The Philippines[1]

Environmental Infrastructure Support Credit Program – Phase II (EISCP2) (PH-P199)

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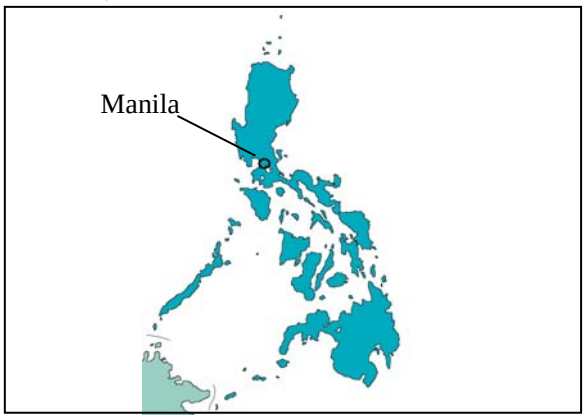
Field Survey : December 2007

1． Program Profile and Yen Loan Assistance



Project Site: Nationwide

Hydro Power Facility constructed under EISCP2

1.1. Background

In the Philippines, with the increase in population and the expansion of economic activities, the issue of environmental pollution such as water and air pollution was becoming serious particularly in Metro Manila. The Philippine Government considered pollution control measures as an important issue in its development policy and promoted the establishment of legal, institutional and regulatory frameworks for that purpose. Under the “Philippine Agenda 21: A National Agenda for Sustainable Development for the 21st Century” established in 1997 under the Ramos administration, comprehensive action plans were drawn up mainly for environmental measures to improve the lives of the Philippine people, which showed the Government’s commitment towards environmental issues. Based on Agenda 21, the “Plan 21” (The Philippine National Development Plan: Directions for the 21st Century) formulated in 1998 emphasized planning, decision-making, participatory administration, etc. integrating environment and development as important issues to be tackled in the long-term environmental strategy.

[1] This ex-post evaluation has been conducted as the Joint Evaluation with the Development Bank of the Philippines (DBP).

In the legal aspect, detailed emission and environmental standards for air and water quality, noise and waste were established on the basis of Presidential Decree (PD) 1151 (Philippine Environmental Policy) and PD 1152 (Philippine Environmental Code), both of which were issued in 1977. These standards are no less stringent than those of advanced countries.

Along with these standards, the framework for enforcing environmental regulations against private enterprises has been established by the Department of Environment and Natural Resources (DENR), including implementation of environmental impact assessment for investment in plant and equipment by companies, emission monitoring, issuance of orders to stop operation to serious offender companies, etc. However, it cannot be said that the current regulations have been fully observed. In order to improve enforcement of these regulations, it was necessary to enhance the enforcement of laws and regulations as well as monitoring by the authorities concerned and to further raise awareness among companies making environmental investment.

The state of water pollution was growing worse in rivers, sea areas and lakes in major urban areas. It was pointed out that water pollution was particularly serious in Pasig River, Manila Bay and Laguna Lake. As for air pollution, the concentrations of pollutants such as TSP (total suspended particles), PM10 (particles of up to 10 microns in diameter) and lead exceeded the Philippine environmental standards which are based on WHO standards.

Given such situation, it was deemed necessary to support and encourage environmental investment activities by companies through the provision of concessional institutional financing.

1.2. Objective of the Program

This program's objective was to provide medium- and long-term financing to private enterprises of mainly small and medium size in the Philippines through DBP and provide technical assistance to end users and private financial institutions as well as DBP for the purpose of promoting investment activity that will help improve the environment; thereby, contributing to the prevention and mitigation of industrial pollution.

1.3. Borrower/Executing Agency

Development Bank of the Philippines (DBP) (guaranteed by the Government of the Philippines)

1.4. Outline of Loan Agreement

Loan Amount / Disbursed Amount:	20,529 million yen / 20,529 million yen
Exchange of Notes / Loan Agreement	December 27, 1999 / December 28, 1999
Terms and Conditions of the Loan	Interest rate:0.75％ Repayment Term: 40 years (Grace period:10 years)

	Procurement Condition: General Untied（Bilateral Untied for Consulting Services）
Final Disbursement Date	March 28, 2006
Contract for Civil Works	－
Consultants	Nippon Jogesuido Sekkei Co., Ltd. (Japan), Cest, Incorporated, Daruma Technologies, Geodata Systems Technologies, Test Consultants (Philippines)
Feasibility Study, etc	Environmental Infrastructure Support Credit Program – Phase I (EISCP1), L/A date: March 1996 Ex-post Evaluation : 2004

２． Evaluation Results (Overall Rating: A）

2.1. Relevance (Rating: a）

This program has high relevance because it is consistent with the national policy both at the time of appraisal and at this time of ex-post evaluation.

