be introduced in order to manage the sub-loans of the revolving fund more accurately and efficiently. Since there are a large number of loans and since the amount of information on each sub-loan is also large, there are limits to managing these data using Excel. It is inefficient and lacks accuracy.

(2) After starting the operations of the revolving fund, a study should be carried out, similar to the impact evaluation survey conducted in 2010. Such a study will make it possible to check whether there are any sectoral or regional biases and whether effects have emerged, enabling adjustments as necessary. Any basic information that would contribute to future policies in the MSME sector should also be shared with NEDA.

(3) The revolving fund loan scheme is not designed to secure the active use of the technical transfer loan. Once after reconsidering the lessons learned and recommendations from the project's Phase I to Phase III, it is necessary to clarify the role of the technical transfer loan, and procedures should be added to the loan scheme if deemed necessary. Specifically, in reference to technical transfer loans the following operational and market development efforts can be considered: (1) provide training to PCI staff (especially the bank employees at the branch level who will handle these loans) on promotional procedures such as marketing and advertising; (2) conduct orientation sessions on technical transfer loans to MSMEs; and (3) provide a bridge between MSMEs and BDS provides in coordination with NEDA who is in the process of creating a BDS database.

4.2.2 Recommendations to JICA

In regard to the institutional organization for the management, operation and maintenance of the revolving fund, it is necessary to verify the organizational structure of the PMU in greater detail. Specifically, the number and specialization of the PMU staff should be verified so as to assess whether the organizational structure is adequate for the management of the revolving fund. In addition, because in most of the cases PMUs are set up on a provisional basis for the purpose of implementing specific projects, it tends to hire external human resources instead of public officers, which results in extremely high job mobility. Although the executing agency has already taken into consideration this point, and has plans to secure a public officer rather than external human resources, it is necessary to monitor this particular matter. Furthermore, participation in the Policy Coordination Committees that will be held periodically is recommended in order to monitor the lending status as well as the loan repayment status.

4.3 Lessons Learned

(1) In cases where an executing agency change occurs, the new executing agency needs to be given a proper, detailed explanation of the project, so that, even if the project is just about to be completed, the new executing agency's ownership of the project can be strengthened. Specifically, procedures to reconfirm and share the details of the loan agreement can be agreed between the parties, so that a sustainable organizational structure can be established from the early stages after the executing agency changes.

(2) During Phase I and II of this project, utilization of the technical transfer loan did not proceed as expected, and the reasons and issues surrounding this situation were already identified through project management at the project implementation stage. Therefore, it can be said that activities and procedures that would help and complement the technical transfer loans, such as pre-establishing the ratio of general and technical loans; market development efforts (e.g. strengthening PR activities and organizing orientation sessions for MSMEs by the executing agency and PCIs); and bridging MSMEs and service providers of training and technical services, could have been included at the appraisal stage of Phase III of the project.

BOX: The Results of Examining the Ripple Effects of Two-Step Loan Projects

The ripple effects of two-step loan projects were examined for three projects that were selected out of the FY 2012 Ex-Post Evaluations, namely the "Micro, Small and Medium Enterprises Energy Saving Project" in India, the "Small and Micro Industries Leader and Entrepreneur Promotion Project (III)" in Sri Lanka, and the "Small and Medium-Sized Enterprises Finances Project (II)" in Vietnam, all of which are yen-loan projects. The following are the three main areas studied.

- The relationship between the subject projects and the degree to which the business

development service (BDS) market has developed in the respective countries[25]

- The macro-political and financial effects of two-step loan projects
- Whether or not local Japanese-affiliated companies benefited from the projects through supply chains which include end users

1. The Relationship between Two-Step Loan Projects and the Degree to Which the BDS Has Developed

The following explains the degree to which the BDS market has developed and the characteristics of the BDS providers in the three countries.

In Vietnam, it is reported that BDS sales account for about 1.5% of GDP. The main tasks of the BDS providers include the following: mediating clients and assisting market development; creating personal connections between companies; giving advice on government rules and regulations; training; consulting on marketing, management strategies and business management; and assisting with the preparation of financial statements. Government-managed agencies, trade associations and business organizations preceded other types of organizations in providing BDS, but their services had some room for improvement[26]. The number of private BDS provider companies has gradually increased in recent years and they have begun to provide high-quality services to relatively large corporations. In India, there are various actors who provide BDS including government agencies, business organizations, private firms, research institutes, NGOs, and individuals. BDS providers provide services in various fields such as accounting and marketing, assistance for export procedures, and training programs. More than 14,000 BDS providers are registered on the web portal operated by the Small Industries Development Bank of India (SIDBI). In Sri Lanka, it is reported that there are between 300 and 500 BDS providers nationwide. They are generally classified into government-managed providers, private providers, and NGOs. There are no significant differences in the types of services provided, but the fees and quality levels vary significantly.

Next, when we look at the overall situation of these three countries regarding the relationship between BDS and end user companies in two-step loan projects, it cannot be said that the end user companies have been utilizing BDS frequently but the end users who ever used BDS replied that the BDS were effective. In addition, end users, including those that had not used BDS, expressed an interest in using it from now on. Although there are a certain number of BDS providers in Vietnam, only one company out of 50 replied that it contacted a (private) BDS provider to receive advice on business in the questionnaire survey. BDS was not essential for the development of vast majority of end users. There are, however, quite a few end users

[25] For the purpose of this detailed analysis, BDSs were defined as follows. In principle, BDSs are services which help companies to grow and become competitive. They include training, consulting, marketing assistance, information provision, legal and accounting services, technical development and dissemination. However, they do not include financial assistance ("The Follow-up Study Report for Projects in Mining and Manufacturing Industries" [Japan International Cooperation Agency, August 2003], p. 87).

[26] In interviews, many stakeholders stated that the content of seminars and consulting provided by government-managed agencies, trade associations and business organizations is very basic and not practical. On the contrary, private BDS providers seem to have many MBA holders and deliver services that meet the international standards.

which are interested in the use of BDS in the future. In India as well, except for the services of daily administration such as accounting and tax reporting, the use of BDS for the purpose of business improvement is limited.(Eight companies out of 45 replied that they used BDS.) The fact that micro, small and medium enterprises (MSMEs) do not know the existence of BDS and how to access BDS providers is a major obstacle to BDS utilization. Meanwhile, more than a half of the end users who did not use BDS are interested in the future use of BDS. In Sri Lanka, the questionnaire survey confirmed that the use of BDS by end users is limited and only 3 companies out of 50 used BDS. A major problem is that MSMEs are not familiar with what a BDS is and how they can access it. However, many end users want to use BDS when their business becomes stable.

Although JICA implemented relevant projects for supporting BDS providers in Vietnam and Sri Lanka, these projects did not create any particular synergistic effect with the two-step loan projects. The reason is that the projects were conducted separately and no joint activities between them were organized. In India, such relevant project for supporting BDS providers has not been implemented by JICA.

Accordingly, the two-step loan projects have realized a certain level of effect even without BDS, as confirmed by the individual ex-post project evaluations. However, it does not mean that MSMEs in all three countries have no need for BDS. It is still possible that, in the future, MSMEs will actively utilize BDS to enhance the quality of their businesses. The following three factors should be regarded as basically common in all three countries: (1) MSMEs have needs for BDS after growing to a certain level; (2) it is confirmed that utilizing BDS has provided a certain level of effect; and (3) matching between MSMEs with needs for BDS and BDS providers is not sufficient but can be improved, because companies are interested in the use of BDS.

2. Macro Policies and Two-Step Loan Projects

The two-step loans carried out in the three subject projects have not provided any ripple effects in the governmental policies of India or Sri Lanka; this was confirmed by the interviews with officials responsible for financial policies. Nor do they seem to have provided any clear effects in the policies of Vietnam. However, according to officials of Vietnam's Ministry of Finance and Ministry of Planning and Investment, the success in JICA's two-step loan projects in the country appears to have had a certain amount of influence on the recently announced plan of “SMEs (Small and medium-sized enterprises) Development Funds”.

In all three countries, we were unable to confirm any particular effect such as increased financing to MSMEs by financial institutions which did not participate in the two-step loan projects. Financing by the two-step loan projects is not remarkably different to existing schemes of private financial institutions for financing companies except for the fact that financing in India was limited to investment in the procurement of energy-saving equipment. On the other hand, there are advantages to the two-step loan projects such as having relatively low interest

rates for Vietnam and India, and a longer repayment period in Sri Lanka.

3. Beneficial Effects to Local Japanese-Affiliated Companies of Two-Step Loan Projects

In Sri Lanka, there is no local Japanese-affiliated company in the end users' supply chain. We confirmed the presence of a few local Japanese-affiliated companies in the end user companies' supply chain in Vietnam and India by conducting questionnaire surveys to end users, but it is very rare that local Japanese-affiliated companies are customers of end users. In conclusion, we were unable to fully confirm benefits for Japanese-affiliated companies by the two-step loan projects.

Comparison of the Original and Actual Scope of the Project

Item	Original	Actual
1. Project Outputs		
A) General loans		
a. Loan scheme	Two-step loan	As planned
b. Loan terms		
• Interest rate	About 8-9%, maximum of 9%	9%
• Repayment period	Not exceeding 10 years (grace period: 2 years)	As planned
• Maximum loan amount	10 million rupees (maximum 75% of project cost)	As planned
c. Target beneficiaries	Companies with fixed assets after the loan (excluding land and buildings) of 20 million rupees or less	As planned
d. Target sectors	Manufacturing and service industries. Priority given to loans conducive to export promotion and job creation	As planned
e. Target business	Business in which the loan would be conducive to qualitative and quantitative improvements in production capacity, improvements in operational capacity, or better added value to products (services)	As planned
f. Target items	Funds for the purchase of fixed assets such as buildings and materials, funds for the purchase of vehicles, and long-term working capital (not including funds for acquiring land or commercial buildings for rent out purposes)	As planned
g. Maximum loan amount	10 million rupees. 25% of project cost borne by end users	As planned
B) Technical transfer loans		
a. Loan scheme	Two-step loan	As planned
b. Loan terms		
• Interest rate	About 8-9%, maximum of 9%	2%
• Repayment period	Not exceeding 10 years (grace period: 2 years)	Not exceeding 7 years (grace period: 2 years)
• Maximum loan	Less than 2.7 million rupees. 25%	Maximum amount was as

amount	of project cost borne by end users.	planned. No burden to end users.
c. Target beneficiaries	End users of current of future general loans	As planned
d. Target items	Costs for management, financial and technical training, costs for employing consultants, and costs for purchasing quality-control equipment	As planned
2. Project Period	December 2004 – December 2010 (72 months)	As planned
3. Project Cost Foreign currency Local currency Total Japanese ODA loan portion Exchange rate	 0 million yen 9,619 million yen (7,820 million rupees) 9,619 million yen 9,619 million yen 1 rupee = 1.23 yen (as of October 2003)	 0 million yen 9,612 million yen (9,603 million rupees) 9,612 million yen 9,612 million yen 1 rupee = 0.99 yen (average between December 2004 and October 2010)

Socialist Republic of Viet Nam

Ex-Post Evaluation of Japanese ODA Loan Project

Small and Medium-Sized Enterprises Finance Project (II)

External Evaluator: Ryujiro Sasao, IC Net Limited

0. Summary

This Project aimed to develop the Vietnamese small and medium-sized enterprises (SMEs), to improve their access to funding, and to develop the capacities of participating financial institutions (PFIs) by providing medium and long term funding to SMEs through PFIs and by helping PFIs to strengthen their capacities to finance SMEs.

The Project has been highly relevant with the Vietnamese government's development plan, development needs and Japan's ODA policy; therefore its relevance is high. Total sales for all enterprises that received funding under the Project increased at a strong annual average rate of 32.4% from 2007 to 2011. The profits of these enterprises have also increased over the years. In addition, the Project supplied medium and long term funding which became the source of PFIs' lending to SMEs and conducted capacity building of the staff of State Bank of Vietnam (SBV) and PFIs through training. Accordingly, the effectiveness and the impact of the project are high. The project cost was lower than planned and the Project was completed within the planned project period, so the Project was highly efficient. No major problems have been observed in the institutional, technical or financial aspects of project operation and maintenance; therefore sustainability of the Project effect is high.

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

1. Project Description

Project locations
(Entire Vietnam)

Machinery purchased with Project funding
(For manufacturing electrical wire)

1.1 Background

The Vietnamese economy expanded rapidly after the government initiated the Doi Moi Policy in 1986 and promoted economic policy to open Vietnam to foreign business through a market economy.

State-run enterprises played a central role in the country's socialist economy system, but their number is decreasing since they began converting into joint-stock companies in the early 1990s. Most private enterprises are SMEs, and private SMEs were expected to be the driving force behind the Vietnamese economy in the future, while the state-run enterprises continued their reform. Despite those expectations, there was no good environment where SMEs can raise funds. The promotion of medium and long term financing to SMEs and the capacity development of financial institutions to conduct that financing was urgently needed to bring sustained economic growth to Vietnam. Hence, the first phase of the SMEs Finances Project contracted in 1999 was implemented with support from the Japanese government. Implementing the Project provided potential growth opportunities in the form of two-step loans to SMEs which was unable to procure adequate funding despite their need for it. However, the intermediary function of the banking sector to finance the private sector was still in the development stage. The mobility of medium and long term funding and the capacity to fund private SMEs, in particular, were still limited.

1.2 Project Outline

The objectives of this Project are to develop the Vietnamese small and medium-sized enterprises (SMEs), to improve their access to funding, and to develop the capacities of participating financial institutions (PFIs) by providing medium and long term funding to SMEs through PFIs and by helping PFIs to strengthen their capacities to finance SMEs, thereby contributing to the promotion of Vietnamese SMEs and the growth of the Vietnamese economy.

Loan Approved Amount/ Disbursed Amount	6,146 million yen / 6,131 million yen
Exchange of Notes Date/ Loan Agreement Signing Date	March 2005 / March 2005
Terms and Conditions	(Loan) Interest Rate: 1.3 % Repayment Period: 30 years (Grace Period: 10 years) General untied (Consulting) Interest Rate: 1.3 % Repayment Period: 30 years (Grace Period: 10 years) General untied
Borrower / Executing Agency	Government of the Socialist Republic of Viet Nam / State Bank of Vietnam
Final Disbursement Date	July 2010
Main Consultants	Nomura Research Institute (Japan) / Vision & Associates (Vietnam) (JV)
Feasibility Studies, etc.	Special Assistance for Project Formulation in 2004.
Related Projects	(Related Japanese ODA Loans) Small and Medium-Sized Enterprises Finances Project (1999–2005) (Other Organizations' Projects)

	• World Bank: Implementation of first and second phase of rural finance projects in the form of two step loan. • Asian Development Bank: Implementation of financial support loan "SME Development Program Loan". • EU: Provision of a line of credit to SMEs similar to JICA's SMEs Finance Project.

2. Outline of the Evaluation Study

2.1 External Evaluator

Ryujiro Sasao, IC Net Limited

2.2 Duration of Evaluation Study

Duration of the Study: September 2012–July 2013

Duration of the Field Study: November 11–December 1, 2012 and March 17–31, 2013

2.3 Constraints during the Evaluation Study

Obtaining some effectiveness indicators required PFIs to ask end users (SMEs that borrowed money) to provide information on past sales and profits. End users in loan agreements that had already been fulfilled were not obligated to provide information and would only do so as a favor. Thus, the External Evaluator was unable to obtain results on some indicators because it was difficult to gather complete information from all related end users.

3. Results of the Evaluation (Overall Rating: A[1])

3.1 Relevance (Rating: ③[2])

3.1.1 Relevance to the Development Plan of Vietnam

During the appraisal, the Vietnamese government enacted the Law on Enterprises in 2000 and was working to improve the business environment for the private sector by doing things such as simplifying the procedures required to establish an enterprise. It also enacted Government Decree No. 90/2001/CP-ND in November 2001 as part of the framework for SME growth after restating its determination to promote a market economy in Vietnam's Five-Year Plan for Socio-Economic Development (2001–2005).[3]

The SME Development Plan (2011–2015) had been devised by the time of this ex-post evaluation. The plan aims to enhance economic growth of the nation and its competitiveness in international economy by improving the growth rate and competitiveness of SMEs through establishing an appropriate investment environment for them. In addition, the following three are the recently, i.e.,

[1] A: Highly satisfactory; B: Satisfactory; C: Partially satisfactory; D: Unsatisfactory

[2] ③: High; ②: Fair; ①: Low

[3] This government decree contained a clear definition of SMEs; determined to establish a credit-guarantee program for SME, promote policy encouraging export and investment and establish a technical support center; and established an SME development bureau in the Ministry of Planning and Investment and put it in charge of SME growth.

since 2009, announced policies that are directly related to financial assistance to SME[4]s. (Please see the Appendix 1 for the details.)

- Provision of a guarantee for SMEs to obtain bank loans (Decision)
- Provision of credit for all businesses for investment and export activities (Decree)
- Establishment of the SMEs Development Fund (Decision)

This Project is in line with the above policies because it has the same objective as theirs.

The Vietnamese government has emphasized SME promotion and devised related policy, laws and ordinances consistently since the time of the appraisal until this ex-post evaluation. In that light, the Project is highly consistent with the development policy.

3.1.2 Relevance to the Development Needs of Vietnam

During the appraisal, the conversion of state-run enterprises to joint-stock companies in line with the introduction of a market economy in Vietnam was continuing, but private SMEs were expected to become the driving force behind the economy in future. However, while state-run enterprises were able to receive financing from state-run commercial banks rather easily, SMEs struggled to secure loans from banks, and many of them counted their main source of funding on relatives, friends and elsewhere in the informal sector. They faced particular difficulty when asking banks for medium and long term loans needed for capital investment and this became the biggest obstacle standing in the way of SME expansion, technical standard improvement and other private-sector development. The banks also faced challenges on their end. With no developed bond market, Vietnamese banks procured most of their funds from savings, consumer confidence in banks remained low, and it was especially difficult to procure medium and long term funds. These were obstacles to medium and long term financing for enterprises.

The SME sector has grown since the time of the appraisal till the time of ex-post evaluation. According to the "White Paper on Small and Medium-Sized Enterprises in Vietnam" (2011), the number of SMEs in Vietnam increased from 107,989, or 95.6% of all the enterprises, at the time of the appraisal in 2005, to 242,453, or 97.4% of all the enterprises, in 2009. Furthermore, the total sales of all the enterprises in 2009, i.e., 5,596 trillion VND, the sales of SMEs accounted for 3,351 trillion VND, i.e., 56.2%. (In 2007, SMEs' share in the total enterprises' sales was 47.0%).

According to the SME White Paper (2011), however, a majority of Vietnamese SMEs did not have funding capacity they needed to run and expand their businesses, and a Vietnam Chamber of Commerce and Industry survey revealed that only 5 to 10 percent of SMEs had secured financing from banks.[5] The intermediary function of banking sector's financing to private sector is still under

[4] In the Vietnamese legal system, the following is the order of priority in enforcement: i) Constitution; ii) Law; iii) Ordinance and Resolution; iv) Decree; and v) Decision and Circular.

[5] According to the "Characteristics of the Vietnamese Business Environment: Evidence from SME Survey in 2011," 30% of the roughly 2,500 SMEs (in the manufacturing industry) surveyed had applied for a loan at a bank, and 70% of those received funding without any particular problems. The low percentage of SMEs that applied is due to the many cases in which personal money was used in investment or loans were secured from informal sources.

development. It is difficult for private financial institutions to procure medium and long term funding, and possibly 80 to 90 percent of funds procured are said to be short term.[6] Under such circumstance, the needs for the Project are strong and it is expected to respond to the promising SMEs' needs for medium and long term funds by supplementing such funds through two step loan, to contribute to the increase of the competitiveness and technology standard of SMEs, and to increase the sustainability of loans for private SMEs through strengthening banking sector.

As demonstrated above, evaluations prior to and after the Project confirmed that SMEs and private financial institutions had a pressing need for medium and long term funding. In that light, the Project was executed in the midst of considerable development needs, and it is still very consistent with development needs as of this ex-post evaluation.

3.1.3 Relevance to Japan's ODA Policy

During the appraisal, the Japanese government addressed SME and private sector growth in its Vietnam Country Assistance Policy (released April 2004). It vowed "to make focused efforts toward policy planning, guidance on business management, improvement of technology and improved access to funding, in terms of policy; and toward supporting industry development, interaction among SMEs, in terms of operations" and "to consider support for an SME management consulting program." The Japanese government also said it would "consider support for banking system reform" in reference to state-run enterprise reform and other economic reforms. The 2005–2008 version of the Mid-Term Strategy for Overseas Economic Cooperation Operations puts forth "sustained economic growth focused on private sector promotion" as one of the main pillars of support.

Thus, the Project is consistent with the issues recognized at the time of the appraisal.

In light of the above, the Project has been highly relevant to the Vietnamese government's development plan, development needs, as well as Japan's ODA policy; therefore its relevance is high.

3.2 Effectiveness[7] (Rating: ③)

3.2.1 Quantitative Effects (Operation and Effect Indicators)

The Project provided funding to end users (SMEs) through two-step loans including the on-lending loan from the State Bank of Vietnam (SBV) to PFIs and helped enhance the ability of PFIs[8] to finance SMEs. (See Appendix 2 for details about the financing scheme.)

[6] According to an interview with the State Bank of Vietnam (SBV).
[7] Sub-rating for Effectiveness is to be put with consideration of Impact.
[8] Vietnamese commercial banks that fulfilled certain selection standards, which include financial soundeness, governance, risk management systems, transparency of financial data, record of financing SMEs and medium and long term funding procurement status.

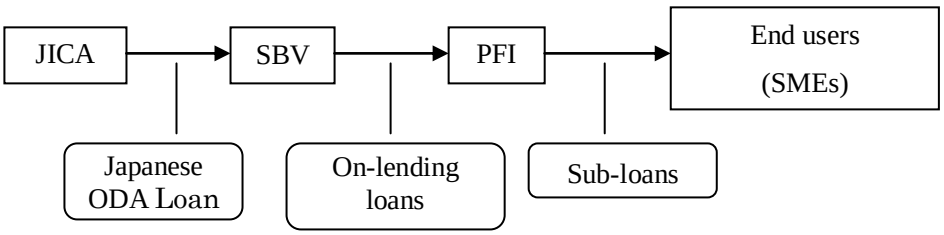


Figure 1: Project Financing Scheme

The table below shows the definition of SME as confirmed in field studies.

Table 1: Definition of SME

Sector	Micro	Small		Medium	
	No. of Employees	No. of Employees	Total Capital	No. of Employees	Total Capital
1. Agriculture, Forestry, Fisheries	10 or fewer	10–200	20 or fewer	200–300	20–100
2. Industry, construction	10 or fewer	10–200	20 or fewer	200–300	20–100
3.Trade, service	10 or fewer	10–50	10 or fewer	50–100	10–50

Source: Decree 56 (Decree No.56/2009/ND-CP enacted in 2009).
Note: Capital is expressed in billions of VND.

The table below shows the Project's initial targets.

Table 2: Operation and Effect Indicators

Indicator	Baseline data (2004)	Target Value (2010, first year after Project completion)
1. End user sales	Data recorded when sub-loan was provided	Growth from when the sub-loan was provided
2. End user profits	Data recorded when sub-loan was provided	Growth from when the sub-loan was provided
3. Percentage of bad debt on sub-loans by monetary value (%)	N/A	Manageable range in terms of PFI financial situation
4. Percentage of bad loan by case (%)	N/A	Manageable range in terms of PFI financial situation
5. Total PFI financing of enterprises under Law on Enterprises*1	VND 7.989 trillion (total of six PFI candidate banks)*2	Expansion over current figure
6. Percentage of PFI financing balance lent to SMEs	43% (six candidate bank average)	Expansion over current figure

Source: Baseline and target values are included in the appraisal document.
Note:
*1. One of end user requirements is an enterprise established under Law on Enterprises.
*2. 6 banks acknowledged by SBV as PFI candidates at the time of appraisal

The table below shows results in terms of the above indicators.

Table 3: Results of Operation and Effect Indicators

Unit: VND 1 billion

Indicator	2007 (Sub-loan first year)	2008	2009 (First year after Project completion)	2010	2011
1. End user sales*1	3,755	5,913	8,465	9,136	11,551
2. End user profits*2	186	228	290	360	772
3. Percentage of bad debt on sub-loans by monetary value (%)*3	0	0.52	1.24	0	0
4. Percentage of bad loan by case (%)*4	0	0.40	1.15	0	0
5. Total PFI financing of enterprises under Law on Enterprises*5	N/A	135,149	222,540	276,858	309,492
6. Percentage of PFI financing balance lent to SMEs*6	N/A	42.3	48.0	48.8	53.1

Notes:
*1-2: Seven of the 10 PFIs.
*3-6: Nine of the 10 PFIs. Note that "bad debt" refers to debt that was not repaid by the due date.
*5-6: Include the loan under the Project

Table 3 shows that sales for end users (Indicator 1) are growing robustly. Total sales for all enterprises that received funding in the Project increased at an average annual rate of 32.4% from 2007 to 2011[9]. Those rates are high compared to the Vietnamese GDP growth rate of five to eight percent over the same period. However, end users have been good customers at these banks according to interviews with PFIs, and the Project may not be the only reason that these SMEs enjoyed such rapid growth. End users' profits (Indicator 2) have also increased over the years. Very few sub-loans have become bad debt (Indicator 3,4). This is likely because end users are good customers at their banks who carefully manage their credit.[10]

Over the years, PFIs have increased their funding of enterprises under the Law of Enterprises (Indicator 5). Though the percentage is small, some of that funding is for the Project (The share of the Project loan is 0.13% by balance base). The percentage of PFI financing balances lent to SMEs gradually increased from 42.3% in 2008 to 53.1% in 2011 (Indicator 6). Reasons for this increase include growing demand for medium and long term funding for SMEs with the increasing number of SMEs and a number of PFIs adopting a business policy that prioritizes SMEs.

On the whole, it appears that initial target indicators have been satisfied at a high level.

The effectiveness of the Project was verified as follows. First, the features of end users were confirmed, next, the ways to use the loan funds were confirmed, finally the effect of the Project was assessed from the point of view of industrial sectors.

[9] The growth rates depend on the timing of loan execution. For example, sales for enterprises that received funding in 2008 increased at an average annual rate of 20.2% over the same period.
[10] Reflecting on the importance of the Project, SBV also advised PFIs to select appropriate enterprises.

(Features of end users in the Project)

As of June 2010, there were 322 eligible SMEs[11] and 354 relevant funding projects.[12] According to the executing agency, 322 end users are located in 42 out of the 63 provinces and province-level municipalities of Vietnam. Thus the Project covers a wide area. The geographical distribution of the end users is as follows.

Table 4: Geographical Distribution of End Users

Area	Number of end users	Ratio (%)	Total number of enterprises*	Ratio (%)
North	175	54.4	84,303	33.9
Middle	66	20.5	43,902	17.7
South	81	25.2	120,473	48.4
Total	322	100	248,678	100

Source: White Paper on SMEs (2011)

Table 5 shows that 80% of end users have 100 or fewer employees, and they belong to the "small" or "micro" SME groups as defined in Decree 56. Similarly, in the table 6 below, in the registered capital amount, 66% of all end users belong to "small" or "micro" SME groups and PFIs put emphasis on the smaller size of companies. The smaller the enterprise, the more difficult it is to secure funding. Therefore, this approach taken by PFIs is desirable.[13]

Table 5: Number of Employees at End Users

No. of Employees	Funding Projects		Percentage of Total Funding (%)
	No. of Projects	Total Funding (millions of VND)	
10 or less	39	100,969	6.0
10–100	262	1,250,429	74.7
100–200	36	207,479	12.4
200–300	13	92,577	5.5
300–500	2	12,500	0.7
500–1,000	1	10,000.0	0.6
More than 1,000	1	838.0	0.1
Total	354	1,674,792	100.0

Source: SBV

Table 6: End Users' Capital

Registered Capital	Funding Projects		Percentage of Total Funding (%)
	No. of Projects	Total Funding (millions of VND)	
VND 1 billion or less	42	85,788.0	5.12
VND 1–5 billion	169	551,056.0	32.90
VND 5–10 billion	80	462,468.1	27.61
More than VND 10 billion	63	575,480.0	34.36
Total	354	1,674,792.1	100.00

Source: SBV

[11] Of the enterprises targeted for funding under the Project, 196 (61%) are limited liability companies, 94 (29%) are joint stock companies, 31 (10%) are private businesses and one is a partnership. Statistics have not been gathered from all projects, but interviews with two PFIs revealed that a certain number of enterprises targeted for funding were new customers receiving funding for the first time.

[12] Project Completion Report

[13] This position differs depending on the PFI. Two of the 10 PFIs lend to both large corporations and SMEs; the remaining eight put more emphasis on lending to SMEs.

(Utilization of loan funds)

Table 7 shows the reasons for borrowing and more than 50 % are for the expansion of existing business and about 40 % are for starting a business. Table 8 shows that all funding is being used for capital investment; no funds are being used as operating capital, as originally planned[14]. Thus, this funding can be expected to contribute to the sustainable manufacturing activities.

Table 7: End Users' Reasons for Borrowing

Reason for Borrowing	Funding Projects		Percentage of Total Funding (%)
	No. of Projects	Total Funding (millions of VND)	
Start a business / new business	121	660,856.0	39.46
Expand existing business	225	945,900.1	56.48
Other	8	68,036.0	4.06
Total	354	1,674,792.1	100.00

Source: SBV

Table 8: End users' Use of Funds

Purpose of Loan	Funding Projects		Percentage of Total Funding (%)
	No. of Projects	Total Funding (millions of VND)	
Plant construction	102	674,603.0	40.28
Machinery / equipment purchase	109	539,804.1	32.23
Other building construction	5	14,156.0	0.85
Vehicle purchase	138	446,229.0	26.64
Total	354	1,674,792.1	100.00

Source: SBV

(Effect of the project in terms of industrial sectors)

The Project's policy aimed to avoid giving priority to any specific line of business, and Table 9 shows a wide range of 12 business fields. All of the top three fields, i.e., transportation, manufacturing and construction / engineering, that accounted for 80% of the total are in the secondary industry.

[14] According to the questionnaire sheets collected from the participating PFIs, most of the loan periods are between 24 and 120 months.

Table 9: End Users' Business Fields

No.	Business Field	Funding Projects	Share (%)
1	Transportation	125	35.31
2	Manufacturing	103	29.10
3	Construction / Engineering	64	18.08
4	Agriculture / Forestry / Fisheries	19	5.37
5	Wholesale / Retail	14	3.95
6	Printing / Publishing	7	1.98
7	Mining	6	1.69
8	Health care / Education / Training	4	1.13
9	Waterworks / Electricity / Water / Infrastructure	2	0.56
10	Distribution / Storage	1	0.28
11	Trade	1	0.28
12	Other	8	2.26
	Total	354	100.00

Source: SBV

In summary it is concluded that the Project has contributed to the sustainable production activities by supporting mainly micro and small enterprises in their capital investment in the wide range of Vietnam.

According to the PFIs, many end users were existing customers of those PFIs. While it seems that an extremely small portion of loans became bad debt, due to the practice of selecting enterprises with a certain level of performance from these lending relationships, limited direct benefits were extended to enterprises that had not been able to secure funding from those PFIs in the past. On a survey of end users, 28 SMEs (82% of respondents) replied that they would have been able to procure business loans without the Project.[15] However, SMEs overall have an enormous amount of need for funding, and the Project increased the amount of loan money provided to SMEs as a whole. According to plural PFIs, there are many good enterprises worth financing which have not borrowed funds from commercial banks and it is certain that those SMEs (non-end users) were also able to secure some kind of funding indirectly as the effect of the Project.

3.2.2 Qualitative Effects

(1) Strengthening finance capacity of PFIs: Commercial banks in Vietnam have difficulties in raising long term funds because of the lack of a mature financial bond market and a system of time and savings deposit. Meanwhile, SBV restricts the commercial banks' use of short-term funds as a source of medium and long term loan to 20–30% of such loan amount in order to maintain the soundness of their balance sheets. Thus, the Project served as a catalyst for their lending by providing medium and long term capital to those commercial banks.

(2) Contribution to the business performance of SMEs: The Project contributed to the development of

[15] 50 enterprises were selected for the survey based on the following criteria: 1) Five to seven enterprises for each PFI; 2) Enterprises with a loan balance as of 2012 (These enterprises are relatively approachable and cooperative toward the interviews.); 3) Avoid regional biases; 4) Include micro, small and medium-sized enterprises from within the SME category; and 5) Industrial field should be in line with the total share.

Vietnamese SMEs in various business fields. The survey to end users asked them to rate on how the loan in the Project contributes to their companies' performance on a scale of 1-3 (3: very much; 2: to a certain degree; 1: in a limited way), and more than 70 percent selected "3". Actual benefits enjoyed include procuring funds at low cost (71%), expanding production capacity and operation scale (58%) and improving product quality by introducing new facilities (13%).

(3) Capacity building of human resources in banking sector: Under the Project, a total of 503 trainees participated in 11 training programs in order that the financial institutions can improve their capacity to appraise the loans to SMEs. Topics of training programs include appraisal methods; risk and loan portfolio management; and how to use management information systems (MIS). The training was meant for the members of SBV's ODA International Credit Projects Management Unit (ICPMU), the implementing unit for the Project, and PFI employees. This training helped develop the abilities of people in the banking sector as follows.

a. ICPMU personnel participated in six of the 11 training programs, and the trainees were generally very satisfied with the training, giving an average score of four (in the five grade evaluation, with five as the highest) to the six programs. They were particularly impressed with the unit on "Credit appraisal and operation management" and indicated that it had contributed significantly to improving their operations. They felt the training was linked to the streamlining of lending procedures and practices across their entire organizations.
b. A majority of PFI employees replied on a survey that the training helped them improve their skills related to credit analysis and that it was linked to streamlining lending practices at an organizational level. Four banks replied that they improved their operation manuals because of their participation in the Project.

3.3 Impact

3.3.1 Intended Impacts

The Project intended to "stimulate Vietnamese SMEs and encourage economic growth."

The number of people working for all the end users has grown from 23,234 before the Project to 32,368 after the completion of the project, owing to the expansion of the scale of individual businesses as a result of the loans by the project.[16] PFIs had an average profit margin (lending interest rate minus borrowing cost) of 3.9 to 4.9 percent per project; thus this Project also contributed to PFI profits.[17]

As of June 2010, there were 322 end users, which is 0.13% of the total of 242,453 SMEs in 2009.[18] End users posted VND 8.5 trillion in sales in 2009 (from the seven banks that reported), which is 0.25% of the total sales of all SMEs, VND 3,351.4 trillion. End users from the Project earned VND 0.3 trillion in 2009 (from the seven banks that reported, after taxes) compared to VND 78.4 trillion of

[16] Project Completion Report (PCR)
[17] Survey of PFIs
[18] Statistics on SMEs here and below are based on the SME White Paper (2011).

pre-tax profit by all SMEs.

Thus the Project has contributed to the promotion of end users, but as a single project, those effects were limited in terms of quantitative contribution to achieving the Overall Goal of the project. It is likely that an effort with a broader scale of policy is needed to promote the financial growth of SMEs. Incidentally, establishment of a SMEs Development Fund is planned in response to the SME Development Plan (2011–2015) announced last year (the fund is expected to be VND 2 trillion). If commercial banks can hold time deposits longer than the current maturity, those deposits can also function as capital for medium and long term loans to SMEs, so it would be desirable to increase those deposits in the long term.[19]

3.3.2 Other Impacts

(1) Indirect impact of the Project

As mentioned above, 80% of end users belong to the second industry and the Project is probably having an indirect, positive impact on the supply chain to which end users belong (among such end users, 20[20] are in "supporting industries" as defined by the Vietnamese government[21]). In the survey of end users during this ex-post evaluation study, 27 of 31 respondent enterprises indicated that their improved performance has benefited other enterprises in their supply chains. Specific benefits include "purchases of more products," "purchases of products at lower prices," and "purchases of higher-quality products."

(2) Impacts on the natural environment

The necessity of environmental considerations was explained during training for PFIs on lending procedures carried out under the Project. The policy manual clearly stated that sub-loans could not be made unless they met the JICA's "Guidelines for Confirmation of Environmental and Social Considerations" (issued in April 2002). As a result, the loan agreement includes these kinds of conditions. In the survey of end users, nearly all respondents indicated that PFIs had explained and advised them on environmental considerations in line with the JICA environmental guidelines in the course of receiving funding.

(3) Land acquisition and resettlement

SBV said that it did not receive any reports concerning resettlement in the Project.

In light of the above, this project has largely achieved its objectives; therefore its effectiveness and impact is high.

[19] Time deposits make up 30 to 40 percent of the total assets of major commercial banks, but the term on most of them is six months or less (according to publicized bank balance sheets and interviews).

[20] Total number of end users in supporting industries themselves and those whose work falls under the definition of supporting industry.

[21] Lines of business that fall under this definition: manufacturing materials, components or partially-finished goods and selling to enterprises that manufacture or assemble finished goods. Relevant sectors are machinery manufacturing, electrical/communications information, automobile parts assembly, spinning/sewing, leather/footwear, advanced technology development.

3.4 Efficiency (Rating: ③)

3.4.1 Project Outputs

Below are the results of loans under the Project.

Table 10: Loan Performance (Cumulative Base)

Unit: VND 1 million

Item	As at June 2010	As at November 2012
Japanese ODA Loan	882,866	882,866
Loans from SBV to PFIs (on-lending loans)	1,228,492	1,735,114
Loans from PFIs to end borrowers (sub-loans)	1,674,792	2,366,966

Source: SBV

As shown above, actual loans are expanding on a cumulative basis. In addition, the balance of revolving funds between 2008 and 2012 stayed at around 12 % of the total yen loan disbursement amount. Therefore, it is concluded that Japanese ODA loan under the Project are being used effectively and lending is being done successfully.

This Project provided the following consulting services focused on support for program implementation (project supervision, PR, etc.) and support for SME financing strategies and operational improvement (enhancing capability of ICPMU and PFI staff):

(1) Support for Program Implementation

- Assist the executing agency in formulating procedures (policy manual, reporting manual) for implementing the Project
- Host workshops to familiarize PFIs with Project processes (including familiarization with JICA environmental guidelines)
- Develop PR methods for the Project
- Propose methods for monitoring PFI and SME and support monitoring conducted by the executing agency
- Build management information systems (MIS) to manage Project implementation
- Assist the executing agency in preparing reports for JICA

Because of incompatibility between the internal system of PFIs and the MIS installed in the Project, the MIS did not function properly in the beginning but in the end the MIS became useful in grasping the progress of and reporting on the project activities.