2.1.1 Relevance at the time of appraisal

As stated earlier, under the Philippine Agenda 21 established in 1997, which was considered the national policy at the time of appraisal, comprehensive action plans were drawn up mainly for environmental measures to improve the lives of the Philippine people. Also, in the Medium-Term Philippine Development Plan (1999–2004), the importance of environmental-conscious sustainable development policy was stressed.

The actual state of pollution at that time was that water pollution was serious in rivers, sea areas and lakes in major urban areas, particularly in Pasig River, Manila Bay and Laguna Lake. The water quality of Pasig River, for example, did not meet Class C (the appropriate level for fishery, recreational activities and use as industrial water) of the water quality standards of the Philippines, and BOD sometimes exceeded 10 times the standard value (BOD contributed to approximately 35% of industrial pollution (1996)).

Water pollution of Laguna Lake was mainly caused by domestic and industrial waste water, mainly due to the delay in the construction of the water supply and sewerage system and insufficiency in water treatment facilities installed at plants as well as inadequate observance of waste water standards (among about 1,500 plants around the lake, approximately 63% were equipped with waste water treatment facilities).

As for air pollution, at the time of appraisal, the concentrations of TSP, PM10 and lead were 5 times, 3 times, and 2.2 times higher than the national standards, respectively, though there were signs

of improvement. As a result, nearly 80% of the population of Metro Manila was exposed to the higher level of air pollution than the national environmental standards and health problems of residents such as higher incidence of respiratory diseases among street workers and higher blood lead concentrations than the standard levels among street children were reported. The main sources of air pollution were automobile emissions, emissions from industrial activities, fuel combustion at thermal power plants, etc. [2]

JBIC entered into a loan agreement for the Environmental Infrastructure Support Credit Program (I) with DBP in 1996, under which support was provided using the ODA loan until July 2002. JBIC recognized the need for further assistance to DBP through the provision of concessional medium- and long-term financing to DBP in order to address the strong demand for funds in the Philippines. Taking these circumstances into consideration, this project was highly relevant in that it continued financial and technical support that had been provided in the Phase I project for the purpose of supporting and facilitating environmental investment by Philippine enterprises.

2.1.2. Relevance at the time of this ex-post evaluation

The 10-Point Agenda, which set national goals for the present Arroyo administration to achieve by 2010, aims at sustainable growth with poverty reduction and environmental improvement. Also, in the Medium-Term Philippine Development Plan (2004–2010), sustainable and effective utilization of natural resources, environmental conservation, provision of a healthy living environment for the people, etc. are included in major policies. Regarding water pollution, in particular, the Philippine Clean Water Act (CWA) was enacted in March 2004 and became effective in May 2005 as a comprehensive water quality control act. This act is distinct from the former PD No. 984 of 1976 in that it invests local governments with authority over water quality control.

With respect to the current situation of the pollution, improvement is still needed in both air and water quality. Water pollution in Pasig River, Manila Bay and Laguna Lake is still serious. For example, the World Bank's data for 2003 shows that 58% of water samples taken from 129 drinking water wells (which were tested by the Environmental Management Bureau of Department of Environment and Natural Resources: DENR-EMB) were found to be contaminated with coli forms; pollution of rivers flowing into Manila Bay caused algae bloom which threatens marine resources and health of people, etc.

Looking at the recent state of air pollution, the observation data obtained by DENR-EMB in 2004 show that the TSP concentration exceeded the national standards in all areas of Metro Manila. According to the data, those in other major cities of Batangas, Zamboanga and Davao were 1.4 times,

[2] The situation of water pollution, pollution of Laguna Lake and air pollution described here is based on the appraisal documents of the Overseas Economic Cooperation Fund.

2.6 times, and 3.7 times higher than the standard level, respectively.[3]

From the above observation, it can be concluded that the relevance of this program is very high in terms of consistency with the national policy and development needs, which has been unchanged since the time of appraisal.

2.2. Efficiency (rating: a)

The efficiency of program implementation was high in terms of output, cost and implementation period. In all aspects, the program was implemented as scheduled.

2.2.1. Output

During the implementation, there were minor modifications of scope compared with the original design at the time of appraisal. The comparison table is shown below.

Table 1: Comparison of the Program Outline (Appraisal vs. Actual)

Items	Appraisal (1999)	Actual
(1) Sub-loan Component		
Eligible end users	Enterprises with at least 70% Philippine capital	Followings were added. ・ State Enterprises or Government-owned and controlled corporations (GOCCs) ・ Local government units (LGUs) ・ Water districts
Use of the funds	• Pollution management and mitigation, pollution prevention, waste reduction • Efficient use of resources (energy saving, recycling project, etc.) • Improvement of labor environment • Establishment of environmental management system (EMS), acquisition of ISO14000 certification • Private-sector-led environmental infrastructure projects	Followings were added. ・ Solid waste management ・ Water supply and sewerage
Method of financing	・ Indirect financing through private financial institutions (PFIs) (wholesale method) ・ Direct financing by DBP (retail	No change