(2) Support for SME Financing Strategies and Operational Improvement

Under the Project, a total of 503 trainees (ICPMU and PFI staff) participated in 11 training

programs[22] on topics like appraisal methods, risk and loan portfolio management and how to use MIS.

3.4.2 Project Inputs

3.4.2.1 Project Cost

The planned Project cost was JPY 9,619 million (6,176 million in foreign currency and 3,443 million in domestic currency). Japanese ODA loans were to make up JPY 6,146 million of the total Project cost[23].

Table 11: Project Cost (Planned)

Unit: 1 million yen

Item	Foreign currency		Domestic currency		Total	
	Total	Eligible for ODA	Total	Eligible for ODA	Total	Eligible for ODA
Two-step loan	6,000	6,000	3,412	0	9,412	6,000
Consulting services	176	116	31	30	207	146
Total	6,176	6,116	3,443	30	9,619	6,146

Exchange rate: USD 1 = JPY 110; VND 1 = JPY 0.007
Price escalation rate: Foreign currency 1.4%; domestic currency 0.0%
Contingency: 5%
Cost calculation base period: October 2004

Table 12: Project Cost (Actual)

Unit: 1 million yen

Item	Foreign currency		Domestic currency		Total	
	Total	Eligible for ODA	Total	Eligible for ODA	Total	Eligible for ODA
Two-step loan	6,000	6,000	13,814	0	19,814	6,000
Consulting services	97	97	34	34	131	131
Total	6,097	6,097	13,848	34	19,945	6,131

Source: SBV (as at June 2010)
Exchange rate: VND 1 = JPY 0.007

As shown by the tables above, both foreign and domestic portions of Japanese ODA loan money were within the plan. The total project cost is, however, as twice as much as the plan. This is because i) the portion shouldered by the end users was much bigger than the original plan and the total project cost became much bigger than planned 9,619 million yen at the completion of first series of sub loan and ii) as at June 2010 the loan went into second generation, and the total project cost had kept

[22] 11 programs include the same programs conducted in different places. Other topics are “Introduction of the Project and sharing some experiences in the first phase”, “Experiences of SME financing in other countries”, “Workshop on policy manual and reporting manual” and “Enhancing the capacity of ICPMU”.
[23] In the table 11 and 12 the domestic currency portion shows the amount of end users’ own investment and the amount of sub-loans covered by PFIs.

increasing.

3.4.2.2 Project Period

Initial plans called for the loan agreement (L/A) to be signed in March 2005 and the Project to be completed by April 2009[24] (a total of 50 months). The L/A was actually signed in March 2005, but the final day on which loans were executed fell in September 2008 (a total of 43 months). In other words, the Project was completed in 86% of the time allotted and the actual project period was shorter than planned.

The following are some reasons why Project loans were executed smoothly:

- In an environment where SMEs generally had considerable need for funding, PFIs had a firm understanding of their customers' circumstances and were able to smoothly match supply and demand.
- This was Phase II of a project. Thus the project did not face the issues of the policy manual being too complicated and the time consuming loan procedure. (Situation had been improved midway through Phase I).
- No rigid funding limits had been established for each PFI and the PFIs consumed portions of the credit limit as a whole, based on their requests. That is to say, there was competition among PFIs, which made the sub-loan execution smooth.

In light of the above, both project cost and project period were within the plan, therefore efficiency of the project is high.

3.5 Sustainability (Rating: ③)

3.5.1 Institutional Aspects of Operation and Maintenance

(1) Revolving Fund Operating Structure

A revolving fund was operated according to initial plans. On-lending loans repaid by PFIs[25] to SBV were managed through the revolving fund and reused to finance PFI-mediated sub-loans to end users.

(2) Loan Monitoring System

Monitoring has been done according to initial plans. PFIs conduct monitoring on the repayment from the end users in accordance with each bank's guideline. SBV also sets the basic framework on monitoring by policy manual and reporting manual and receives obligatory reporting from PFIs. SBV

[24] The time when sub-loans from PFIs to end users were to be completed.

[25] Six commercial banks were envisioned at the time of the appraisal, but the following 10 banks satisfying the pre-set criteria were selected in practice: 1. Asia Commercial Bank (ACB); 2. Vietnam Technological and Commercial Joint Stock Bank (TCB); 3. Bank for Investment and Development of Vietnam (BIDV); 4. Central People's Credit Fund (CCF); 5. Dong A Commercial Bank (DAB); 6. Ho Chi Minh Housing Development Commercial Joint-Stock Bank (HDB); 7. Mekong Housing Bank (MHB); 8. Sacombank (STB); 9. Vietnam Joint Stock Commercial Bank for Industry and Trade (Vietinbank); 10. Namviet Bank.

also formulates progress reports containing PFI loan amounts, numbers of loans, lines of business and other classifications, the revolving fund balance and delinquency status of PFIs.

Incidentally, revolving fund trend analysis from semi-annual balances yields an average balance of VND 102.669 billion from June 2008 to June 2012, which is 11.6% of the total amount of loans executed with yen loan money. This demonstrates that Project funding is continuously being used well.

(3) Project Implementation System by Agency

1. SBV

The following four divisions of ICPMU within SBV were involved in the Project:

- Appraisal Division: Receives and examines requests for loans from SBV to PFIs (on-lending loans) and, if it deems the requests appropriate, asks the Accounting Department to move money from the revolving fund to PFIs. Supervises and advises overall PFI financing operations. Consists of nine people.
- Accounting Division: Manages the schedule of borrowing from JICA and repaying the Ministry of Finance. Manages overall movement of funds related to the Project and manages the revolving fund balance. Consists of eight people.
- PFI Monitoring and Accreditation Division: Prepares reports on the Project to submit to the SBV Board of Directors. Selects PFIs. Consists of five people.
- Project Implementation Support Division: Works with consultants to implement training related to the Project. Also engages in work related to strengthening organizations for the Project.

According to interviews with the executing agency, the workforce is stable; it has enough personnel to execute operations and only one worker left the office in the past three years (while hiring four new ones).

2. PFIs

On a questionnaire survey, nearly all PFIs said that they had a sufficient number of personnel to implement operations.

3.5.2 Technical Aspects of Operation and Maintenance

(1) SBV

All employees in all departments hold degrees in economics, accounting and other fields associated with bank operations and Project operations, and many hold master's degrees. Furthermore, each department contains multiple staff members who have more than 10 years of experience in the business, so there seems to be sufficient experience and knowledge to execute the Project. The actual work is done according to the policy and reporting manuals, and the manuals are revised when necessary.

SBV also has much experience working on the same Small and Medium-Sized Enterprises

Finances Project through two phases. Interviews with SBV personnel revealed that they faced no particular technical problems or issues in the course of executing the Project.

(2) PFIs

On the survey, each PFI gave a self-evaluation that its Project personnel possessed sufficient skills for credit and debt recovery operations and said that it faced no issues in particular in its work. All PFIs use standardized operation manuals in the course of executing operations. Seven banks implemented internal employee training after the Project as well.

3.5.3 Financial Aspects of Operation and Maintenance

The table below shows how ICPMU has used the budget. The required administrative expenses have been allocated sufficiently within SBV.

Table 13: ICPMU Budget Use

Unit: VND 1 million

Fiscal Years	2010	2011	2012
Budget	2,723	2,735	3,420
Expenditures	2,696	2,674	3,382
- Wages	1,689	2,013	2,895
- Other operational expenses	1,007	661	487

The following updated management indicators for the 10 PFIs demonstrate that banks are in an almost healthy state overall. (Detailed information on banks are shown in Appendix 3.)

(1) Equity Ratio: The 10 banks averaged 15.8% in 2011. Incidentally, the average for 104 regional banks in Japan was 9.2% in the year ending March 2011[26]; the PFI figure is relatively high.

(2) Return on Assets Ratio: The 10 banks averaged 1.3% in 2011. The average for 104 regional banks in Japan was 0.2% in the year ending March 2011; PFI profitability is also high.

(3) Total Assets: The largest bank (VietinBank) had VND 460.317 trillion in 2011, and the smallest bank (CCF) had VND 12.187 trillion. The average annual growth rate (weighted) for the 10 banks from 2009 through 2011 was 27.5%.

(4) Loan Balance: The largest bank (VietinBank) had VND 291.915 trillion in outstanding loans in 2011, and the smallest bank (CCF) had VND 5.813 trillion. The average annual growth rate (weighted) for the 10 banks from 2009 through 2011 was 24.6%.

(5) Non-performing Loan Rate: In 2011, the rate varied among banks from 2.96% of BIDV at the highest to 0.56% of STB at the lowest. The period from 2009 through 2011 showed that the rates were on a gradually increasing trend.

[26] Source: “Monthly Financial Journal”(September 2011)

(6) Loan-deposit Rate: In 2011, the rate varied among banks from 120.05% of BIDV at the highest to 51.43% of HDB at the lowest. However, the period from 2009 through 2011 did not show any common trend in the rates among banks.

3.5.4 Current Status of Operation and Maintenance

PFIs have never delayed repaying on-lending loans from SBV. Furthermore, as described in Effectiveness (Quantitative Effects), very few SMEs have delayed in repaying sub-loans from PFIs.

Each bank has made allowances for bad debt as prescribed in government decisions (Decision 493/2005/QD-NHNN dated April 22, 2005 and Decision 18/2007/QD-NHNN dated April 25, 2007).

No major problems have been observed in the operation and maintenance system; therefore sustainability of the project effect is high.

4. Conclusion, Lessons Learned and Recommendations

4.1 Conclusion

The Project has been highly relevant with the Vietnamese government's development plan, development needs and Japan's ODA policy; therefore its relevance is high. Total sales for all enterprises that received funding under the Project increased at a strong annual average rate of 32.4% from 2007 to 2011. The profits of these enterprises have also increased over the years. In addition, the Project supplied medium and long term funding which became the source of PFIs' lending to SMEs and conducted capacity building of the staff of State Bank of Vietnam (SBV) and PFIs through training. Accordingly, the effectiveness and the impact of the Project are high. The project cost was lower than planned and the Project was completed within the planned project period, so the Project was highly efficient. No major problems have been observed in the institutional, technical or financial aspects of project operation and maintenance; therefore sustainability of the Project effect is high.

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

4.2 Recommendations

4.2.1 Recommendations to the Executing Agency

The Project was executed successfully on all fronts, so the External Evaluator does not have any particular recommendations on improving execution. However, funding may need to be provided to SMEs on a larger scale in order to have an even greater impact on SME sector. As a concrete measure, it would be best to move ahead steadily on the concept of the SMEs Development Fund planned under the policy of the SME Development Plan (2011–2015). In the long term, if commercial banks can hold more time deposits of the term longer than the current period, those deposits can function as capital for medium and long term loans to SMEs. Accordingly, it is expected that the health of the entire banking sector continues to improve so that banks can increase those deposits.

4.2.2 Recommendations to JICA

None.

4.3 Lessons Learned

(1) Encouraging Competition between PFIs

Behind the smooth execution of loan operations for this Project was the principle of competition at work among PFIs because funding limits were not established for each bank. This should serve as an example of good practice when executing the same kind of two-step loans.

(2) Using MIS Effectively

Because of an insufficient budget of the Project, PFIs were not able to build complete MIS for information sharing between SBV's ICPMU and FPIs.[27] As a result, PFIs had no choice but to prepare reports manually, which was extremely inefficient.[28] It will be critical for executing agencies as well as PFIs to make sure the compatibility of MIS with their existing computer system when executing the same kind of two-step loans.

BOX: The Results of Examining the Ripple Effects of Two-Step Loan Projects

The ripple effects of two-step loan projects were examined for three projects that were selected out of the FY 2012 Ex-Post Evaluations, namely the "Micro, Small and Medium Enterprises Energy Saving Project" in India, the "Small and Micro Industries Leader and Entrepreneur Promotion Project (III)" in Sri Lanka, and the "Small and Medium-Sized Enterprises Finances Project (II)" in Vietnam, all of which are yen-loan projects. The following are the three main areas studied.

- The relationship between the subject projects and the degree to which the business development service (BDS) market has developed in the respective countries[29]
- The macro-political and financial effects of two-step loan projects
- Whether or not local Japanese-affiliated companies benefited from the projects through supply chains which include end users

1. The Relationship between Two-Step Loan Projects and the Degree to Which the BDS Has Developed

The following explains the degree to which the BDS market has developed and the characteristics of the BDS providers in the three countries.

In Vietnam, it is reported that BDS sales account for about 1.5% of GDP. The main tasks of

[27] PFIs needed to build new systems because their internal systems were not compatible with the system installed in the Project.

[28] MIS are currently serving PFIs at the main office level.

[29] For the purpose of this detailed analysis, BDSs were defined as follows. In principle, BDSs are services which help companies to grow and become competitive. They include training, consulting, marketing assistance, information provision, legal and accounting services, technical development and dissemination. However, they do not include financial assistance ("The Follow-up Study Report for Projects in Mining and Manufacturing Industries" [Japan International Cooperation Agency, August 2003], p. 87).

the BDS providers include the following: mediating clients and assisting market development; creating personal connections between companies; giving advice on government rules and regulations; training; consulting on marketing, management strategies and business management; and assisting with the preparation of financial statements. Government-managed agencies, trade associations and business organizations preceded other types of organizations in providing BDS, but their services had some room for improvement[30]. The number of private BDS provider companies has gradually increased in recent years and they have begun to provide high-quality services to relatively large corporations. In India, there are various actors who provide BDS including government agencies, business organizations, private firms, research institutes, NGOs, and individuals. BDS providers provide services in various fields such as accounting and marketing, assistance for export procedures, and training programs. More than 14,000 BDS providers are registered on the web portal operated by the Small Industries Development Bank of India (SIDBI). In Sri Lanka, it is reported that there are between 300 and 500 BDS providers nationwide. They are generally classified into government-managed providers, private providers, and NGOs. There are no significant differences in the types of services provided, but the fees and quality levels vary significantly.

Next, when we look at the overall situation of these three countries regarding the relationship between BDS and end user companies in two-step loan projects, it cannot be said that the end user companies have been utilizing BDS frequently but the end users who ever used BDS replied that the BDS were effective. In addition, end users, including those that had not used BDS, expressed an interest in using it from now on. Although there are a certain number of BDS providers in Vietnam, only one company out of 50 replied that it contacted a (private) BDS provider to receive advice on business in the questionnaire survey. BDS was not essential for the development of vast majority of end users. There are, however, quite a few end users which are interested in the use of BDS in the future. In India as well, except for the services of daily administration such as accounting and tax reporting, the use of BDS for the purpose of business improvement is limited.(Eight companies out of 45 replied that they used BDS.) The fact that micro, small and medium enterprises (MSMEs) do not know the existence of BDS and how to access BDS providers is a major obstacle to BDS utilization. Meanwhile, more than a half of the end users who did not use BDS are interested in the future use of BDS. In Sri Lanka, the questionnaire survey confirmed that the use of BDS by end users is limited and only 3 companies out of 50 used BDS. A major problem is that MSMEs are not familiar with what a BDS is and how they can access it. However, many end users want to use BDS when their business becomes stable.

Although JICA implemented relevant projects for supporting BDS providers in Vietnam and Sri Lanka, these projects did not create any particular synergistic effect with the two-step loan

[30] In interviews, many stakeholders stated that the content of seminars and consulting provided by government-managed agencies, trade associations and business organizations is very basic and not practical. On the contrary, private BDS providers seem to have many MBA holders and deliver services that meet the international standards.

projects. The reason is that the projects were conducted separately and no joint activities between them were organized. In India, such relevant project for supporting BDS providers has not been implemented by JICA.

Accordingly, the two-step loan projects have realized a certain level of effect even without BDS, as confirmed by the individual ex-post project evaluations. However, it does not mean that MSMEs in all three countries have no need for BDS. It is still possible that, in the future, MSMEs will actively utilize BDS to enhance the quality of their businesses. The following three factors should be regarded as basically common in all three countries: (1) MSMEs have needs for BDS after growing to a certain level; (2) it is confirmed that utilizing BDS has provided a certain level of effect; and (3) matching between MSMEs with needs for BDS and BDS providers is not sufficient but can be improved, because companies are interested in the use of BDS.

2. Macro Policies and Two-Step Loan Projects

The two-step loans carried out in the three subject projects have not provided any ripple effects in the governmental policies of India or Sri Lanka; this was confirmed by the interviews with officials responsible for financial policies. Nor do they seem to have provided any clear effects in the policies of Vietnam. However, according to officials of Vietnam's Ministry of Finance and Ministry of Planning and Investment, the success in JICA's two-step loan projects in the country appears to have had a certain amount of influence on the recently announced plan of “SMEs (Small and medium-sized enterprises) Development Funds”.

In all three countries, we were unable to confirm any particular effect such as increased financing to MSMEs by financial institutions which did not participate in the two-step loan projects. Financing by the two-step loan projects is not remarkably different to existing schemes of private financial institutions for financing companies except for the fact that financing in India was limited to investment in the procurement of energy-saving equipment. On the other hand, there are advantages to the two-step loan projects such as having relatively low interest rates for Vietnam and India, and a longer repayment period in Sri Lanka.

3. Beneficial Effects to Local Japanese-Affiliated Companies of Two-Step Loan Projects

In Sri Lanka, there is no local Japanese-affiliated company in the end users' supply chain. We confirmed the presence of a few local Japanese-affiliated companies in the end user companies' supply chain in Vietnam and India by conducting questionnaire surveys to end users, but it is very rare that local Japanese-affiliated companies are customers of end users. In conclusion, we were unable to fully confirm benefits for Japanese-affiliated companies by the two-step loan projects.

Appendix 1: Table: Vietnam government's policies directly related to financial assistance to SMEs (in and after 2009)

Policies and categories*1 (in parenthesis)	Effective Date	Responsible agencies and functions	Outline of policies and the results
Provision of a guarantee for SMEs to obtain bank loans (Decision No 03/2011/QD-TTg)	February 2011	- Ministry of Finance (MOF): Guiding, examining and supervising the implementation; - Vietnam Development Bank (VDB): guarantee organization; - Commercial Banks: providing loans	Outline: The Vietnam Development Bank (VDB) will act as a guarantee organization for SMEs to take middle- and long-term loans in VND to implement their projects. To be eligible for obtaining a loan guarantee by the VDB, the SMEs shall be required to: • Belong to sector such as agro-forestry-fishery, processing industry, manufacturing, gas and water supply, waste treatment and management, construction and so on • Have a minimum 15% of its equity participating in the investment project ; and • Not have any bad debts at the time of the guarantee application. Results: VDB has conducted appraisal and issued about 1,500 Letters of guarantee to businesses, of which the total value is about VND 10,692 billion. (confirmed by MOF) Commercial Banks has provided about VND 9,000 billion of loans to businesses under the Letter of guarantee*2.
Provision of credit for all businesses for investment and export activities (Decree 75/2011/NĐ-CP replacing for Decree 151/2006/NĐ-CP)	Initial issuance: 2007 Replacement: 2011	- MOF: making related policies, supervising the implementation; - VDB: providing loan and/or guarantee	Outline: VDB conducts the following activities: • Lending for investment projects • Guarantee for investment projects • Lending for exporting contracts • Guarantee for exporting contracts Results*2: • Lending for Investment projects: VDB provided about VND19,000 billion of loans to 437 projects owned by about 300 SMEs.