[3] The data source is the National Air Quality Status Report 2003–2004 (DENR-EMB). More than one observation point is set in each city or region. In Metro Manila, for example, TSP concentration was 3 times higher than the standard in the most polluted Edsa Area and 1.6 times higher than the standard even in the least polluted Ateneo Area.

	method)	
Conditions of Sub-loan to end-users	・ Loan amount under this program: Up to 80% of the total project cost ・ Sub-loan interest rate: 13% fixed (revision to 11% under consideration) ・ Repayment period: 3–15 years (grace period: up to 5 years) ・ Currency: Philippine peso	No change
(2) Consulting services		
Input(M/M)	Foreign 76M/M Local 360M/M	(Revised January 2004) Foreign 60M/M, local 282M/M (Revised April 2006) Foreign 51M/M, local 401M/M
TOR	・ Publicity and dissemination of the program ・ Strengthening of cooperation with government agencies concerned and the industrial circle ・ Support to end users in project formation and implementation ・ Support to DBP and PFIs in the examination of environmental and technical aspects ・ Support for environmental monitoring of end users by DBP ・ Development of DBP's environmental guidelines ・ Support for the improvement of PFIs' environmental assessment system (including training) ・ Training for DBP, PFIs and end users ・ Development of DBP's environmental information system ・ Project evaluation, etc. ・ Support for establishment and operation of Environmental Trust Fund (ETF)[4]	Added items: ・ Support for the implementation of the forest program by DBP ・ Support for DBP's CDM projects ・ Support for DBP's water supply and sewerage projects ・ Expanded application of the process of environmental technical evaluation and monitoring procedures to DBP's other environmental lending programs Canceled items: ・ Support for the improvement of PFIs' environmental assessment system ・ Support for establishment and operation of Environmental Trust Fund (ETF)

[4] At the time of appraisal, there was a plan to establish a fund to be reserved as DBP's own resource by accumulating a part of interest income (0.25%) paid by end users. This plan was laid out for the purpose of supplementing the consulting services of EISCP2, in order to prepare for the possible new needs of various environment-related activities (for example, capacity building and researches) which are not covered by the existing terms of reference (TOR) of the consulting services.

（Source: Project Completion Report (PCR)）

As the Table 1 above shows, in the provision of sub-loans, there were modifications in the eligible end users and also in funds usage. The TOR of consulting services was also modified. The reasons for these modifications are as follows.

(1) The modification on the sub-loan component

1) During the project implementation, there were increasing inquiries to DBP for loans in connection with solid waste treatment both from the private and government sector with the enactment of the Republic Act (RA) No. 9003 (Solid Waste Management Act). This is because the Act set forth the timeframe for the enterprises to introduce and operate solid waste treatment facilities. DBP regarded this good business opportunity because it anticipated more active investment to be made in the area of solid waste management, which is a growing market. Therefore, DBP decided to make the area of solid waste management eligible under the EISCP2 Program.
2) In addition, DBP started Municipal Water Loan Financing Initiative (MWLFI) [5] in 2004 jointly with JBIC and USAID, etc. to promote the financing in water area. In the Philippines, Local Government Units (LGUs) and Water District are the main executing bodies in providing water supply and sewerage services. Therefore, DBP decided to use the sub-loan under this Program to finance LGUs and Water Districts. Along with this line, water supply and sewerage were added as eligible area for financing under the Program.

(2) Amendment of TOR for the consulting services

1) During the project implementation, in response to the various needs in environment which is a global agenda, DBP as the representative bank in the Philippines, expanded its loan and technical assistance in order to support environmental improvement. Support for the implementation of the forest program by DBP and support for DBP's CDM projects and water supply and sewerage projects were added in line with this DBP's policy to expand support in the environmental field.
2) In the evaluation of environmental aspect in EISCP2, as part of the consulting services provided

[5] This program was designed to provide financing with the guarantee scheme of Local Government Unit Guarantee Corporation (LGUGC) which has been receiving assistance from USAID based upon the U.S.-Japan joint initiative called "the Clean Water for People Initiative" announced in 2002, a joint endeavor to provide safe water and sanitation to the world's poor, improve watershed management, and increase the productivity of water.

under this Program, the Project Evaluation and Endorsement Reporting (PEER) System,[6] which aims at environmental technical evaluation, and also Environmental Performance Monitoring (EPM) System,[7] which aims at monitoring, were developed and established. It was decided that the both systems were to be applied for all other environment-related financing projects by DBP.

3) Support for the improvement of PFIs' environmental evaluation system was deleted from major TOR items because PFIs had not yet established an environmental evaluation system as of the implementation stage of this Program. It was concluded that PFIs were not ready. (Instead, it was decided to provide necessary support to PFIs within the scope of the training component for PFIs.)
4) Establishment of ETF (Environmental Trust Fund) was excluded from the TOR items of consulting services because the DBP management judged that they were not ready to carry it out considering the limited fund resources and the lack of appropriate implementation system.