			• Guarantee for investment projects: 30 billion VND of total 6 cases of guaranty was provided. • Lending for Exporting contracts: VDB has financially supported about 162 SMEs. The total value of loans is up to VND 17,000 billion. • Guarantee for exporting contracts: Results are not confirmed.
Establishment of the SMEs Development Fund (Reconfirmed by Decision 1231/QD-TTg)	Reconfirmed in September 2012	MPI (Ministry of Planning and Investment)	Outline: Establishing a Governmental Fund which is specialized in lending and guaranteeing SMEs' lending. Current status: The authorized capital of the Fund is budgeted to be about VND 2,000 billion. Proposal of Fund establishment was presented to Prime Minister and under study.

Source: The external evaluator summarized information collected during the ex-post evaluation.
Note:
*1. In the Vietnamese legal system, the order of strength of validity is i) Constitution, ii) Law, iii) Ordinance and Resolution, iv) Decree, v) Decision and Circular.
*2. Figures extracted from reports by Agency of Enterprises Development, MPI

The first two of the above three policies have a limited number of beneficiary companies, but bank loans based on guarantee and credit provision are already implemented. In addition to these financial assistance schemes, the SMEs Development Fund is to be established on the basis of the "SME Development Plan (2011–2015)" that was announced last year. According to the Ministry of Planning and Investment (MPI) in charge of the Fund, MPI, MOF and SBV are the three candidates for the executing agency. With regard to a concrete financial assistance scheme, the options are as follows: i) capital investment into SMEs; ii) two-step loan; and iii) direct loan from MOF. Concrete proposals on the options have already been submitted to the Prime Minister's Office, and are being studied at the time of the ex-post evaluation study in March 2013.

Appendix 2: Project Financing Scheme

Plan	Results (Note: Only items that have changed from Plans are shown.)
(a) Two-step loan (1)Loan scheme: Yen loan funds are transferred from the account of Ministry of Finance, the borrower, to the account of SBV, then, PFIs borrow on-lending loan from SBV and PFIs provide end users (SMEs) with the medium and long term funds. (2) Loan Conditions 1) End user eligibility requirements a) Legal status/form ・ A judicial entity established under the Law on Enterprises; that is, either a joint stock company, a limited company, a partnership or a private enterprise; ・ A joint venture company duly established under the Law on Foreign Investment in which Vietnamese non-state sector controls majority of the shares; b) Size: registered capital not exceeding VND 10 billion (about 100 million yen) or annual average number of employees less than 300 persons. c) Business sector: Not limited, such as manufacturing, mining, and agriculture/forestry/fishery. (Except for real estate, finance/insurance, precious metal dealing, restaurant, entertainment, transaction of weapons and other socially harmful sectors) d) Area: Entire Vietnam 2) Terms and conditions: Sub-loan from a PFI to an end-borrower(end user) A sub-loan contract shall be made between PFI and End-borrower. Detailed terms and conditions are as follows. a) Eligible investment ・ Plant and machinery ・ Initial working capital associated with the above-mentioned investment b) Loan limit: The amount of a single sub-loan shall not exceed VND 20 billion. (the above mentioned initial working capital should be 20 % of the total investment or less.) c) Authorization of the sub-loan: PFIs shall conduct credit analysis of the end users by themselves and SBV only confirms the	(a) Two-step loan (2) Loan Conditions 1) End user eligibility requirements a) Legal status/form 2005 revisions to laws have removed "joint venture corporations based on foreign investment legislation" of the second item in the left legal status. An additional eligibility requirement for the Project is at least 50% private enterprise ownership. b) Size: The left provision is based on the government decree enacted November 2001 (defining SMEs), but this government decree was revised in June 2009, so the scale of enterprises in the Project follows it. The point is that the number of employees is nearly the same, but the size of capital funds is increased (to VND 100 billion for agriculture, forestry and fisheries, industry and construction and to VND 50 billion for commercial and service industries). 2) Terms and conditions: Sub-loan from a PFI to an end-borrower(end user)

formality. d) Currency: Vietnamese Dong or US dollar. e) Interest rate: Interest rates of sub-loans shall be, in principle, freely determined by each PFI. f) Maturity and grace ・ 10 years for a loan for capital investment (A grace period will be 2 years at the longest.) ・ Working capital: one year or less g) Share of financing: ・ End-borrower: 15 % or more of a total sub-project cost ・ PFI: 25% or more of the remaining project cost after the share of end-borrower being subtracted ・ Yen loan: not more than 75% of the remaining project cost after the share of end-borrower being subtracted h) Collateral: In line with the Vietnamese governmental regulations i) Credit risk: PFIs shall bear end-borrower's credit risk. j) Environment clearance: Sub-loans shall be in accordance with the relevant governing regulations in Vietnam and JICA's guideline on environment.	e) Interest rate: The discretion of PFIs to set interest rates has been assured. It appears that interest rates for SMEs for the Project have been several percentage points below market standard. h) Collateral: Currently, a collateral needs to be provided for all projects in principle. Recently, however, it has become easier to receive financing because facilities and machinery purchased by PFIs can be used as a collateral. Nearly all SME respondents to a survey indicated that they had no particular difficulty receiving financing. (Besides, there is no particular difference of policies of PFIs concerning collateral requirement between the loans in the Project and other loans.) i) Credit risk: Credit risk in the Project was analyzed for each individual eligible SME according to manuals and checklists prepared by each bank. The rates of interest on loans were determined under guidance from the main branch in line with the credit level of eligible SMEs based on results of said analysis.
3) On-lending loans from SBV to PFIs a) Currency: Vietnamese Dong b) Interest rate: The interest rate of 364-days Treasury Bill (TB). c) Maturity: Same as sub-loan d) Credit risk: SBV shall bear each PFI's default risk. e) Collateral ・ In principle, collateral for on-lending is not required. ・ When a PFI is in a financially difficult situation, SBV is entitled to require the PFI to submit collateral. In this case, the type of collateral shall be decided by	3) On-lending loans from SBV to PFIs b) Interest rate: Conditions have changed from the left mentioned one to the following: "Weighted average of deposit interest rates reported to SBV by PFIs on a quarterly basis." The background of the above change is explained below. PFIs did not lower interest rates to SMEs when the TB rates were lower than market interest rates (deposit interest rates), and loans to SMEs stagnated when the TB rates were higher than market interest rates. In light of these circumstances, the Ministry of Finance

SBV. 4) Transfer from MOF to SBV a) Currency: Vietnamese Dong b) Maturity and grace period: Same as those of JICA loan c) Foreign exchange risk: MOF shall bear the exchange risk between yen and VND. d) Operation cost: SBV collects interest from PFIs. SBV shall obtain 0.2 % of the total outstanding balance of transfer from MOF to SBV and return the rest to MOF.	advised that SBV set interest rates on on-lending loans for the Project to the prime rate, and the new standard went into effect July 2009. However, the prime rate has diverged from the market rate after two years, so the Ministry of Finance reviewed on-lending loan interest rate standards and advised that SBV use regularly updated weighted averages from all deposit interest rates, and the new standard has been in effect since April 2012. PFIs have not reported any particular disruptions resulting from the aforementioned rule changes.

Appendix 3: Business performance indicators of PFIs

Indicator	Equity Ratio (%)			Return on Asset Ratio (%)			Total Assets (VND1 Billion)		
Year	**2009**	**2010**	**2011**	**2009**	**2010**	**2011**	**2009**	**2010**	**2011**
ACB	9.73	10.33	9.24	1.49	0.02	0.02	167,724	202,454	278,856
TCB	9.60	12.94	11.29	2.32	0.02	2.28	92,534	149,503	178,191
BIDV	9.53	9.32	10.01	1.20	0.01	0.99	294,340	366,268	406,919
CCF	47.12	41.12	43.40	0.47	0.01	1.65	8,103	11,113	12,187
DAB	10.64	10.03	9.07	1.78	0.02	1.94	42,157	54,525	64,546
HDB	15.67	12.70	15.01	1.33	1.02	1.26	19,127	34,389	45,025
MHB	8.05	13.39	21.46	0.17	0.22	0.24	39,712	51,211	47,282
STB	11.41	9.97	11.66	1.93	1.71	1.96	98,474	141,799	140,137
VietinBank	8.06	7.44	9.50	0.62	0.01	1.71	242,667	367,068	460,317
NaviBank	8.87	19.07	16.94	1.01	0.01	0.99	18,686	20,015	22,496

Indicator	Loan Balance (VND1 Billion)			Non-performing Loan Rate (%)*1			Loan-deposit Rate (%)*2		
Year	**2009**	**2010**	**2011**	**2009**	**2010**	**2011**	**2009**	**2010**	**2011**
ACB	62,021	86,648	101,898	0.40	0.34	0.89	54.94	60.06	53.29
TCB	42,093	52,928	63,435	2.49	2.29	2.83	62.47	55.38	56.78
BIDV	200,858	254,192	291,761	2.82	2.71	2.96	101.36	100.90	120.05
CCF	3,841	4,945	5,813	-	-	-	-	-	-
DAB	34,356	38,321	44,003	1.32	1.59	1.69	108.53	90.01	107.49
HDB	8,231	11,728	13,848	1.10	0.83	1.63	69.77	55.70	51.43
MHB	20,136	22,689	22,954	2.03	1.90	2.31	128.59	95.23	100.94
STB	55,248	77,359	78,449	0.69	0.52	0.56	71.97	74.52	84.89
VietinBank	162,335	233,062	291,915	0.61	0.66	0.75	103.85	108.10	109.34
NaviBank	9,960	10,767	12,915	2.45	2.24	2.92	87.21	94.36	85.63

Note:

*1. “Non-performing Loan” means a loan which is more than 90days overdue and in high risk category.

*2. In the calculation of the rate “deposit” includes financial bonds.

Major Plans / Results Comparison

Item	Planned	Actual
(1)Outputs (Loan performance from the Project)	Japanese ODA loan amount: JPY 6 billion Loans from SBV to PFIs (on-lending loans): No planned value Loans from PFIs to end borrowers (sub-loans): No planned value	Japanese ODA loan amount: JPY 6 billion Loans from SBV to PFIs (on-lending loans): 1,228,492 Loans from PFIs to end borrowers (sub-loans): 1,674,792 (Unit: VND 1 million, as of June 2010)
(2)Time Period	March 2005–April 2009 (50 months)	March 2005–September 2008 (43 months)
(3) Project cost Foreign currency Domestic currency Total Japanese ODA loan portion Exchange rate	 6,176 million yen 3,443 million yen (VND 491.9 billion) 9,619 million yen 6,146 million yen VND 1 = JPY 0.007 (as of October 2004)	(as of June 2010) 6,097 million yen 13,849 million yen (VND 1.9784 trillion) 19,945 million yen 6,131 million yen VND 1 = JPY 0.007 (Same as left)

Socialist Republic of Viet Nam

Ex-Post Evaluation of Japanese ODA Loan Project

Haiphong Port Rehabilitation Project (II)

External Evaluator: Ryujiro Sasao, IC Net Limited

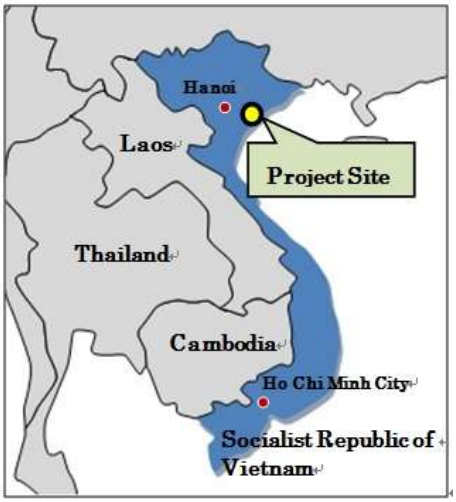
0. Summary

The Project aimed to improve the cargo handling capacity of Haiphong Port, Vietnam's second-largest international port, by upgrading container facilities and improving channel at the port.

The Project has been highly consistent with the Vietnamese government's development plan, development needs and Japan's ODA policy; therefore its relevance is high. The container cargo handled at the Project's target port had been increasing consistently and it has increased dramatically since berth construction was completed in 2007. In addition, Haiphong City's economic indicators related to distribution enjoyed robust growth in the years around berth completion, hence the Project's effectiveness and impact reached initially planned levels. Although the Project's cost was within budget, the Project period was exceeded significantly; therefore efficiency of the Project is fair. No major problems have been observed in the institutional, technical or financial aspects of maintaining the Project; therefore sustainability of the Project effect is high.

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

1. Project Description



Project location

Cranes procured in the Project

1.1 Background

Haiphong Port is located on the right bank of Haiphong City, 36 kilometers upstream of the Red River tributary from the open sea. The port was besieged with sediment and sand drift, major harbor maintenance issues that plague river ports and bury channel. The issues consistently pushed the port's cargo handling capacity down; the port handled 3 million tons of cargo in 1988 but only 2.4 million

tons in 1992.[1] Given this problem, the port's geographical advantages, sizeable hinterland and important role in Vietnamese economic development, emergency improvement was a pressing issue. Then, Japan International Cooperation Agency (JICA) conducted a feasibility study (F/S) in 1993 for Phase I of the Project, and the construction began in 1997 and finished in 2000. The Phase I work expanded harbor facilities such as container berths, but there was a desperate need to add more container berths and take action to combat the silting up of the port's channel, in order to accommodate the larger ships and to deal with increasing containerized cargo.

1.2 Project Outline

The objective of this Project was to improve the port's cargo handling capacity by upgrading container facilities and improving channel at Haiphong Port, Vietnam's second-largest international port, thereby contributing to the promotion of northern Vietnam's economic and social development.

Loan Approved Amount/ Disbursed Amount	13,287 million yen / 12,004 million yen
Exchange of Notes Date/ Loan Agreement Signing Date	March 2000 / March 2000
Terms and Conditions	(Civil works) Interest Rate: 1.0 % Repayment Period: 40 years (Grace Period: 10 years) Tied: (Special Yen (ODA) loan[2]) (Consulting services) Interest Rate: 0.75 % Repayment Period: 40 years (Grace Period: 10 years) Bilateral tied
Borrower / Executing Agency	Government of the Socialist Republic of Viet Nam / Ministry of Transport
Final Disbursement Date	January 2010
Main Contractors	Penta-Ocean Construction (Japan) / TOA Corporation (Japan) (JV)
Main Consultants	Nippon Koei (Japan) / Overseas Coastal Area Development Institute of Japan (Japan) / Transport Engineering Design Corporation (Vietnam) (JV)
Feasibility Studies, etc. (if any)	・JICA's F/S "Haiphong Port Emergency Improvement Plan Study" (1993) ・F/S by Vietnamese government with consultants (1996) (Note) While the 1993 F/S was a study of the entire harbor, the 1996 F/S focused on improving the channel in Haiphong Port.
Related Projects (if any)	(Technical Cooperation) ・JICA's M/P "Plan for Transport Development in the

[1] Haiphong Port Emergency Improvement Plan Study Report (1993)

[2] The Project was executed under the Special Yen (ODA) Loan System. Special yen (ODA) loans were introduced by the Japanese government in 1998 as a system to support Asian countries targeted for rapid recovery from the Asian currency crisis by providing funding for streamlining logistics, improving production bases and upgrading infrastructure for major disaster response and other fields. Relaxed loan agreement conditions (interest rates/payment periods) are provided under this system, and it strives to provide more opportunities for Japanese businesses to participate in projects by limiting contract parties to Japanese businesses and limiting procurement of products and services with loan money to those indigenous to Japan (procurement of those from other countries limited to 50% of loan amount or less).

	Northern Part of Vietnam Study" (1994) ・JICA's "Study on the National Transport Development Strategy (VITRANSS)" (2000) (ODA Loan) ・Haiphong Port Rehabilitation Project (I) (L/A signed January 1994) ・National Highway No. 5 Improvement Project (1st L/A signed January 1994)

2. Outline of the Evaluation Study

2.1 External Evaluator

Ryujiro Sasao, IC Net Limited

2.2 Duration of Evaluation Study

Duration of the Study: September 2012–July 2013

Duration of the Field Study: November 11–December 1, 2012 and March 17–31, 2013

3. Results of the Evaluation (Overall Rating: A[3])

3.1 Relevance (Rating: ③[4])

3.1.1 Relevance to the Development Plan of Vietnam

At the time of the appraisal, development of northern Vietnam, specifically of Hanoi, Haiphong and Ha Long bay, was given precedence as part of the Doi Moi Policy, and Vietnam's Socio-Economic Development Plan (2001–2005) and Strategy for Socio-Economic Development (2001–2010) emphasized harbor improvement to accommodate increasing demand for ship cargo. In addition, the Vietnam Harbor Improvement Master Plan 2010 focused on improving existing harbors including Haiphong Port and pledged to help streamline the handling of an increasing amount of cargo[5].

As of this ex-post evaluation, the Five-Year Socio-Economic Development Plan (2011–2015) approved by the National Assembly in November 2011 highlights the need to maintain and update existing infrastructure and build a new transport network. The target infrastructures included in this plan are expressways, international harbors and major airports. The harbor sector master plan[6] released in December 2009 includes the following on individual harbors:

- Upgrade Lach Huyen Port to receive ships up to 100,000 DWT[7] and serve as Vietnam's long-distance export base.
- Improve cargo handling capacity at Haiphong and Cai Lan Ports through concentrated investment.

[3] A: Highly satisfactory; B: Satisfactory; C: Partially satisfactory; D: Unsatisfactory
[4] 3: High; 2: Fair; 1: Low
[5] This project is also prioritized in the sector of port and marine transport in the Vietnam transport sector master plan, formulated by "Study on the National Transport Development Strategy (VITRANSS)".
[6] MASTER PLAN ON DEVELOPMENT OF VIETNAM'S SEAPORT SYSTEM THROUGH 2020, WITH ORIENTATIONS TOWARD 2030
[7] DWT = dead weight tons, an indicator used mainly for cargo ships to describe the maximum load a ship can bear.

The table below shows the cargo volume forecast from the master plan. Much is expected for Haiphong Port.

Table 1: Cargo Volume Forecast

(Unit: 1 million tons)

Harbor	2015	2020
Haiphong*	48.5	64.4
Lach Huyen	13.0	31.5
Cai Lan	10.3	14.9

Source: The harbor sector master plan
Note: * Represents all the ports in Haiphong area, which includes three state-run ports such as Hoang Dieu, Chua Ve and Tan Cang

The above mentioned ports (Haiphong Port, Cai Lan Port, Lach Huyen Port and in Haiphong, Hoang Dieu, Chua Ve[8] and Tan Cang) are shown in the following maps.