The above-stated modifications were made in response to the new needs and changes which took place during the project implementation and these modifications did not affect much the expected output of the entire Program. In addition, the magnitude and scope of these modifications were minor and insignificant; therefore, the Evaluation Team judges that there is no problem in these changes. Considering the fact that expansion of eligible end-users and fund usage was introduced in order to respond to the changing needs in the environmental market, these modifications should be regarded as good and positive reaction by DBP.

2.2.2. Project implementation period

Disbursement of sub-loans took 6 years from March 2000 and was completed in March 2006. From the start, DBP conducted this project assuming that the disbursement period is 6 years based on the provisions of L/A. Therefore, the project was completed as planned in terms of the project period (100% of the initially planned period).

2.2.3 Project cost

At the time of appraisal, the total estimated project cost was 20,529 million yen (sub-loans: 20,000 million yen; consulting services: 529 million yen). Regarding the sub-loan portion (20,000 million yen), sub-loans were available up to 80% of the total cost of each sub-project eligible under EISCP2.

[6] A standardized system of information and documents which are necessary for the credit evaluation and approval process of environmental lending. This system made uniform procedure, information and documents within DBP required for the environmental and technical evaluation and analysis, and for the loan application and approval.

[7] A standardized system and procedures of environmental monitoring; it gives the uniform contents and format of report to be submitted to DBP quarterly by all the end users who received financing under EISCP2.

The remaining amount was to be covered by the end user's own fund or other available external sources. As a result of project implementation, 20,000 million yen were disbursed for sub-loans and 529 million yen were disbursed for consulting services. Thus, the loan disbursement was conducted as initially planned for both components.

2.3. Effectiveness (rating: a)

The implementation of the program has generally brought the expected benefits, therefore the effectiveness is high.

2.3.1. Actual result of sub-loan provision

It is considered that the loan funds were effectively used through measures such as expanding the eligible end users and usage of the funds. Total loan amount financed by DBP was 9,520.46 million pesos and the number of subprojects financed was 48 in total.

Table2：Overall Disbursement Result

Item	Total Cost（Million YEN）
①Sub-loan	19,999.98
②Consulting Services	528.99
Total	20,528.98

（source：PCR）

The breakdown of the sub-loans in terms of the areas of fund use is shown below.

Table3：Outline of Sub-loans (first generation) by Classification

(as of December 31, 2006)

Classification	No. of sub-loans approved	%	Sub-loan amount (Million Pesos)	%
Cleaner Production	16	33.33%	1,136.20	11.93%
Conservation of Natural Resources	13	27.08%	7,355.49	77.26%
Environmental Relocation	3	6.25%	280.00	2.94%
Occupational Safety and Health	4	8.33%	257.92	2.71%
Pollution control	4	8.33%	220.94	2.32%
Solid Waste Management	5	10.42%	213.91	2.25%
Toxic and Hazardous Waste	1	2.08%	42.00	0.44%
Wastewater Treatment	2	4.17%	14.00	0.15%
Total	48	100.00%	9,520.46	100.00%

（Source：PCR）

According to the above table, most of the sub-loan funds were provided in the fields of cleaner

production [8] and natural resource conservation, which in total occupy approximately 60% in terms of the number of sub-loans approximately 90% in terms of amount provided.

Table 4：Breakdown of End-users by Asset Size

Asset size of the End-User (Million Pesos)	No. of Sub-loans approved	%	Sub-loan Amount（Million Pesos）	%
Large（more than 100 Mil.P）	37	77.08%	9,331.16	98.01%
SME（100 Mil.P and below）	11	22.92%	189.30	1.99%
Total	48	100.00%	9,520.46	100.00%

（Source：PCR）

The breakdown by asset value of end users shows that large scale enterprises with total assets over 100 million pesos occupy 77% and 98% of all end users respectively in terms of the number of enterprises and amount provided. Amount wise, only 2% of all funds were provided to small and medium sized enterprises.

The initial objective of the program was to provide funds mainly to small and medium sized enterprises (SMEs). It turned out that among the total number of 48 cases financed under the Program, 11 end users were SMEs, which occupies more than 20% in terms of number of cases. Among 243 loan applications that were accepted for environmental evaluation under EISCP2, 48 cases passed. This SME's ratio (i.e., 11 SMEs out of total 48 end users) could be considered as a moderate success and it should deserve the positive evaluation. It is true that, in reality, the most of the enterprises which had a better understanding of or are highly motivated to make environmental investment and meet the high criteria of sub-loan appraisal set by DBP are large scale enterprises. To promote more investments by SMEs, continuation of educational activities towards private enterprises are important. Under EISCP2, environmental awareness raising activities for enterprises were actively promoted as was in Phase I. However, it seems to take time before such activities bear fruit by enabling many enterprises to receive actual loans. That is why it is important to steadily continue activities to raise awareness toward environmental investment.