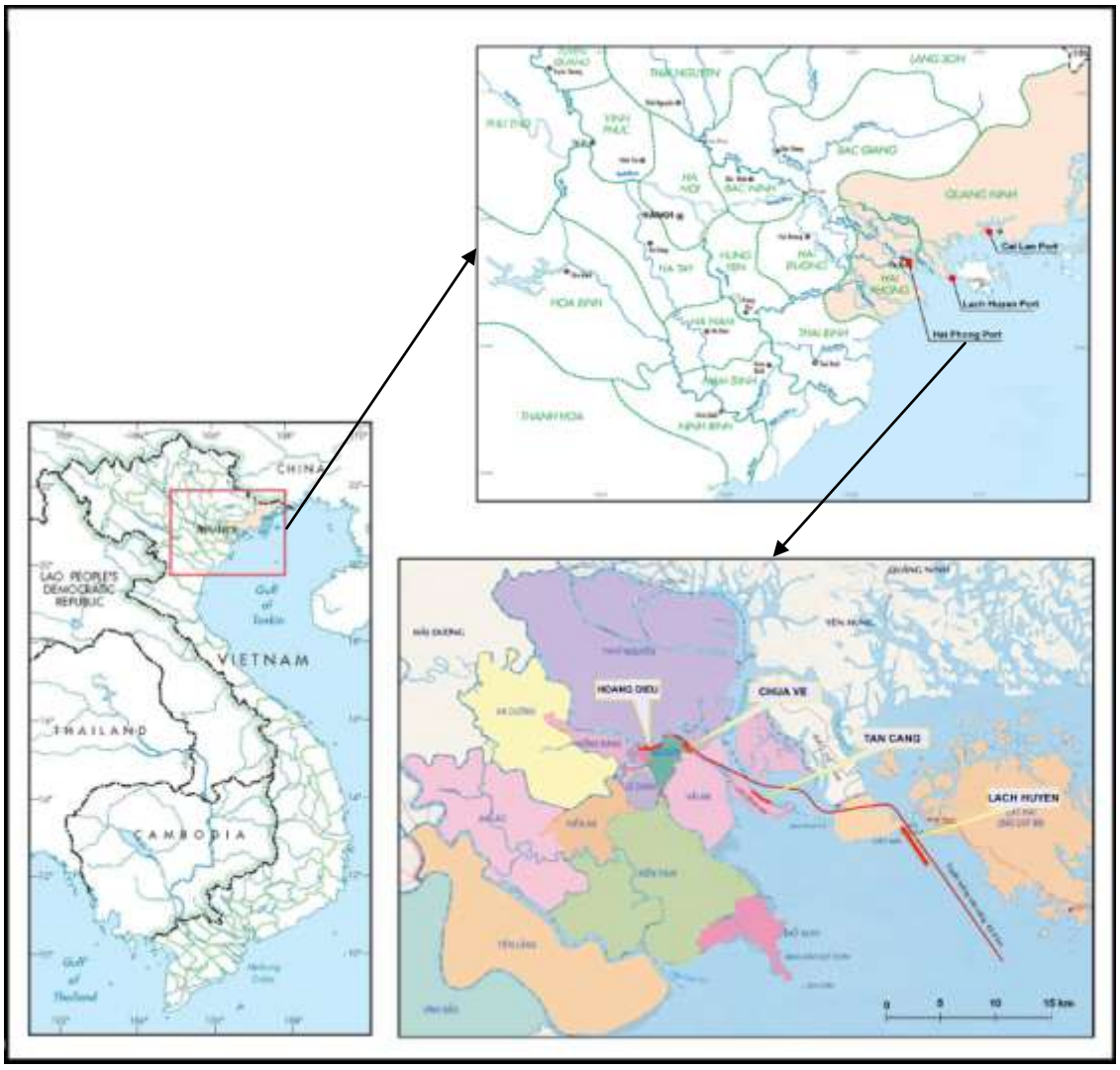


Chart 1: Location of the ports

[8] Chua Ve is the Project site.

As described above, Vietnamese development policy and the harbor sector master plan emphasized the development of Haiphong Port during both the appraisal and the ex-post evaluation. As of this ex-post evaluation, no external circumstances have compromised the Project's initial relevance. In that light, the Project is highly consistent with development policy.

3.1.2 Relevance to the Development Needs of Vietnam

Haiphong Port is the largest international port in northern Vietnam and is behind only Saigon Port in terms of cargo volume. At the time of the appraisal, however, aging facilities and sediment in its channel caused by its river location were restricting the vessels that came to call. These were major obstacles; the port was unable to berth ships larger than 3,000 DWT despite its past ability to regularly berth 10,000 DWT vessels.

In the mean time, Vietnam enjoyed economic growth, and Haiphong Port's cargo volume increased 19% year-over-year to 5.54 million tons in 1998, escaping from the stagnant period of early 1990s when the channel suffered desilting. Even in the research in which demand was reviewed in February 1999 in light of the Southeast Asian currency crisis, cargo volume in northern Vietnam was expected to continue to increase and reach 6.3 million tons by 2000 and 8.2 million tons by 2010.[9]

Statistics obtained during the ex-post evaluation study show that Haiphong Port's cargo volume was increasing faster than anticipated at the time of the appraisal and confirm retroactively the fact that there was a pressing need to improve the harbor (see the Effectiveness section for more details).

In addition to this quantitative need, needs related to the use of Haiphong Port continue to pile up: the Nomura-Haiphong Industrial Zone, an area in which 48[10] companies engage in manufacturing, was established, and investment and further establishment of industrial zones along the national highway between Hanoi and Haiphong and within Haiphong City limits continued in the 2000s.[11]

At the time of the appraisal, from the point of view of the upward trend of cargo volume at Haiphong Port and the port's capacity at the time, the need for the Project was obvious. The fact that cargo handling needs in northern Vietnam were greater than initially expected was confirmed after the Project. In that light, the Project is highly consistent with development needs.

3.1.3 Relevance to Japan's ODA Policy

The Japanese government showed its cooperation, which corresponds to specific needs of each transport mode, as an important issue in the Country Assistance Policy for Vietnam (1994-1999). In addition, the Country Assistance Strategy for Vietnam (2000) aims at examining efficient transport infrastructure including the following points:

- Improvement of a trunk transport network among cities, and between cities and villages
- Improvement of rural roads and public transport bases in cities
- Improvement of distribution base facilities such as ports, airports, railways, which contribute to

[9] JICA internal document, 1999
[10] The number of tenants in land plots
[11] Fourteen industrial zones were built along National Highways 5 and 10 through Haiphong City between 1994 and 2010 (according to a field survey in 2010 ex-post evaluation).

the regional and nationwide distribution of goods

- Implementation of projects of broader area such as east-west corridors

In that light, the Project is highly consistent with Japan's development policy.

The Project has been highly consistent with the Vietnamese government's development plan, development needs and Japan's ODA policy; therefore its relevance is high.

3.2 Effectiveness[12] (Rating: ③)

3.2.1 Quantitative Effects (Operation and Effect Indicators)

Detailed operation and effect indicators for the Project were not established at the time of the appraisal.[13] However, JICA appraisal documents show an annual cargo volume target for Haiphong Port of 7.069 million tons for 2010 including 2.758 million tons, or 225,000 TEU[14], of container cargo.

In Haiphong there are three ports (Hoang Dieu, Chua Ve and Tan Cang) under control of government-linked company, Haiphong Port Holding Limited Liability Co. ("Haiphong Port company"), and the Project focuses on Chua Ve Port. Hoang Dieu Port and Tan Cang Port handle both general and container cargo, and Chua Ve Port specializes in container cargos. Chua Ve Port handles about 30% of the total cargo volume (both of bulk cargo and container cargo) according to Haiphong Port company.

The Table 2 below shows trends for cargo volume and other items for all of Haiphong ports from the time of the appraisal onward. The volume of cargo handled by the three Haiphong ports far exceeds initial expectations at the time of the appraisal. The container volume at Chua Ve Port is also continuously increasing. Moreover, it increased rapidly after berth construction was completed in 2007. Chua Ve Port has consistently handled over half of the container cargo handled by the three Haiphong ports.[15]

[12] Effectiveness should be judged in consideration of impact to determine a rating.

[13] Confirmed via appraisal documents. However, during the ex-post evaluation study, the External Evaluator obtained the 2010 cargo volume for Chua Ve Port established by the Vietnamese side in 1998 (4.266 million tons). That is the equivalent of 356,000 TEU, and the actual 2010 figure of 626,000 TEU is far and away above that.

[14] TEU is a unit that expresses cargo volume handled in a harbor. One TEU equals one 20-foot container.

[15] According to Haiphong Port company, after the project the operational situation of Chua Ve Port is close to the designed capacity and the movement of its share depends on the other ports' operational situation. The share fell to 61.6% in 2009, because new berths of other ports had started operation. The share fell to 54.1% in 2011 due to the construction of additional container berths at Haiphong Port after the Project.

Table 2: Cargo Volume Trends for All Haiphong Ports*1 and Chua Ve Port

Item / Year	1999	2003 (Initially planned Project completion year)	2005	2006	2007 (Substantial Project completion year)
1. Cargo volume at all Haiphong ports (1,000 tons)*1	6,509	10,518	10,512	11,151	12,301
1-1. Container cargo volume (1,000 TEU)	199	377	424	684	808
1-2. Bulk cargo volume (1,000 tons)*2	4,279	5,604	5,289	5,576	5,748
2. Number of ships berthed	1,014	1,156	1,015	2,056	2,453
3. Chua Ve Port container cargo volume (1,000 TEU)	138	316	343	390	558
4. Chua Ve Port's share of container cargo volume of Haiphong ports	69.3%	83.8%	80.9%	57.0%	69.1%
(Reference Information)					
Port of Ho Chi Minh total cargo volume (1,000 tons)	N/A	29,177	36,930	43,126	59,884

Source: Haiphong Port company
Note *1. Totals for three Haiphong ports (Hoang Dieu, Chua Ve and Tan Cang)
*2. Not packed cargos such as grain and mineral.

Item / Year	2008	2009	2010	2011
1. Cargo volume at all Haiphong ports (1,000 tons)*1	13,969	14,370	15,689	17,891
1-1. Container cargo volume (1,000 TEU)	816	954	755	1,019
1-2. Bulk cargo volume (1,000 tons)*2	6,238	6,487	6,799	5,486
2. Number of ships berthed	2,443	2,410	2,649	2,467
3. Chua Ve Port container cargo volume (1,000 TEU)	629	588	626	551
4. Chua Ve Port's share of container cargo volume of Haiphong ports	77.1%	61.6%	82.9%	54.1%
(Reference Information)				
Port of Ho Chi Minh total cargo volume (1,000 tons)	58,096	64,558	59,596	52,389

Haiphong Port company does not have accurate data on average waiting time, a standard harbor sector operation/effect indicator. Interviews with the company revealed that it is close to zero, and related personnel (executing agencies/corporations that use the harbor) said nothing of long waiting time compared to other harbors in their interviews. In that light, Project effectiveness was likely high despite the lack of detailed operation and effect target indicators at the time of the appraisal.

The good condition of the Vietnamese macro economy is one reason why actual cargo volumes for Chua Ve Port and the rest of Haiphong Port exceeded expected values at the time of the appraisal.[16] JICA internal documents show cargo demand estimated at the time of the appraisal in March 1999 based on economic predictions reflecting the currency crisis, but the actual GDP growth rates far

[16] Cargo volume at international ports typically has a strong correlation with GDP. Cargo volume for the Port of Ho Chi Minh provided as a reference on Table 2 was also boosted by the strong condition of the local and national economies and is increasing steadily.

exceeded those predictions. When we pay attention to the economic situation around Haiphong, investment and further establishment of industrial zones along the national highway between Hanoi and Haiphong and within Haiphong City limits in the 2000s, also drove substantial increases in cargo volume. Incidentally, industrial output in northern Vietnam grew at an annual average rate of 19.9% from 2000 through 2008 (General Statistics Office of Vietnam study). The above mentioned growth of regional economy is estimated to be realized by the development of transport infrastructure such as this project and National Highway No.5 connecting to Haiphong Port, which was improved by Japanese ODA loan[17].

Though the External Evaluator was unable to obtain official statistics on the content of containers handled at Chua Ve Port, interviews revealed that they contained the following types of goods[18]:
(Imports) Raw materials for textile/shoe products, electrical/automobile parts for industrial zones, etc.
(Exports) Finished textile/shoe products, products from industrial zones, etc.

As explained above, the impending construction of Lach Huyen Port, a large, deepwater port, will possibly affect Haiphong Port[19]. Based on interviews with relevant personnel at the Nomura-Haiphong Industrial Zone, the Japan Business Association in Haiphong and a JICA expert, Lach Huyen has the advantage of berthing large ships and cutting days off their voyages. On the other hand, Haiphong has an advantage in that large ships do not visit every day but feeder ships do and shippers can use Haiphong every day. The interviewed people do not expect cargo handling to shift dramatically to Lach Huyen in the future, because some companies' bases are near Haiphong, which makes other ports inconvenient. In addition to the above mentioned strength of Haiphong Port, a major Japanese ocean freight company also expects to continue using Haiphong Port.[20] In addition, a simulation was done in the final report from the Preparatory Survey on Lach Huyen Port Infrastructure Construction in Vietnam to find future cargo volumes for each harbor. This report found the volume at Haiphong Port will increase until around 2015 (when Lach Huyen will be built) but decrease around 10% from that level by 2020. Therefore, both ports should be able to coexist because Lach Huyen's future effects on Haiphong are within an acceptable range.

3.2.2 Qualitative Effects

(1) Streamlining Distribution

Five corporations that use Chua Ve Port (logistics companies, manufacturers) expressed in interviews that they were able to handle cargo quickly at the new Haiphong Port facilities (among the

[17] There is a related statement in " National Highway No. 5 Improvement Project" of the 2007 ex-post evaluation (2.4 Impact).
[18] Source: Department of Statistics, Haiphong Port company
[19] Lach Huyen Port is about 21km south east from Chua Ve Port.
[20] The interviewed Japanese shipper replied "Even after it is completed, Lach Huyen Port will probably not be physically capable of absorbing all cargo currently handled at Haiphong Port. Large vessels from European and American routes and mid-sized vessels on short sea routes will probably stop at Lach Huyen, but Haiphong will continue serving mainly small and mid-sized vessels on Asian short sea routes". At the time of the interviews, the loading rates on the company's cargo ships that stopped at Haiphong were extremely high.

quickest in Vietnam). That speed is owed to the newness of machinery and facilities; an improved container terminal management system[21]; the wealth of experience and the quality of managers and on-site workers in departments that handle cargo; and work that is done according to ISO standards specifically for the harbor sector. Various documents related to the harbor's use are being processed smoothly with no particular problems. Interviews with a major ocean freight company produced the same praise for the harbor, and there were no particular problems with the cost of using the harbor compared to other harbors, the procedure of using the harbor or customs procedures.

According to Nomura-Haiphong Industrial Zone personnel, 30% of exports from Haiphong Port were products from their industrial zone, which shows some magnitude of a benefit of the Project to those companies based in the zone.[22]

(2) Improving Safety of Ocean Transport

Haiphong Port personnel said in interviews that the civil engineering work (channel improvement) and installation of navigation support equipment in the Project have improved safety in the harbor and in channel. In particular, the improvement of channel made it possible for ships to navigate the harbor without having to suddenly change direction.[23]

3.3 Impact

3.3.1 Intended Impacts

The table below shows data on Haiphong City from 2005 to 2011 collected during field surveys. All indicators have increased steadily since around the time of berth completion in 2007, and the Project likely contributed to these results to some degree by stimulating distribution. The Haiphong City Transportation Department also expressed in interviews that promotion of distribution under the Project contributed to the local economy.

[21] This system includes systems that manage container handling in terminals and systems that manage main ship cargo handling. The software used here enabled the integration of individual sub-systems and probably improved efficiency of all cargo handling work about 10% (according to interviews with harbor personnel).

[22] One reason companies base themselves in the Nomura-Haiphong Industrial Zone is its proximity to Haiphong Port, and eight new companies have moved to the industrial zone since 2007, when berth construction was completed.

[23] Statistics obtained from the Maritime Administration of Haiphong, a government agency, do not show a clear, downward trend in the number of accidents involving ships in the Haiphong Port area from 2005 through 2011. However, considering that the number of ships that entered the port in 2011 was 2.4 times the number that entered in 2005, it appears that safety has improved to a certain degree.

Table 3: Haiphong City Economic Indicators Related to Distribution

Year / Indicator	2005	2006	**2007 (Berth completion year)**	2008	2009	2010	2011
1. Regional real GDP (VND 1 billion; 1994 figures)	14,043.1	15,801.4	17,814.6	20,111.0	21,633.0	24,003.6	26,650.4
2. Industrial output (VND 1 billion)	25,295.2	33,078.8	48,883.2	67,410.3	70,391.9	83,904.5	99,634.6
3. Number of registered companies	1,451	1,890	3,001	3,025	3,482	3,322	2,710
4. Corporate sales (VND 1 billion)	59,617.9	76,300.5	107,612.3	157,301.2	159,732.8	186,827.5	200,530.0
5. Foreign investment (USD 1 million)	251,111	161,748	299,624	915,084	117,900	78,984	611,655
(Reference Information)							
6. Ho Chi Minh City real GDP (VND 1 billion; 1994 figures)	88,866	99,672	112,271	124,303	135,053	150,928	166,423
7. Ho Chi Minh City industrial output (VND 1 billion)	247,231	288,132	350,880	442,819	528,403	606,925	702,957

Source: Department of Planning and Investment, Haiphong city (Items 1–5), "Vietnam GSO" (2005, 2011) and Ho Chi Minh Statistics Office (2010, 2011) (Items 6–7)

3.3.2 Other Impacts

(1) Impacts on the Natural Environment

The results of EIA (Environment Impact Assessment) relating to this project was submitted to the Ministry of Science, Technology and Environment of Vietnam and approved in November 1998. In line with this policy, dredging and dumping of dredged soil was planned to be conducted with sufficient consideration of environment.

Contractors devised environmental management plans in the course of performing their work. They conducted dredging, considering the work's influence on environment. Specifically, they engaged in the following monitoring activities:

- Suspended solids content monitoring
- Turbidity monitoring
- Sea water and sea bed soil sampling

Monitored figures fell within acceptable ranges according to Vietnamese standards[24]. As initially planned, dredged sand was dumped on land or offshore with the approval of the responsible Haiphong People's Committee and was not reused.

As for post-Project environmental monitoring, Haiphong Port company monitors the quality of air, water and sediment on the river bottom in the harbor area once every six months. Monitoring data as at January 2013 shows that all items satisfy Vietnamese standards.

[24] It was confirmed by the Environment Monitoring Report for June 2005 prepared by the contractor.

The following environmental considerations are taken during maintenance dredging:[25]

1) Berth dredging

Special environmental considerations were not taken for this relatively small civil engineering procedure. However, the condition of berths is monitored as part of the environmental monitoring described above and the quality of air, water and sediment satisfies the national standard.

2) Channel dredging

This is a major civil engineering procedure, so Vietnam Maritime Safety North (VNMS), the executing government agency, performs environmental impact evaluations. Dredging crews must choose methods that reduce impacts on the environment. Their main method of reducing impacts is to make sure that dredged sand does not flow into the river[26]. Environmental monitoring is also done in offshore dumping areas for dredged sand at every dredging occasion. The results of monitoring have thus far satisfied the national environment standard.

The increase of traffic in the area due to the rapid increase of cargo volume at Haiphong Port may be contributing to the deterioration of National Highway 5. Residents who live near Chua Ve Port said in interviews that air quality was getting worse because of increased traffic.