Table 5: Breakdown of End-users by Sub-loan Amount

Size of Sub-loans	No. of Sub-loans approved	%	Sub-loan Amount（Million Pesos）	%
Large（P200M and >）	7	14.58%	7,310.72	76.79%
Medium（P100M- <200M）	10	20.83%	1,312.04	13.78%

[8] According to DBP's Operating Policy Guidelines (OPG) for EISCP2, which serves as the lending manual of the Project, the definition of cleaner production is set as follows: "pollution prevention, also referred to as cleaner production, clean technology or waste minimization; it means reducing to the extent possible any wastes that are generated and subsequently treated, stored and disposed through source reduction or reuse or recycling."

Small（<P100M）	31	64.58%	897.70	9.43%
Total	48	100.00%	9,520.46	100.00%

（Source: PCR）

Table 6: Breakdown of End-users by Sub-loan Repayment Term

Duration of Sub-loans (Years)	No. of Sub-loans approved	%	Sub-loan Amount（Million Pesos）	%
16-20	1	2.08%	69.62	0.73%
11-15	4	8.33%	1,584.94	16.65%
6-10	15	31.25%	1,128.64	11.85%
1-5	28	58.33%	6,737.26	70.77
Total	48	100.00%	8,299	100.00%

（Source: PCR）

In terms of sub-loan repayment term, approximately 30% of all sub-loans are those with periods of over 6 years. Given the financial situation of the Philippines where medium- and long-term funds are in short supply, EISCP2 is considered to have played a significant role.

2.3.2. Qualitative Effect

(1) Institutional strengthening

Through the implementation of the program, significant results were achieved in the establishment of the procedure for technical and environmental evaluation. To be specific, an evaluation system called the PEER (Project Evaluation and Endorsement Reporting) system, a monitoring procedure called EPM (Environmental Performance Monitoring), and EMIS (Environmental Management Information System) [9] were developed. These procedure and systems are introduced in lending operations under not only EISCP2 but also in other programs by DBP, showing that the effect of this program is spreading throughout the Bank.

(2) Provision of training

In the consulting services, the training for employees of DBP promoted their better understanding to environmental projects. The training subjects included introduction to environmental studies, environmental information collection methods, environmental evaluation methods, etc. The record of trainings provided from 2002 to 2005 is shown below.

Table 7：EISCP2　Training Record

[9] This is the on-line management information system provided internally within DBP. The employees can access the environment-related information such as operation manuals used in environment lending, templates of various documents, contents of environmental management courses, environmental and technical information, information on sub-projects, etc.

	2002	2003	2004	2005	Total
Number of trainings	26	3	2	12	43
Number of staff trained	1,059	180	48	274	1,561

（Source: Technical Assistance Component Final Report）

(3) Environmental awareness raising activities for enterprises

Through this program, activities to raise environmental awareness of enterprises were promoted actively. Starting from 2002, over twenty seminars (Industry Forums), orientations and meetings were held targeting various industrial associations (such as those related to sugar refining, hog raising, sightseeing, electric utilities, foods, industrial parks, textiles, hospitals, chemicals, glass production, etc.). Visits to individual enterprises that showed interested in the above-mentioned seminars were conducted in 2003. In 2004, seven workshops were held focusing on the specifically important themes in the field of environment (cleaner production, treatment of hazardous substances, management of solid waste including medial waste, etc.). In 2005, awareness raising activities were expanded to other environmental financing projects (CDM, Forest Program, etc.) within the scope of the consulting services. In addition to industrial associations, cross-industrial organizations such as the Philippine Chamber of Commerce and Industry (PCCI), Cebu Chamber of Commerce and Industry (CCCI), Pollution Control Association of the Philippines (PCAPI) and Philippine Environmental Industry Association (PEIA) participated in these activities. Thus, awareness raising activities were widely promoted in the private sector. As a result, people's understanding of environmental investment was deepened by these positive educational activities.

2.4. Impact

2.4.1. Impacts in pollution abatement and environmental improvement

Improvements in the living environment brought by the subproject are summarized below. DBP is making effort to quantitatively assess the environmental improvement and energy saving effects achieved by each end user (or subproject) at the time of sub-loan appraisal under EISCP2. Each end user is required to submit quarterly environmental monitoring reports to DBP after obtaining the loan, including indicators and their values concerning environmental improvement and energy saving. The data presented below show such improvement effects summarized based on the monitoring results. This data was verified by environmental specialists hired as part of the consulting services provided under this project in the process of loan screening and monitoring conducted by DBP and PFIs. Thus, the data is evaluated to be relevant.