(2) Land Acquisition and Resettlement

Government Office Decision No. 29/QD-TT (September 1999) charged the Haiphong People's Committee with compensating for resettlement. The Haiphong Port Project Management Unit (PMU) served as the project manager on the compensation committee. Compensation money was paid out of the Vietnamese national budget. Eighty-six households were eligible to receive compensation for 650 hectares of eligible aquaculture ponds, but nobody was resettled. There were no particular issues between residents and executing agencies.

In summary, as the main impact of the Project, its contribution through streamlining distribution to the local economy such as shown in the economic indicators of Haiphong city is confirmed. The construction works of the Project has not brought any negative impact on the marine environment and there is no particular problem in land acquisition, either.

In light of the above, the Project has largely achieved its objectives; therefore its effectiveness and impact are high.

[25] Maintenance dredging is dredging done to maintain current conditions.

[26] By using Trailing Suction Hopper Dredger (TSHD), a special ship for dredging work, dredged sediment is collected through a special pipe and then kept in a specific part of the ship. Then the sediment in the ship is carried to a designated dumping spot, which prevents the sediment moving into the river.

3.4 Efficiency (Rating: ②)

3.4.1 Project Outputs

The Table 4 below shows planned and actual Project outputs. Parts of the scope of Project outputs were changed as shown below. However, as the changes contributed to Project objectives, these addition and deletion were appropriate.

The Special Yen (ODA) Loan System was applied to the Project, and a satisfaction survey was conducted on the system. The executing agency gave high marks for the technical capabilities of contractors, the quality of management and constructions, the quality of transfer of technology from contractors to subcontractors and on all other counts. Regarding preliminary qualification screening (P/Q) and bidding, the agency replied that the number of bidders and their bids were about the same as cases of ordinary bidding.

Table 4: Planned and Actual Outputs

<table>
<tr><th>Planned</th><th>Actual</th><th>Reasons for disparity</th></tr>
<tr><td>1. Civil engineering work</td><td></td><td></td></tr>
<tr><td>(1) Container terminal: Adding two berths to piers, building embankments, reclamation, improving soil, paving, drainage, dredging turning basins, installing fenders, installing fences, installing power supply/water supply facilities</td><td>(1) Container terminal: as planned</td><td></td></tr>
<tr><td>(2) Channel improvement: Dredging channel (5.5 meters deep in rivers; 5.7 meters deep in the ocean), building training walls, reinforcing embankments</td><td>(2) Channel improvement: Dredging channel (7.0 meters deep in rivers, 7.2 meters deep in the ocean), building training walls, reinforcing embankments
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<tr><td>(2) Dredger procurement: Grab dredgers</td><td>(2) Dredger procurement: deleted</td><td>The Vietnam Maritime Administration (VINAMARINE) was originally supposed to dredge channel, and procuring equipment to dredge berths was deemed unnecessary during the detailed design survey.</td></tr>
<tr><td>3. Consulting services
Support for bidding, work supervision and harbor administration seminars
Planned MM is as follows:
Non-Vietnamese consultants: 162
Vietnamese consultants: 234</td><td colspan="2">3. Consulting services
The aforementioned work was completed as planned. The increase in the number of Vietnamese consultants in the actual MM is a reflection of the extended work schedule.
Non-Vietnamese consultants: 158
Vietnamese consultants: 286
As described below, lecturers from the Japanese side (Project consultants) conducted harbor administration seminars to the executing agency personnel invited to Japan. Personnel who participated in the training felt that it was beneficial to learn about facility maintenance and CTMS operation methods for Vietnam.
<table>
<tr><th>Training Process</th><th>Participants</th><th>Time Period (days)</th></tr>
<tr><td>Container handling machinery O&M</td><td>6</td><td>21</td></tr>
<tr><td>Civil engineering work practices and maintenance</td><td>3</td><td>21</td></tr>
<tr><td>Container terminal operation</td><td>6</td><td>26</td></tr>
<tr><td>Harbor administration training</td><td>8</td><td>10</td></tr>
</table></td></tr>
</table>

Source: Haiphong Port Holding Limited Liability Co.

3.4.2 Project Inputs

3.4.2.1 Project Cost

The planned Project cost was JPY 9.978 billion in foreign currency and JPY 6.342 billion in domestic currency for a total of JPY 16.32 billion.[27] The actual Project cost was JPY 9.745 billion in foreign currency and JPY 2.84 billion in domestic currency for a total of JPY 12.585 billion.

Table 5: Project Cost Table

(Unit: 1 million yen)

Item	Planned*1			Actual*2		
	Foreign currency	Domestic currency	Total	Foreign currency	Domestic currency	Total
Civil engineering work	3,633	2,575	6,208	5,634	2,090	7,724
Cargo handling machinery/dredgers	4,105	0	4,105	3,137	0	3,137
Consulting services	605	263	868	598	98	696
Auditing	13	3	16	3	0	3
Price escalation	525	192	718	-	-	-
Physical Contingency	826	277	1,103	-	-	-
Interest during construction	270	0	270	363	0	363
Land acquisition cost	0	1,600	1,600	0	323	323
Administrative costs	0	521	521	10	324	334
Taxes/Customs	0	911	911	0	6	6
Total	9,978	6,342	16,320	9,745	2,840	12,585

Source: Haiphong Port Holding Limited Liability Co.
Notes:
*1: Costs calculated in March 1999
Exchange rate: JPY 1 = VND 100
Price escalation: Foreign currency: 2.0%; domestic currency: 2.2%
Physical Contingency: 10.0%
*2: Exchange rate: JPY 1 = VND 146.26
(Simple average yearly rate during loan period)

Overall, the Project cost was within the planned budget (77%).

The portion of the total Project cost in Vietnamese dong was about 10% over budget, but the Japanese yen appreciated 46% and reduced the Project cost in yen. The Project cost increase in dong was mostly due to an increase in the cost of civil engineering work, because the scope expanded and the construction schedule lasted longer than initially planned.

3.4.2.2 Project Period

The planned project period is from August 1999 to January 2004 (=54 months)[28], while the actual project period is from March 2000 to March 2011 (=133 months)[29].

[27] The cost for consulting services only includes the money required for support of bidding, work supervision and harbor administration seminars and does not include expenses for detailed designs, which was already agreed to be paid from the remaining balance of the yen loan of Phase I.
[28] The appraisal document estimated the implementation period of 4 years and 5 months from L/A signing date (August 1999) to construction completion date (December 2003) but at the time of L/A the completion date was decided as January 2004.
[29] Actual L/A signing date was March 2000 and the construction completion date was March 2011.

Thus the Project period was extended 79 months. Below is detailed information about Project period activities (the total is more than 79 months because of overlapping delays).

Table 6: Activity Delays and Reasons

Item	Delay	Reason for Delay
1. Hiring consultants	–5 months*1	
2. Detailed design study	10 months	Initial plans did not specifically include the study period.
3. Consulting services	71 months	Work schedule was extended with discontinuation period*2.
4. Bidding for construction work	7 months	It took time for JICA and the agency supervising the executing agency to approve the bid evaluation.
5. Construction period	46 months	・The geography of the Bach Dang River changed after the detailed design was completed, so the Bach Dang embankment design was revised, resulting in additional work. After berth work was completed, this additional work lasted from July 2008 until September 2009. ・Channel needed to be made deeper to correspond to an unexpected increase in cargo volume. This meant that canal embankments needed to be raised to protect against high waves. After berth work was completed, this additional work lasted from November 2009 until March 2011.
6. Bidding for machinery	None	
7. Installing machinery	–2 months*1	

Source: Haiphong Port Holding Limited Liability Co.

Note:

*1. Progressed faster than planned

*2. Discontinuation period is between the end of originally planned construction and the beginning of additional works (August 2007 – May 2008).

A simple comparison of planned and actual Project periods shows that Project work lasted 146% longer than planned. This includes embankment work that was not planned initially, so the Project period actually lasted 87 months when considering the amount of time it took to complete container berths, the essential aim of the Project. If that is the case, Project work lasted 61% longer than planned. Either way, the Project lasted far longer than planned.

3.4.3 Results of Calculations of Internal Rates of Return (IRR) (Reference Value)

The table below shows the planned and actual financial internal rate of return (FIRR) and the economic internal rate of return (EIRR).

Table7: Internal Rates of Return

Planned*1	Results*2
FIRR: 2.6% Costs: investment, expenses, replacement investment Benefits: income from harbor fees	FIRR: 5.4% Costs: investment, expenses Benefits: income from harbor fees
EIRR: 13.3% Costs: Construction, administrative cost, maintenance dredging, replacement investment Benefits: Reduced waiting time, reduction of unloading cost because of berthing of larger ships, reduced ship-service time through reduced cargo handling time	EIRR: 11.2% Costs: Construction, administrative cost, maintenance dredging Benefits: Reduced waiting time, reduction of unloading cost because of berthing of larger ships, reduced ship-service time through reduced cargo handling time

Note:
*1.Source: Haiphong Port Emergency Improvement Plan Study conducted in 1993
*2. Source: Re-calculation by the External Evaluator

During this ex-post evaluation, the figures from the Results column above were calculated by replacing planned values for each item used during the appraisal with actual values.[30] Actual FIRR is higher than planned FIRR because the actual cargo volume at Chua Ve Port was greater than expected. However, actual EIRR is slightly lower than planned EIRR because maintenance dredging costs far exceeded initial expectations.

In light of the above, although the Project cost was within the plan, the Project period was significantly exceeded; therefore efficiency of the Project is fair.

3.5 Sustainability (Rating: ③)

3.5.1 Institutional Aspects of Operation and Maintenance

As initially planned, Haiphong Port company handles harbor administration and VNMS under the Vietnam Maritime Administration performs maintenance dredging of channel.

(1) Harbor Administration

Haiphong Port company operates under state-run VINALINES (Vietnam National Shipping Lines), and Chua Ve Port, the target of the Project, is one of three ports it owns and operates. Chua Ve Port (the port itself is a subsidiary of Haiphong Port company) has 842 employees.

The Operations Department and the Engineering Department in the harbor (management-level) and the Work Team in the field (field-level) administer harbor operations. Organizations at each facility are arranged vertically. The Operations Department is mainly in charge of berths and container yards, creating various types of plans and conducting on-site monitoring, while the Work Team actually handles the cargo. The Engineering Department is mainly in charge of machinery, creating various types of plans and conducting on-site monitoring, while the Work Team operates cranes and forklifts.

The Civil Engineering Technology and Engineering Divisions at Haiphong Port company

[30] Details on how replacement investment was calculated prior to the Project are unclear, so replacement investment is not included in calculations for the Results column. The effect is likely minor.

headquarters are in charge of maintaining harbor facilities. The Civil Engineering Technology Division performs regular and emergency maintenance of berths and container yards. The Engineering Division performs regular and emergency maintenance of cargo handling machinery. The on-site Work Team also maintains cargo handling machinery on a daily basis.

Haiphong Port company has indicated that both its operations and maintenance sections have enough personnel and that turnover is low.

(2) Maintenance Dredging

Haiphong Port company dredges berths and VNMS dredges channel as follows.[31] VNMS is a government-linked company that employs a total of 1,200 people, and 15 of them are involved in dredging. Specialists (prominent Vietnamese companies specializing in dredging) perform the actual dredging. The Haiphong Port area is dredged once per year for three to five months (about 1 million m^3 of sand is dredged) at a cost of around USD 15 million. Channel depth is confirmed by an echo-sounder. VNMS receives approval from the local people's committee every time it dredges. Twenty percent of dredged sand is used for reclamation, while the remaining 80 percent is dumped offshore.

Employees with expert knowledge and experience administer harbor operations, there are enough employees to do the work, and turnover is low. Specialists are periodically subcontracted to perform maintenance dredging to provide the required depth in ocean areas. Therefore, in terms of institutional aspects, sustainability is high.

3.5.2 Technical Aspects of Operation and Maintenance

(1) Harbor Administration

Senior personnel of the aforementioned organizations in both the operations and maintenance sections hold degrees related to the harbor sector and have at least 10 years of work experience.

Work in the operations sections is done according to ISO standards specific for the harbor sector, and there are no particular technical issues in the field. A CTMS has been introduced, and it is used to manage container yards, ship entry and departure and harbor gates in the course of harbor administration. In the training of the staff of the executing agency in Japan basic training about CTMS was conducted and at the time of installment of equipment the suppliers conducted training on the details of operation and maintenance.

In the maintenance sections, berth work is done according to Vietnam Maritime Association standards, and work on cargo handling machinery is done according to manufacturer manuals and relevant Vietnamese standards. There are no particular technical issues in the field.

[31] Haiphong Port company dredges once per year and collects 80,000 m^3 of sand per dredging. Dredged sand is dumped in the South Dien Vu Region and was not reused.

(2) Maintenance Dredging

There are no particular issues because, as explained above, prominent Vietnamese companies specializing in dredging are subcontracted to dredge channel.

As explained above, personnel with expert knowledge and experience administer and maintain the harbor according to national standards and manuals, so there are no particular technical issues. Actually, companies that use Chua Ve Port hold its cargo handling services in high regard. The technical sustainability of the Project is high.

3.5.3 Financial Aspects of Operation and Maintenance

(1) Harbor Administration

The Table 8 below shows trends for Chua Ve Port operating revenue and operation and maintenance costs.

Table 8: Chua Ve Port Operating Revenue and Operation and Maintenance Costs

(Unit: VND 1 million)

Fiscal Years	Operating revenue	Operation and maintenance cost
2007	348,395	255,390
2008	248,952	246,229
2009	445,090	402,469
2010	529,531	435,705
2011	486,535	448,568

Source: Haiphong Port Holding Limited Liability Co.

In the F/S conducted before the Project, annual operating and maintenance costs were expected to account for about 10% of the total Project cost, but 2011 operating and maintenance costs accounted for over 20% of the total Project cost, which seems to be reasonable expenditure[32]. The port's operating revenue is once transferred to the Haiphong Port company and then O&M budget is re-distributed to the port. Interviews to the O&M staff revealed that the O&M cost above was enough to operate and maintain Chua Ve Port.

The Table 9 below shows the financial status of Haiphong Port company. Revenues and profits are both increasing consistently.

Table 9: Haiphong Port Company Financial Status

(Unit: VND 1 million)

Fiscal Years	Total revenue	Net profit
2009	940,709	46,438
2010	1,057,979	49,802
2011	1,202,356	62,260
2012	1,372,573	105,161

Source: Haiphong Port Holding Limited Liability Co.

[32] This is the maintenance cost of five berths, including the two built in the Project. This is probably why the percentage is so high.

As far as the current operational status of Haiphong Port shows, Haiphong Port company will probably have consistent revenue, and it is highly likely that it will continue to be able to secure operation and maintenance costs.

(2) Maintenance Dredging

As shown in the Table 10 below, VNMS has consistently listed profits for the past three years and should have no particular problem sustaining dredging work in the future.

Table 10: VNMS Financial Status

(Unit: VND 1 billion)

Fiscal Years	Total Sales	Total Expenditures	Profit After Taxes
2009	250.8	222.3	28.2
2010	413.6	341.7	71.3
2011	367.1	324.2	32.2

Source: VNMS

As shown above, a budget for proper operation and maintenance of the harbor has been secured, and future prospects are high. Financially speaking, the Project is highly sustainable.

3.5.4 Current Status of Operation and Maintenance

According to the executing agency, all main facilities and machinery such as container berths, container yards, navigation support equipment and cargo handling machinery (four quayside cranes and eight rubber-tyred gantry cranes), CTMS and so on are operating smoothly. The External Evaluator also conducted an on-site survey that confirmed that these facilities are in good condition. There has also been no problem in obtaining spare parts.

In light of the above, no major problems have been observed in the institutional, technical or financial aspects of Project maintenance; therefore sustainability of the Project's effects is high.

4. Conclusion, Lessons Learned and Recommendations

4.1 Conclusion

The Project has been highly consistent with the Vietnamese government's development plan, development needs and Japan's ODA policy; therefore its relevance is high. The container cargo handled at the Project's target port, Chua Ve had been increasing consistently and it has increased dramatically since berth construction was completed in 2007. In addition, Haiphong City's economic indicators related to distribution enjoyed robust growth in the years around berth completion, hence the Project's effectiveness and impact reached initially planned levels. Although the Project's cost was within budget, the Project period was exceeded significantly; therefore efficiency of the Project is fair. No major problems have been observed in the institutional, technical or financial aspects of maintaining the Project; therefore sustainability of the Project effect is high.

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

4.2 Recommendations

4.2.1 Recommendations to the Executing Agency

Many people related to the harbor have pointed out that the increase in the volume of cargo handled at Haiphong Port, to which the Project has contributed, has caused a rapid increase in traffic around the harbor. This is estimated to be associated with road congestion and the deterioration of parts of National Highway 5 between Hanoi and Haiphong. The Project did not cause these problems directly. As there are many external factors such as increase of berths in Haiphong, improvement of road by other projects and local increase of industrial production which may increase cargos, the degree of impact of this project is not easy to identify, either. Therefore, it is desirable for the Ministry of Transport, which is the responsible agency for road as well as the executing agency of the Project, to consider countermeasures such as expanding lanes and maintaining roads.

4.2.2 Recommendations to JICA

None.

4.3 Lessons Learned

As shown in the Effectiveness section, the Project delivered better effects than initially planned. One critical factor behind these effects is the good condition of the Vietnamese macroeconomy. During the appraisal in March 1999, cargo demand was estimated based on economic predictions that factored in the effects of the currency crisis, but the actual GDP growth rate far exceeded those predictions. Investment and further establishment of industrial zones along the national highway between Hanoi and Haiphong and within Haiphong City limits likely had a major effect on this development. Analysis at the time of the appraisal did not necessarily touch on such local economic trends. However, in planning the harbor's operation it is important to consider the actual demand for goods distribution in the local economy at micro level, in addition to understanding GDP and other national level economic trends.

Major Plans / Results Comparison

Item	Planned	Actual
(1) Project outputs		
1. Civil engineering work		
1) Container terminal	Adding two berths to piers, building embankments, reclamation, improving soil, paving, drainage, dredging turning basins, installing fenders, installing fences, installing power supply/water supply facilities	As planned
2) Channel improvement	Dredging channel (5.5 meters deep in rivers; 5.7 meters deep in the ocean), building training walls, reinforcing embankments	Dredging channel (7.0 meters deep in rivers, 7.2 meters deep in the ocean), building training walls, reinforcing embankments The design of the Bach Dang embankments was revised because the geography of the Bach Dang River changed after detailed designs were made.
3) Navigation support equipment installation	Installing buoys, beacons and other navigation support equipment to indicate the locations of shipping lane	As planned
4) Power line relocation	Relocating and upgrading existing power lines (35kV) to Ha Nam Island due to channel dredging	As planned
2. Equipment, etc.		
1) Cargo handling machinery procurement	Container gantry cranes, straddle carriers, trailers, etc.	Quayside cranes (4), rubber-tyred gantry cranes (8), container terminal management system (CTMS)
2) Dredger procurement	Grab dredgers	Deleted
3. Consulting services	Support for bidding, work supervision and harbor administration seminars	As planned
(2) Period	August 1999 -January 2004 (54 months)	March 2000–March 2011 (133 months)
(3) Project cost Foreign currency Domestic currency Total Japanese ODA loan portion Exchange rate	 9,978 million yen 6,342 million yen (VND 634.2 billion) 16,320 million yen 13,287 million yen VND 1 = JPY 0.01 (as of March 1999)	 9,745 million yen 2,840 million yen (VND 415.4 billion) 12,585 million yen 12,004 million yen VND 1 = JPY 0.0068 (2000–2010 average)

Republic of Indonesia

Ex-Post Evaluation of Japanese ODA Loan Project

"Surabaya Airport Construction Project (I) (II)"

External Evaluator: Ryujiro Sasao, IC Net Limited

0. Summary

This project aims to meet the increasing demand for air transport and improve the safety of air transport by constructing and improving airport facilities and equipment including the passenger terminal building and the control tower at the Surabaya Airport in East Java of Indonesia, in line with the forecast of increasing airport use induced by the economic growth in East Java.