Table 8: Environmental Benefits of EISCP2

Environmental Benefits	Indicator and Quantity
(1) Mass of water pollutants avoided	BOD ：470,100 kg/year COD： 940,000 kg/year TSS： 1,012,600 kg/year Cr6+： 6 kg/year
(2) Mass of air pollutants avoided	Particulate： 857 MT(metric ton)/year NOx： 1,286 MT/year SO2： 3,690 MT/year CO： 117 MT/year
(3) Resources conserved or wastes recycled / reused	Energy：6,930 MWH/ year Water：20,498,700 cubic meters/ year Raw materials：21,200 MT/ year
(4) Solid wastes collected/treated	Solid waste treated：28,100 MT/ year
(5) Solid hazardous wastes treated	Solid waste treated：12,236 MT/ year

(Source: Technical Assistance Component Final Report)

Note: BOD: Biochemical Oxygen Demand; COD: Chemical Oxygen Demand; TSS: Total Suspended Solids; Cr6+: hexavalent chromium; NOx: nitrogen oxide; SO2: sulfur dioxide; CO: carbon monoxide

2.4.2. Impact on natural environment

Regarding impacts on natural environment, the executing agency is required to make confirmation of such impacts at the time of sub-loan appraisal based on the relevant environmental laws in the Philippines. Through the consulting services of this program, the PEER system was introduced as the DBP's standard procedure for environmental financing along with the EPM monitoring procedure and the Environmental Management Information System (EMIS). All these systems directly led to the establishment of a system for checking compliance of each subproject with environmental laws and conducting monitoring properly.

Assessment of environmental impacts of each subproject is one of the most important tasks. DBP examines each subproject carefully taking into account the technical and management capacity of applicant enterprises as well as environmental risks. With regard to environment-related permission and certification, checking of the Environmental Compliance Certificate (ECC) issued by DENR and the Pollution Control Officer certified by DENR[10] is conducted in the sub-loan evaluation process.

[10] DENR specifies under the Administrative Order No.26 that the Pollution Control Officer should be appointed who satisfies the following basic qualifications; (1) Must be a Filipino citizen, (2) Of good moral character, (3) Mentally and physically healthy, (4) Of legal age and (5) Must have a professional qualification. Each enterprise is supposed to submit its application of candidate Pollution Control Officer to DENR Regional Offices, and then, the Secretary of DENR or a duly designated official shall approve the accreditation. Those who passed this screening process will be given Certification of Accreditation by DENR. The accredited Pollution Control Officers are obliged to receive trainings of DENR.

Thus, environmental impacts are properly assessed and controlled in the sub-loan appraisal process in DBP.

2.4.3. Resident relocation / land acquisition

For subprojects involving resident relocation or land acquisition which may have impact on the environment, DBP identifies such impact based on the contents of ECC and confirms that appropriate measures are taken. There has been no case reported where obtainment of financing under this program by end users resulted in any problem concerning resident relocation or land acquisition, or any negative impact on the environment.

2.4.4. Impact on surrounding areas and local residents

The funds provided under this project were used to extend loans in various fields of environmental technology such as air pollution prevention, waste water treatment, preservation of natural resources, etc. We visited 5 end user companies selected as samples taking into account the balance among regions and types of business, and conducted a beneficiary survey with 3 companies among them whose managers consented to the survey. [11]

Table 9: List of Companies Visited

Business Type of End User	Location	Use of Fund
Company A: food processing	Pampanga Province	Construction of waste water treatment facilities
Company B: hog raising	Pampanga Province	Construction of hog raising facilities
Company C: operation of long distance bus service	Caloocan (suburbs of Manila)	Replacement of buses
Company D: waste disposal	Cavite (suburbs of Manila)	Construction of waste disposal facilities
Company E: power generation	Bohol Island	Construction of mini power generation equipment

(Source: Compiled by the evaluation team)

The food processing company A processes 120 m3 of waste water a day with the newly constructed facilities and the treated water satisfied all of the regulatory standards in the water quality test in 2007. None of the 30 employees to whom the beneficiary survey was conducted has contracted any disease attributable to the workplace conditions or the environment in the past 3 years

[11] For the beneficiary survey, we selected companies on condition that the owner or the manager consented to the survey. After approaching each end user jointly with the Program Evaluation Department of DBP, we obtained consent from Company A (food processing), Company B (hog raising), and Company C (long-distance bus service) among the companies we visited as listed above.

and all of them answered that their working environment is quite healthy. Also, no sign of environmental pollution (e.g. poor growth of plants, death or decrease in numbers of birds, butterflies or dragonflies, death of fish, change in the color of river water, algae bloom, increase in parasites or infectious diseases, etc.) has been observed in the village where Company A's plant is located or in the area surrounding the plant in the past 3 years, according to the results of the survey. In the beneficiary survey to 30 residents in the surrounding area, most residents reacted favorably to the company's contribution to the community (employment, clean-up activities, donations, etc.) and no one expressed dissatisfaction in the environmental aspect.

The beneficiary survey to the hog raising company B shows a slight gap in perception between the employees and local residents. The company constructed a hog yard equipped with a ventilation device and a temperature and humidity control device with the fund financed under this project and realized cleaner and more efficient operation than before. Since these improvements, none of the 10 respondent employees has contracted any disease attributable to the workplace conditions or the environment and 9 of them answered that their job-related stress has been reduced compared to that before the introduction of the new equipment. Also, all of them say that work efficiency has increased and 9 of them say that they have started to leave the company earlier than the scheduled finishing time. On the contrary, in the survey to 49 local residents, 39 respondents pointed out "offensive odor" and 31 pointed out "increase in flies" as examples of the on-going environmental impact, which are particularly serious on rainy days, they say. However, Company B obtained Environmental Compliance Certificate (ECC) from DENR and has been reporting to DBP concerning ECC compliance status to date. Thus, the company has been operating in compliance with environmental standards. The results of the interview survey this time indicate that, although ECC has been obtained, the impact on local residents has not been removed completely in issues such as offensive odor that are not subject to environmental standards.

Company C, which operates a long-distance bus service, purchased 10 new buses to replace old dilapidated buses with the fund financed under the project. According to the interview survey to 30 employees and 30 passengers, there has been significant improvement in the environmental aspect. The purchase of new buses led to a saving of 89,300 liters of fuel a year and reduction of CO2 emission by 33%. These improvements are reflected in the results of the survey in which 13 out of 60 employees and passengers pointed out that air pollution has been mitigated. In addition, improvement in health condition resulting from the improvement of the ventilation system was pointed out by 22 respondents, while reduction in gas and soot emissions was mentioned by 6 respondents and reduction in vibration was mentioned by 26 respondents.

Based on the survey results as presented above, though the number of surveyed samples was limited, it was confirmed that generally the Program has brought moderate impacts on environmental improvement.

2.5. Sustainability (rating: a)

The sustainability has been examined from the viewpoint of institution, technical capacity and financial situation. As a result, the Evaluation Team believes that there is sufficient sustainability at this moment due to DBP's high implementation capacity and good operation and maintenance system.

2.5.1 Status of the revolving funds [12]

The status of revolving funds is acceptable, and the second generation funds have already been used for new sub-loans.

2.5.2 Executing Agency

2.5.2.1 Status of cash collection

The overdue situation of this program is generally acceptable and there is no concern at this moment.

2.5.2.2 Implementation System

（1）Operation and Maintenance

DBP, the executing agency of this Program, was established in 1958 as government financial institution, and it has been providing the industries in the Philippines with mainly the medium- to long-term funds for development. As lending institution, DBP has clear division of responsibilities among various departments with well established implementing units of each lending program. The implementing capacity of DBP has high reputation among major multilateral agencies and bilateral donors such as the World Bank, ADB and Kfw with abundant experiences to implement programs with these donors.

The project management office of EISCP2 was transferred from the Environmental Management Unit (EMU) to the Water and Air Pollution Prevention and Control Unit in 2005, due to reorganization of DBP. Also, the loan operations were placed under the responsibility of the Development Banking Sector (which has been later reorganized again into the Program Development Sector).

2) Process for credit decision

[12] The revolving fund uses the liquidity resulting from the gap between the repayment period of the sub-loans and the repayment period of the JBIC loan and relends the funds to end users. This is expected to further boost the effects of the JBIC loan.

An appropriate system for credit examination by EMU (from 2005) and the Water and Air Pollution Prevention and Control Unit (from 2004) is established. In particular, introduction of the PEER system as the DBP's standard procedure for environmental financing as well as the EPM monitoring procedure and the EMIS environmental information system is highly significant and has a ripple effect on the bank. According to the interview with end users, the credit decision sometimes takes a year, the longest. Such time-taking procedure coupled with the large number of documents required to be submitted causes a little dissatisfaction among end users. However, from the standpoint of the banking operations, it proves that careful and strict sub-loan appraisal is conducted based on solid documentation and requirements by DBP. Therefore, it can be judged that DBP has established strong and solid credit evaluation procedures. From this observation, DBP has high sustainability in terms of operation and maintenance.

(2) Technical capacity in operation and maintenance

DBP's employees are capable enough in performing their duties. Many of them are excellent as professionals in terms of their enthusiasm and attitude toward their jobs, knowledge in banking and finance, and highly customer-oriented way of working. DBP has high technical capacity with abundant experiences to implement aid programs by the major multilateral agencies and bilateral donors such as Japanese programs under both ODA (official development assistance) and OOF (other official flows) facilities, the World Bank, ADB and Kfw.

Also, an excellent training system is in place at DBP. Particularly, a total of 1,561 employees received environment-related training under this program. This has significantly contributed to the improvement of technical capacity of DBP employees. As part of the consulting services under this program, 13 types of manuals concerning environmental financing were developed. The procedure and system from sub-loan appraisal to monitoring stages were also clearly established.

As mentioned before, through this Program, the PEER system (the standardized environmental evaluation procedure), the EPM system (standardizes monitoring procedure) and the EMIS (management information system focusing on environment) were introduced as the DBP's standard procedure. These systems were applied not only for this Program but also other environmental lending programs within DBP as standard system. This is regarded as major technical ripple effect spread over inside the bank.