The project has been highly relevant to Indonesia's development plan, development needs, as well as Japan's ODA policy; therefore its relevance is high. There are six items of target indicators which were set at the ex-ante evaluation to be met seven years after the project completion. In three out of the six target indicators (domestic passengers, domestic cargo volume, and domestic aircraft movement) actual figures of five years after substantial completion of the project have already exceeded the targets[1]. Therefore the effectiveness of the project is high. In the impact aspect, it has been observed that the project has led to the increase of tourists in the area near the airport. Although the project cost was within the plan, the project period was exceeded, therefore the efficiency of the project is fair. The sustainability of the project effect is high, because no major problems have been observed in institutional, technical and financial aspects.

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

1. Project Description

Project Location

Entrance to the Surabaya Airport

1.1 Background[2]

Indonesia is the world's largest archipelagic country that consists of nearly 17,000 islands in a vast

[1] In the project civil works of additional scope was completed in April 2010. But the substantial completion date is May 2006 and the new airport has started operation in 2006.

[2] Sources of the data in 1.1 are the appraisal documents.

area with a distance of 1,888 km from north to south and 5,110km from east to west. For economic development of the country that encompasses such a wide area, it is a critical issue to strengthen and facilitate the capacity to transport. Indonesia has about 300 privately-owned airports. Among those airports, about 160 are designated as domestic airports and 23 as international ones. Centered at the Jakarta International Airport in the country's capital, Bali Ngurah Rai International Airport (also known as Denpasar International Airport), and Surabaya Juanda International Airport (hereinafter the "Surabaya Airport"), about 200 regular domestic and international flights connect those airports.

Air transport in Indonesia has grown significantly along with the country's economic development in the 1990s. In the last 20 years, the average annual growth rate of the country's passenger transport by air has been 18.7%, and that of cargo transport by air 33.4%, respectively. In 1998, both passenger transport and cargo transport by air decreased significantly because of the Asian currency crisis. It is worth noting that the volume of domestic passenger transport by air in 1998 was less than 60% of that of 1997. However, both passenger transport and cargo transport by air have increased since 2000 because of the recovered demand for air transport. The Surabaya Airport, opened in 1964, has been an international airport with the rank of Class 1 since 1989[3]. It is the third largest airport in Indonesia after the ones in Jakarta and Bali.

1.2 Project Outline

The objective of this project is to meet the increasing demand of air transport and improve the safety of air transport by constructing and improving airport facilities and equipment including the passenger terminal building and the control tower at the Surabaya Airport located in East Java of Indonesia, thereby contributing to economic development of the hinterland and increase of distribution.

Phase	1	2
Loan Approved Amount/ Disbursed Amount	12,867 million yen / 12,866 million yen	15,007 million yen / 14,542 million yen
Exchange of Notes Date/ Loan Agreement Signing Date	December 1996 / December 1996	August 2003 / March 2004
Terms and Conditions	(Civil works) Interest Rate: 2.7% Repayment Period: 30 years (Grace Period: 10 years) Conditions for Procurement: General untied (Consulting services) Interest Rate: 2.3% Repayment Period: 30 years (Grace Period: 10 years) Conditions for Procurement: General untied	(Civil works) Interest Rate: 1.8% Repayment Period: 30 years (Grace Period: 10 years) Conditions for Procurement: General untied (Consulting services) Interest Rate: 1.8% Repayment Period: 30 years (Grace Period: 10 years) Conditions for Procurement: General untied

[3] The airport classes are as follows: Class 1: International (major) airport; Class 2: Domestic trunk route airport; and Class 3: Domestic feeder airport.

Borrower / Executing Agency(ies)	Republic of Indonesia / Directorate General of Civil Aviation (DGCA), Ministry of Transportation	Republic of Indonesia / Directorate General of Civil Aviation (DGCA), Ministry of Transportation
Final Disbursement Date	December 2005	September 2010
Main Contractor (Over 1 billion yen)	PT. Waskita Karya (Indonesia)/PT. Teguh Raksa Jaya (Indonesia)/Kajima corporation (Japan)/Mitsubishi corporation (Japan) (JV), PT. Adhi Karya (Indonesia)	
Main Consultant (Over 100 million yen)	LAPI ITB (Indonesia)/Japan Airport Consultants, Inc. (Japan) (JV), PT. Digratia Avia Consultant (Indonesia)/PT. Billitonica Indomatra Consultant (Indonesia)/PT. Trans Asia Consultant (Indonesia)（JV）	
Feasibility Studies, etc.	-E/S (Engineering Service) conducted by JICA, 1992, -I/P (Implementation Program) formulated by DGCA based on the E/S, 1995, -D/D (Detailed Design) of the extension of apron conducted by East Java state government by using a consultant, 2008	
Related Projects	Yen loan: E/S conducted by JICA in 1992 Grant aid: "the Project for Airport Security System Improvement" implemented by JICA based on G/A (Grant Agreement) in November 2010	

2. Outline of the Evaluation Study

2.1 External Evaluator

Ryujiro Sasao (IC Net Limited)

2.2 Duration of Evaluation Study

Duration of the Study: September 2012 – July 2013

Duration of the Field Study: December 8–22, 2012, and February 24 – March 5, 2013

3. Results of the Evaluation (Overall Rating: A[4])

3.1 Relevance (Rating: ③[5])

3.1.1 Relevance to the Development Plan of Indonesia

The Government of Indonesia has proceeded with the plans for establishing economic infrastructure to help increase the transport capacity since the first national development five-year plan of 1968. In particular, the government regarded the air transport connecting islands rapidly and efficiently as an important development sector from the point of view of the country's geographical features.

At the time of the appraisal, the national development plan (PROPENAS 2000-2004) emphasized the improvement of traffic infrastructure as an economic basis and, in particular, put emphasis on the necessity of repairing the existing facilities in the airport sector.

At the time of the ex-post evaluation, the national development plan (2010-2014) aims to develop the economy in five years, improve the quality and quantity in the fields of road, railroad, port, airport,

[4] A: Highly satisfactory; B: Satisfactory; C: Partially satisfactory; D: Unsatisfactory

[5] ③: High; ② Fair; ① Low

electricity, irrigation, drinking water and postal service by continuous development of infrastructure. In addition, according to the "Master Plan – Acceleration and Expansion of Indonesia's Economic Development 2011–2025" (MP3EI), which was issued in May 2011, the connection among regions is important as the precondition to realize the plan. Accordingly, the significance of the airport sector, which is an important factor in the transport system, is strong. The plan also refers to the acceleration of international distribution. The Surabaya Airport is important in that sense as well.

The improvement of the airport by the project is in line with Indonesia's development policies both at the appraisal, hence, the ex-post evaluation and the project is highly consistent with the development policies. Moreover, no change of the external environment has affected the original relevance of the project up to the point of ex-post evaluation.

3.1.2 Relevance to the Development Needs of Indonesia

At the time of the appraisal, the total number of passengers was 2.6 million, and the total weight of handled cargoes at the airport reached 28,000 tons[6]. Surabaya was the center of East Java and the use of the airport was expected to rapidly increase in accordance with the region's economic growth. Under such circumstances, it was necessary to expand the airport to meet the future increase of demand, as the lack of expansion would have become the constraint for responding the demand.

According to the recent statistics, as shown in the section on "Effectiveness" below, the number of passengers reached 13.78 million in 2011. This figure is far beyond the forecast of the second appraisal (6.78 million for the year 2013) in 2004. Accordingly, the expected needs at the time of the appraisal were confirmed retroactively by statistics. The decree of the Minister of Transport in 2012 designated the Surabaya Airport as the first category of hub airport[7] and gave the airport the central role in the development of East Java.

In the light of the above, development needs expected at the time of the appraisal was confirmed retroactively by statistics and the position of the airport in the transport and airport sector is important. Accordingly, the development needs were very strong.

3.1.3 Relevance to Japan's ODA Policy

With regard to the first appraisal, this project seems to be related to "Well-balanced development of the entire nation with secured equity" and "Improvement of industrial basis for the purpose of continuous invitation of investment" mentioned as two out of five priority items in the Country Assistance Policy for Indonesia issued in February 1994. With regard to the second appraisal, in the Medium-Term Strategy for Overseas Economic Cooperation Operations (April 2002) concerning the support to Indonesia, the emphasis was on "economic infrastructure" which was necessary for the return to the path of sustainable growth through economic reform. This project was in line with the

[6] Figures are at the time of first appraisal. At the time of second appraisal all the passengers are 4.75 million and handled cargos are 43,089 ton. Therefore, with the forecast of air transport demand increase, it was necessary to expand the airport facilities and to be ready for the future demand

[7] There are 3 categories of hub airport. The definition of the first category is the airport whose passenger volume is more than five million passengers a year.

policy. Furthermore, the Country Assistance Strategy for Indonesia (October 2003) stated "Formulation of an environment for growth led by the private sector's investment" as one of the priority issues and the project was in conformity with the policy as well.

As shown above, the project is in line with the Japanese government policies both at the first and second appraisal.

In light of the above, this project has been highly relevant with Indonesia's development plan, development needs, as well as Japan's ODA policy; therefore its relevance is high.

3.2 Effectiveness[8] (Rating: ③)

3.2.1 Quantitative Effects (Operation and Effect Indicators)

The planned targets set at the time of the second ex-ante evaluation and the results are shown below in the Table 1. At the time of ex-post evaluation[9] in three out of the six target indicators (domestic passengers, domestic cargo volume, and domestic aircraft movement) actual figures have already exceeded the target which were set at the ex-ante evaluation to be met seven years after the project completion. In addition, the average degree of achievement of targets of the six items is 115%, indicating high effectiveness.

Table 1: Operation and Effect Indicators

Indicators	Baseline (2001)	Target (7 years after the completion of the project: 2013)	Results (5 years after the completion of the project*: 2011)
Number of international passengers (thousand/year)	618	1,630	1,409
Number of domestic passengers (thousand/year)	2,443	5,152	11,583
International cargo volume (t/year)	14,240	50,284	17,890
Domestic cargo volume (t/year)	23,527	54,098	77,255
Number of takeoffs and landings of international flights per year	6,426	15,215	10,145
Number of takeoffs and landings of domestic flights per year	47,677	76,152	100,514

Source: Baseline data and targets from the ex-ante evaluation table, results from AP1 (airport operation company)
*5 years after the substantial project completion in 2006

The strong macro economy is the main background of the outcome above. The GDP and GRDP figures were mainly utilized to set the target indicators. Both the GDP and GRDP figures for the early 2000s forecasted at the time of the appraisal were both 4.5%. However, as shown in the following table, the actual figures of both real GDP and GRDP clearly exceed the forecast. (The figures for 2010 and 2011 are forecast ones.)

[8] Sub-rating for Effectiveness is to be put with consideration of Impact.
[9] Five years have passed since the substantial project completion in 2006.

Table 2: Real GDP and GRDP

Unit: %

Year	2005	2006	2007	2008	2009	2010	2011
GDP (Indonesia)	5.6	5.5	6.3	6.1	4.5	5.8	6.3
GRDP (East Java)	5.6	5.8	6.1	5.9	5.0	6.1	6.5

Source: Regional Economic Indicators-Bappeko Surabaya, 2011

The indicators of Table 1, which are below the target, reveal that the growth of international cargo volume is particularly slow. With regard to the forecast on cargo volume, a higher GRDP elasticity of demand[10] was applied to international cargo than domestic cargo. In fact, while the growth of GRDP between 2004 and 2011 (based on year 2000 price) is 1.51 times, the growth of the export component is 1.82 times, which means the increasing share of export in GRDP. The monetary value of export from the ports in East Java became three times between 2004 and 2011 and it is estimated that marine transport played a big role in the increasing export[11]. Consequently, with regard to the roles expected of Surabaya airport, the airport's contribution in domestic transport has increased, while other logistics measures are more influential in international transport.

The content of international cargo is as follows[12]. The major import items are mechanical and electrical parts, footwear, postal items and documents. The major export items are marine products[13].

3.2.2 Qualitative Effects

(1) Safety

The operation and management of the Surabaya Airport meets the safety standards of the International Civil Aviation Organization (ICAO). According to the airport operation company, the installed systems such as the new control tower, the upgraded airfield lighting system, and the meteorological observation system contribute to aviation safety. Research during the ex-post evaluation has revealed that[14], although the Surabaya Airport has had no serious accident in the last 10 years, an accident involving abnormal landing occurred in 2007[15].

(2) Airport services

During the site research in the ex-post evaluation, the External Evaluator was unable to obtain the statistics or information on the punctuality of departures and arrivals. (In interviews, randomly selected 10 passengers unanimously stated that the punctuality depends on airlines rather than airports.) The same interviewees also stated that the Surabaya Airport is as good as other big airports in terms of space of terminal, layout of facilities (access), distance to move, and time necessary for check-in. Many of them also state that the quality of services has improved since the time prior to the

[10] GRDP elasticity of demand was calculated based on the past data.
[11] The source of those data is "East Java in Figures" (Statistics of East Java Province). According to the interviewed logistics companies, there is no direct flight from the Surabaya Airport to Japan and some products are exported to Japan through Jakarta. This is another reason why international cargo has not grown much.
[12] Source: Statistics of AP1(2012)
[13] Their share in all export items is about 50% (weight base).
[14] Although we requested AP1 to provide records of past accidents, they were not available.
[15] An aircraft (Boeing 737 type) made a belly landing off the runway with a strong impact owing to the bad weather and insufficient caution of the pilots. Two out of the 148 passengers were slightly injured.

project. Hence, passengers' satisfaction with the convenience of the airport is high. Also in the interview to the staff of airline companies working in the Surayaba airport (4 companies, 5 staff members) they replied that the Surabaya airport is as good as or even better than other big airports in terms of time necessary for check-in and quality and quantity of various facilities.

3.3 Impact

3.3.1 Intended Impacts

The originally expected impact is economic development of the hinterland and increase of distribution. The following is a summary of the information obtained during the ex-post evaluation.

According to officials of the tourism office of Sidoarjo, where the Surabaya Airport is located, the tourism-related income of the city, has increased by 30% since the project, and the number of hotels has increased from 30 to 40 in 2007 after the project.

In the city of Surabaya, the hinterland of the airport, the direct impact of airport improvement seems to have appeared in the increase of tourists and hotels (the city's service and investment promotion section).

Three companies related to the airport including a user company state that their revenues have been increasing in the recent years because of the increase of volume of cargos handled and so on. Accordingly, the project is highly appreciated by them. Two of the companies handle cargos and provide services to passengers under the contract with airlines. The other company is a logistics one. The number of employees of the three companies has increased, indicating a positive impact on employment. Light industry products and marine products are reported to be the major export items.

Table 3 summarizes the economic indicators related to the project. In general, figures have improved after the completion of the project. "Visitors to Sidoarjo city" "Number of foreign tourists to East Java" and "Sales in hotel industry in East Java" are in line with the results of the interviews above.

Table 3: Economic Indicators related to the Project

Year	2005	2006 (Completion of construction*)	2007	2008	2009	2010	2011
Visitors to Sidoarjo city	n.a.	441,989	446,663	453,576	454,770	469,465	n.a.
Employment in Surabaya city	214,322	222,126	227,382	235,812	244,580	n.a.	n.a.
Industrial production of Surabaya (Billion Rp.)	9,699	10,173	10,230	10,321	10,412	n.a.	n.a.
Economic growth of Surabaya (%)	6.33	6.35	6.31	6.23	5.3	6.2. (Forecast)	6.7 (Forecast)
Number of foreign tourists to East Java	86,558	87,568	98,711	156,726	155,156	168,888	185,815
Sales in hotel industry in East Java (Billion Rp.)	2,254	2,363	2,428	2,548	2,712	3,067	3,345 (Interim)
Number of enterprises in manufacturing in East Java	4,715	n.a.	n.a.	6,248	6,183	n.a.	n.a.
Real GDP growth rate of East Java region (%)	5.64	5.8	6.11	5.9	5.01	6.05 (Forecast)	6.51 (Forecast)

Source: Tourism office of Sidoarjo city; Regional Economic Indicators-Bappeko Surabaya, 2011; Book of Surabaya Dalam Angka 2010; East Java in Figures (Statistics of East Java Province, version of 2002, 2006, 2008, 2011, 2012) *The civil works of the original scope were completed in May 2006.

3.3.2 Other Impacts

(1) Impacts on the natural environment

According to the then project manager, environment monitoring was conducted by the executing agency, DGCA based on ANDAL (Report on the environment impact assessment), RKL (Environment management plan), and RPL (Environment monitoring plan), all of which are related to the project and were formulated in 1999[16].

Environment monitoring after the completion of the project is conducted based on the Decree of the Minister of Environment No. 45 Year 2005 concerning the guidelines on the implementation of RKL and RPL. External experts are commissioned to conduct the research by the AP1 Surabaya office and the state of air, water, noise and other factors is monitored every six months and the report is issued.

According to several residents around the airport, noise has worsened since the completion of the project[17], although they recognized the positive economic impact of the project at the macro level. The obtained environment monitoring report (first half of 2012) also states that the figures in several items of air, water and noise exceed the national standards set by the Ministry of Environment. Accordingly, 13 recommendations for improvement were also made in the report. The External Evaluator made inquiries on the current situation of the recommendations and confirmed that corrective actions were already taken on seven items, although there are six remaining items to be tackled[18]. The details of situation are as follows.

[16] The results of environment monitoring have not been confirmed by document, although the External Evaluator requested DGCA and the airport operating company to provide with detailed information.

[17] The interviewees stated that the frequency of roars of planes at the take-off and landing increased in accordance with the increase of flights.

[18] According to the above monitoring report, with regard to the noise issue, the following measures are implemented: determination of the direction of takeoff and landing to avoid the dense populated area, changing the type of aircraft to bigger ones to reduce the number of aircraft movement, tree plantation and so on.