This program was implemented in both retail and wholesale scheme. The participating financial institutions (PFIs) which participating in the wholesale scheme were selected by DBP in light of criteria such as financial condition, ratio of past due accounts, credit management ability, managerial capacity, skills and capability of employees and operations systems, etc. In this program, DBP was supposed to conduct not only credit evaluation and supervision of accounts, but also technical

assistance to PFIs and end users. Particularly, from the viewpoint of fostering private financial institutions, assistance to PFIs to improve their technical evaluation capacity was important. For this purpose, in implementing this program, technical transfer in environmental credit management was conducted toward each PFI by DBP's program implementation unit of EISCP2 and also by the team of experts who were mobilized by DBP under the consulting services of this program. According to the interview survey of this ex-post evaluation, it was confirmed that the technical assistance to PFIs by DBP was provided properly and effectively[13].

From the above-stated reasons, the evaluation team concludes that technical capacity in environmental lending was certainly improved in both DBP and PFIs, which is considered as a certain success.

2.5.2.3. Financial status of DBP

The trend of financial status of DBP as a whole is shown below.

Table 13: DBP's Financial Status (2004-2006)

	2004	2005	2006
Gross Income (billion Peso)	11,543,103	13,388,083	18,271,412
Net Income (billion Peso)	2,445,067	3,216,545	3,734,378
Debt to Equity Ratio	8.17	7.33	6.63
Net Income to Gross Income (%)	21.20%	24.02%	20.43%
ROE (%)	10.88%	12.59%	12.10%
ROA (%)	1.20%	1.50%	1.60%
Capital Adequacy (%)	11.03%	11.91%	13.22%

（Source：Compiled by the Evaluation Team）

The gross income has been increasing steadily from 11,543,103 pesos in 2004 to 18,271,412 pesos in 2006. The net income has also been increasing steadily from 2,445,067 pesos in 2004 to 3,734,378 pesos in 2006. Return on assets (ROA) has improved from 1.20% in 2004 to 1.60% in 2006. Return on equity (ROE) was 10.88% in 2004, 12.59% in 2005 and 12.10% in 2006, showing upward trend. The profitability has been generally on the increase. From the above, DBP has recorded general increase in both income and profit, and the profitability indicators are good as well.

[13] For example, according to an interview with Bank of the Philippine Islands (BPI) conducted on December 2, 2007, BPI stated its view that DBP was advanced in the area of environmental lending and BPI enjoyed benefit of receiving useful advices from both DBP's own staff and environmental experts who were mobilized by DBP under the consulting services of EISCP2. Under EISCP2, out of the total 48 sub-loans approved, 20 sub-loans were provided by PFIs through the wholesale scheme. BPI provides 9 sub-loans out of these 20 loans. Regarding the specific question of "what aspects of EISCP2 do you highly appreciate?", the following three points were provided by BPI; (1)In proceeding with the lending in environmental area, BPI received necessary advices from DBP's own staff engaged in EISCP2. These advices were useful from banker's point of view and satisfactory. (2) BPI highly appreciated the expertise of environmental experts who provided instructions to sub-loan applicants, which met the real needs of them, from the step of appraisal to monitoring. (3) BPI bankers participated in the training program provided under EISCP2, and the trainings they received were useful in their daily works.

Therefore, it can be concluded that the financial management of DBP is good and sound as a bank.

Based on the above facts, DBP's sustainability in terms of institutional, technical and financial capacity is very high overall. DBP is highly capable as an executing agency and has sufficient institutional, technical and financial ability which is necessary for the continuation of developmental lending in sustainable manner, including environmental two-step lending programs.

3. Conclusion, lessons learned and recommendations

3.1. Conclusion

From the above-stated observations, this Program is granted the highest rating in light of the five evaluation criteria set by OECD's Development Assistance Committee (DAC).

3.2. Lessons Learned

None.

3.3. Recommendations

The ex-post evaluation report of EISCP Phase I pointed out that it is necessary to exploit the needs of small and medium sized enterprises for environmental investment. Phase II clearly states its objective to provide financing "to private enterprises of mainly small and medium size". This objective had been achieved to some extent under the Phase II. However, continuous efforts should be made to promote more investments by small- and medium-sized enterprises (SMEs). Most of the enterprises that understand the need of environmental investment and have sufficient financial capacity are multinational or large scale enterprises. In reality, it is a challenging task to encourage SMEs to invest in the environmental field. Even though environmental investment is required by law, many enterprises tend to take a "wait-and-see" attitude because of weak enforcement power of the law as pointed out by some. There is no quick and easy way to improve this situation and it is important to continue awareness-raising activities on a steady basis under cooperation between the public and private sectors. The cooperation with various industrial associations and chambers of commerce and industry and awareness-raising activities conducted in Phase II set the right direction. For the future, a change in the attitudes of enterprises toward environmental investment should be facilitated by further strengthening partnerships with the private sector and NGOs.