Table 4: Recommendations listed in environment monitoring report (first half of 2012) and the situation of countermeasures

Number	Recommendations	Situation of counter measures (The implemented measures are shown in shadow.)
1	As there are items of air, water and so on, which exceed the national standard set by the Ministry of Environment, technology of low pollutant should be introduced so that emission yielded from electric power plant, incinerator and so on may become below quality standard.	Not implemented yet
2	Conducting periodical maintenance of machines such as power plant and incinerator operating in the airport so that machine emission doesn't exceed quality standard	Implemented by contracting out
3	Introducing traffic arrangement to alleviate traffic jam at airport surrounding area	Not implemented yet
4	Plantation of trees around the area of airport with aim to lessen the impact of air pollution on residents	About 1,600 trees were planted since July 2012.
5	Sorting the type of dry garbage and wet garbage in order to reduce the garbage amount burned in the incinerator and executing 3R principle (Reduce, Reuse and Recycle)	Implemented
6	Management of water capture area to avoid the existence of ponds within the Surabaya airport and to avoid the arrival of wild birds affecting the landing and departure of planes	A study on the causes of ponds was conducted.
7	Improvement of the capacity of water treatment plant (WTP) in accordance with the increase of operation size of the airport	O&M of WTP is contracted out.
8	Improvement of patrol system in the airport site by the improvement of facilities for patrol to reduce the bird strike	Patrols have been carried out but the patrol facility has not been enhanced.
9	Usage of solar cell as backup energy source supplier	Not implemented yet
10	Starting applying of zero emission processes and energy efficiency	Not implemented yet
11	Making sure the use of self protective device (APD) such as ear plugs, gloves and safety shoes by the airport staff to keep their safety	Already equipped
12	Supporting the accurate conduct of emission test by regular sweeping around the tip of chimney of incinerator	Already implemented
13	Conducting measurement of vibration intensity in the surrounding area of the Surabaya airport in the near future	Not implemented yet

(2) Land Acquisition and Resettlement

The necessary resettlement of residents was complete and 367 households (1,064 people) were resettled. The necessary acquisition of 6 ha of land near the entrance of the access road, which had not been done at the time of the appraisal, was completed in June 2006 without resettlement of residents. Civil works of this part of the access road was completed in September 2006[19].

Resettlement conducted before the appraisal was based on the President Decree No.55 of 1993. Interviews with the community leaders of resettled residents such as village chief revealed their complaints about the content of the compensation, although they are satisfied with the negotiation method. They stated that the quality of the provided residence at the resettled place was good but some residents who had been engaged in farming could no longer do so and had to find jobs at places far

[19] Another acquisition of land and related resettlement (289 households, 1,125 people) planned in the master plan were suspended because Japanese and Indonesian governments decided that its need was low.

from their residence (It seems that 10% of the residents are unemployed)[20]. During the resettlement process, however, there was no violence or trouble.

In summary, the positive impact by the project on the companies using the airport is clearly confirmed. The project has led to the increase of tourists in the cities of Sidoarjo and Surabaya. Although it is very difficult to make an exact assessment of the economic impact on the other economic indicators of the region, the collected information as a whole indicates that the project may have had a certain impact on the region. Although there is no serious problem on resettlement and land acquisition, with regard to the natural environment, periodic environment monitoring reported issues to address in air, water and noise. Therefore, continuous actions for improvement are expected.

In light of the above, this project has largely achieved its objectives; therefore its effectiveness is high.

3.4 Efficiency (Rating: ②)

3.4.1 Project Outputs

This project is to construct new airport facilities including passenger terminal, which can accommodate six million passengers and 120,000 tons of cargos, at the opposite side (north side) of the existing airport facilities (south side) with runways in between. The project also conducts the renovation of facilities related to airport safety including Instrument Landing System (ILS). As shown below, most components of the original scope were constructed or installed as planned. Changes of scope of other items from the original plan are logical, as they were based on the actual geographical features and soil quality and the necessity of airport operation.

1) Civil works

Table 5: Plan and Results of Outputs

Major scope	Plan	Results
1. Full parallel taxiway	30m or 23m, 168,000m^2	30m or 23m, 188,000m^2
2. Apron	1,036.5m x 137.0m	1,036.5m x 124.5m
3. Passenger terminal building	Floor area: 52,100m^2	Floor area: 52,100m^2
4. International cargo building	Floor area: 5,590m^2	Floor area: 5,600m^2
5. Domestic cargo building	Floor area: 4,340m^2	Floor area: 4,360m^2
6. Administration/Operation Building/ATC(Air Traffic Control)-Tower	Floor area: 5,160m^2	Floor area: 5,160m^2
7. Other facilities	Airfield Lighting System, Radio Navaids, ATC Facilities, Aeronautical Communication, Meteorological Facilities and so on	Airfield Lighting System, Radio Navaids, ATC Facilities, Aeronautical Communication, Meteorological Facilities and so on (as planned)

Source: DGCA

The table below lists the changes of scope. Most of them are changes of specifications based on

[20] In the project, monetary compensation was made for the assets owned by the residents including farmland. Although no particular program for the improvement of livelihood was implemented, about 100 resettled people are employed at the airport, according to the DGCA.

the site condition.

Table 6: Changes of Scope and Reasons for Change

Changes	Reasons
1. Cancellation of Nondirectional Radio Beacon (NDB) and Terminal Area Surveillance Radar	As the technology related to Radio Navaids has advanced, a new radar system will be installed after the project.
2. Change to Rapid Exit Taxiways (Change of shape of taxiway)	To correspond to the recent rapid increase of flights
3. Addition of slope protection to the river diversion	Required by site condition
4. Revisions to storm water drainage	Required by site condition
5. Modification of horizontal alignment and modification of typical of road	Required by site condition
6. Addition of piping work for Fuel Supply System	Required by site condition
7. To enlarge the bridge and access road of VIP Terminal	Required by site condition

Source: DGCA

The substantial addition of scope is as follows.

Table 7: Added Scope and Reason for Addition

Additional scope	Reason for addition
1. Additional work for connection to the toll road	This work was needed because of the change of the route of connection part (short road), which was caused by the transfer of a collecting point of cargos from the terminal building to another place in order to make the flow of cargos smooth.
2. Expansion of the apron	Expansion was needed because the number of passengers exceeded 6 million, which was the designed capacity for the airport, in 2006, and the space of the apron became insufficient.

Source: DGCA

2) Consulting services

The planned consulting services include support to bidding, construction supervision, and technology transfer. The expected M/M of these consulting services were 514 M/M for international consultants and 1,227 M/M for local consultants.

The consulting services were conducted as planned. (There is no change of the content of services and M/M.) In addition, at the beginning of the second phase, it was confirmed that the operation of airport satisfied the national environment standard and the consulting services on environment monitoring were added to formulate necessary measures, and implemented as planned.

The performance of the consultants was highly appreciated by the implementing agency.

3.4.2 Project Inputs

3.4.2.1 Project Cost

Table 8 summarizes the planned cost of both the first and second phases (based on the appraisal documents) and the actual costs (from Project Completion Report: PCR). "Additional works" in the actual include two big additional scopes, additional work for connection to the toll road and expansion of the apron. The total cost of the project is 33.061 billion yen. This is 78% of the plan made in the first phase and the actual cost was less than planned.

The above figure, however, includes the additional scope such as additional civil works and additional consulting services and the actual cost corresponding to the original scope is 32.224 billion yen. The figure is 76% of the plan made in the first phase.

Table 8: Project Cost Table

Unit: million yen

Items	Foreign currency			Domestic currency			Total		
	Planned (1st phase)	Planned (2nd phase)	Actual	Planned (1st phase)	Planned (2nd phase)	Actual	Planned (1st phase)	Planned (2nd phase)	Actual
Construction works	14,367	22,970	22,261	19,651	3,050	3,138	34,018	26,020	25,399
Additional construction	n.a.	n.a.	0	n.a.	n.a.	807	n.a.	n.a.	807
Consulting services	2,554	2,143	1,982	380	383	292	2,934	2,526*1	2,274
Additional Consulting services (environmental assessment)	n.a.	n.a.	11	n.a.	n.a.	18	n.a.		29
Contingency	719	1,148	247	981	154	0	1,700	1,302	247
Land acquisition	0	0	0	0	297	1,364	0	297	1,364
Administration cost	0	0	0	0	26	121	0	26	121
Tax	0	0	0	3,866	2,985	2,820	3,866	2,985	2,820
Total	17,640	26,261	24,501	24,878	6,895	8,559	42,518	33,156	33,061

Source: DGCA

*1 This figure includes the cost of the additional consulting services.

Other notes:
(Planned: first phase)
Applied foreign exchange rate: 0.046 Yen/Indonesian Rupiah; price escalation: 2.0% (For both domestic and foreign currencies); physical contingency rate: 5%
Calculation time: April 1996
(Planned: second phase)
Applied foreign exchange rate: 0.013 Yen/Indonesian Rupiah; price escalation: 0%; physical contingency rate: 5%
Calculation time: November 2002
(Actual)
Applied foreign exchange rate: 0.012 Yen/Indonesian Rupiah (Based on the weighted average)

Here are the major reasons why the actual costs were lower than planned ones.

- Commodity prices in Indonesia had significantly increased by 2004 when the substantial

expenditure of construction cost started. In particular, the prices of materials and labor cost of construction works soared. According to the External Evaluator's calculation, the prices of these items in Rupiah are two to three times the original plan. According to the IMF statistics, the level of commodity prices in the country increased by 134 % from 1996 to 2001.

- During this period, however, the Japanese yen appreciated by 200–300% from the time of the appraisal, and the cost measured in the Japanese yen was reduced, offsetting the increase of the cost in Rupiah.

3.4.2.2 Project Period

Based on the appraisal document of the first phase, assuming the starting date of the project is the L/A contract date and the completion date is the end of the construction (without maintenance period), the planned project period is 77 months between November 1996 and March 2003.

When the same rule is applied, the actual project period is 114 months between December 1996 and May 2006. Then the project period is longer than planned and the rate of the actual period to the planned one is 148%.

If the period of additional civil works is included, however, the project period is extended to April 2010 and the rate of the actual period to the planned one becomes 209%.

In comparing the actual and planned project period without the additional civil works, the delay period is 37 months. The detailed components of the delay are shown below. (Because of the overlapping in the delay periods, the total becomes more than 37 months if all the delay periods are simply added up.)

Table 9: Situation of Delay

Activity items	Delay
1. Employment of consultants	6 months
2. Consulting services	
2-1. Support for bidding	35 months
2-2. Supervision of civil works	No delay
2-3. Supervision of maintenance	1 month
3. Bidding of civil works	40 months
4. Construction period	No delay

Source: DGCA

The main reason for the prolonged project period is that it took considerable time before the bidding results were finalized because of the audit procedure of Indonesia's National Board of Audit (BPKP)[21]. When the situation above is compared with the ex-post evaluation of "the New Padang Airport Construction Project", another airport project in Indonesia, the project period of the latter was

[21] According to JICA's internal documents, after the bidding, BPKP conducted audit and consequently it made a decision not to approve the initial bidding results (BPKP disqualified an applicant who had a minor defect in the procurement procedure). Because of such decision, a series of discussion were held including even the Minister of Transportation and it took considerable time to reach the final conclusion. It seems that general election in Indonesia also prolonged the settlement of the issue.

extended as well and the delay factors also include the longer bidding process influenced by the audit by BPKP. BPKP's audit itself is important, as it is the process to confirm whether the procurement was conducted appropriately by a third party. Therefore, the extension of the project period was inevitable to a certain degree. The actual delay period was, however, as long as three years and it caused the delay in both the completion of the project and the appearance of the effect of the project.

3.4.3 Results of Calculations of Internal Rates of Return (IRR)

Below is the comparison between the planned and actual Financial Internal Rate of Return (FIRR) and Economic Internal Rate of Return (EIRR).

Table 10: Internal Rates of Return

Plan	Actual
FIRR: 2.1% Cost: Construction cost, cost of operation and maintenance Benefit: Both air transport related revenue and non-air transport related revenue	FIRR: Negative Cost: Construction cost, cost of operation and maintenance Benefit: Both air transport related revenue and non-air transport related revenue
EIRR: 17.4% Cost: Construction cost, cost of operation and maintenance Benefit: Saving of operation cost, reduction of travel time, avoidance of loss of transport/passengers, avoidance of reduction of foreign currency revenue	EIRR: 22.5% Cost: Construction cost, cost of operation and maintenance Benefit: Saving of operation cost, reduction of travel time, avoidance of loss of transport/passengers, avoidance of reduction of foreign currency revenue

Source: Plan is from the ex-ante evaluation table of the project phase II and the actual is the External Evaluator's re-calculation.

At the time of the ex-post evaluation, re-calculation of IRR was conducted by replacing the planned figures by the actual ones. In the project, the airport deals with more than expected passengers and cargos, which lead to the increase of benefit. When the situation with the project is compared to the one without it, however, the cost of operation and maintenance is also larger than planned. Particularly, in FIRR, the value of such cost increase exceeds the increased benefit, causing the negative FIRR.

In light of the above, although the project cost was within the plan, the project period exceeded it; therefore the efficiency of the project is fair.

3.5 Sustainability (Rating: ③)

3.5.1 Institutional Aspects of Operation and Maintenance

The implementing agency of the project is DGCA and the operation of the airport is conducted by the Surabaya office of the First National Airport Operation Company (AP1) as originally planned.

AP1 Surabaya has 446 permanent staff members as of January 2013 and consists of six departments such as Air Traffic Services (ATS) Operation & Readiness, Airport Operation & Readiness, "Airport Security, Safety Management Systems, Quality Management and Customer Services", Sales, Finance & Information and Shared Services. It is the ATS Operation & Readiness

department and the Airport Operation & Readiness that are responsible for the operation and management of the airport including the maintenance of equipment and facilities in it.

Each section in the ATS Operation & Readiness department is led by a section chief with about 15 years of work experience. It also has core staff members called team leaders who have similarly long experience. As a whole, there is no shortage of staff for conducting necessary activities. The organization is also stable, as the staff's turnover ratio is very low except for retirement at the age limit.

The structure of each section in the Airport Operation & Readiness department is essentially the same as that of ATS Operation & Readiness department: section chief with 15–20 years of work experience, and team leaders who have similarly long working experience. The department also faces no shortage of staff for conducting necessary activities, and it is stable with a low turnover ratio among the staff members.

3.5.2 Technical Aspects of Operation and Maintenance

All the staff members belonging to the ATS Operation & Readiness department and the Airport Operation & Readiness department have the engineering degrees necessary for their fields of work. They face no particular technical problems in day-to-day operations. In addition, in the ATS Operation & Readiness department, the staff's performance is checked every six months, and any staff member who is seen to have problems attends training. In the Airport Operation & Readiness department, the staff's competency check is undertaken as well as training every two years. Like in the ATS Operation & Readiness department, any staff member who seems to have a problem attends additional training.

Operations are conducted based on the Juanda Airport Aerodrome Manual, which is the common manual to all departments and the Standard Operating Procedure, which is the detailed manuals specific to each department.

3.5.3 Financial Aspects of Operation and Maintenance

The following table shows the movement of operation and maintenance costs (O&M costs) in the last three years. The costs are slightly increasing. Staff members of the ATS Operation & Readiness and Airport Operation & Readiness departments of AP1, Surabaya, stated that the amount of O&M costs is enough to conduct operations.

Table 11: Movement of O&M Costs

Unit: billion rupiah

Fiscal year	Budget	Results
2009	292.7	291.8
2010	301.5	306.5
2011	334.6	333.3

Source: AP1, Surabaya

The financial performance of AP1, Surabaya is good. It has continuously posted profit, e.g., as before tax profit in rupiah, 102.6 billion (2009), 132.4 billion (2010) and 197.9 billion (2011), respectively.

As the airport's profitability is secure as seen above, there seems to be no problem to secure future O&M cost. The airport operation company AP1 itself has also recorded profits continuously and its financial situation is stable[22]. According to the balance sheet of the entire AP1 of the last four years (2007-2010), the current ratio which means safety is much more than 100% and the equity ratio is about 90%. With regard to AP1's profitability, the ratio of operating profit divided by total asset has increased from 3.2% in 2007 to 5.8% in 2010. The company's equity ratio and the ROA (operating profit divided by total asset) are as good as those of major airport operators in the world (top 10 companies in sales)[23].

3.5.4 Current Status of Operation and Maintenance

As stated above, equipment and facilities installed in the project are maintained by the ATS Operation & Readiness and Airport Operation & Readiness departments, which actually use them, and all the equipment and facilities work well. The ATS Operation & Readiness department keeps the maintenance contracts with manufacturers of air traffic control equipment, solves problems, and procures spare parts. In the Airport Operation & Readiness department, the Airport Facilities Readiness section conducts cleaning of various facilities in the airport and the Airport Equipment section procures spare parts. There is no particular problem in procurement of spare parts.

In light of the above, no major problems have been observed in the operation and maintenance system in terms of institutional, technical and financial aspects; therefore the sustainability of the project effect is high.

4. Conclusion, Lessons Learned and Recommendations

4.1 Conclusion

The project has been highly relevant to Indonesia's development plan, development needs, as well as Japan's ODA policy; therefore its relevance is high. There are six items of target indicators which were set at the ex-ante evaluation to be met seven years after the project completion. In three out of the six target indicators (domestic passengers, domestic cargo volume, and domestic aircraft movement) actual figures of five years after substantial completion of the project have already exceeded the targets. Therefore the effectiveness of the project is high. In the impact aspect, it has been observed that the project has led to the increase of tourists in the area near the airport. Although the project cost was within the plan, the project period was exceeded, therefore the efficiency of the project is fair. The sustainability of the project effect is high, because no major problems have been observed in institutional, technical and financial aspects.

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

[22] API's after-tax profit of 2010 is 443.7 billion rupiah.
[23] Source: "Kokusoken's document no.218, International comparison of financial situation of airport operation", p.2.

4.2 Recommendations

4.2.1 Recommendations to the Executing Agency

According to the environment monitoring report made in the first half of 2012, there are several items of air, water and noise whose figures exceeded the national standards set by the Ministry of Environment. Accordingly, 13 recommendations for improvement were made in the report. It has been confirmed that corrective actions were already taken for seven items and it is recommended to take corrective measures on the remaining six as well without delay.

4.2.2 Recommendations to JICA

Nothing in particular

4.3 Lessons Learned

Nothing in particular

Comparison of the Original and Actual Scope of the Project

Item	Original	Actual
1. Project Outputs		
1) Full parallel taxiway	30m or 23m, 168,000m^2	30m or 23m, 188,000m^2
2) Apron	1,036.5m x 137.0m	1,036.5m x 124.5m
3) Passenger terminal building	Floor area: 52,100m^2	Floor area: 52,100m^2
4) International cargo building	Floor area: 5,590m^2	Floor area: 5,600m^2
5) Domestic cargo building	Floor area: 4,340m^2	Floor area: 4,360m^2
6) Administration/Operation Building/ATC (Air Traffic Control)-Tower	Floor area: 5,160m^2	Floor area: 5,160m^2
7) Other facilities	Airfield Lighting System, Radio Navaids, ATC Facilities, Aeronautical Communication, Meteorological Facilities and so on	Airfield Lighting System, Radio Navaids, ATC Facilities, Aeronautical Communication, Meteorological Facilities and so on (as planned)
(Additional scope)		
1) Additional work for connection to the toll road	-	Surface stabilization by sand and gravel: 54,000m^2
2) Expansion of the apron	-	Earth works, pavement works and drainage work
2. Project Period	November 1996 – March 2003 (77 months)	December 1996 – April 2010 (161 months)
3. Project Cost		
Amount Paid in Foreign Currency	17, 640 million yen	24, 501 million yen
Amount Paid in Local Currency	24, 878 million yen (540.8 billion Indonesia Rupiah)	8,559 million yen (713.3 billion Indonesia Rupiah)
Total	42,518 million yen	33,061 million yen
Japanese ODA Loan Portion	27,874 million yen	27,409 million yen
Exchange Rate	1 Rupiah = 0.046 yen (As of April 1996)	1 Rupiah = 0.012 yen (Weighted average)