Philippines

Ex-Post Evaluation of Japanese ODA Loan

Social Reform Related Feeder Ports Development Project

External Evaluator: Satoshi Nagashima, ICONS Inc.

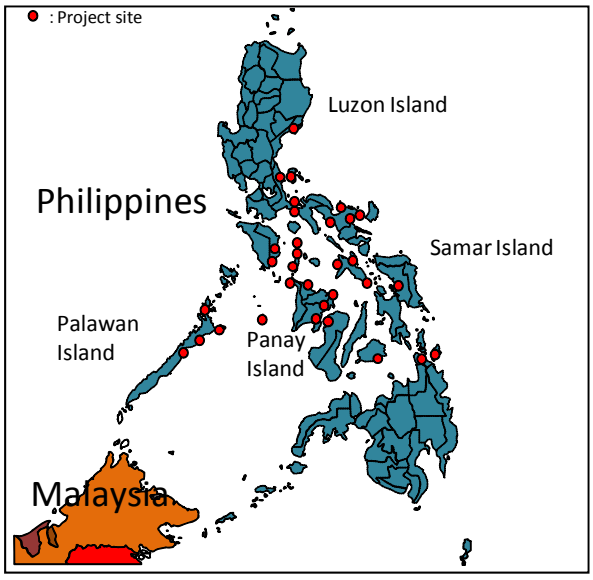
0. Summary

This project had been implemented to activate rural economic activities by constructing 34 ports and related facilities like access roads in the Philippines, thereby contributing to eliminate poverty among impoverished people (farmers, fishermen, etc.).

This project is in accordance with the policies and the development needs of the Philippines, and aid policies of Japan, thus the relevance is high. Since additional investment by the government of the Philippines has been seen for some ports and income classification of some of the municipalities which are the location of the ports was improved, the impact by the implementation of this project has been observed for some sites. However, the situation of the effect of the project differs according to the ports and the statistical information to prove the effect isn't sufficient. For that reason, overall evaluation of the effectiveness and the impact is fair. Moreover, as the project period was extended to a large extent because of the reselection of the project sites and the delay of selection of the contractors, the efficiency is fair. Many ports are managed and maintained properly by local governments because of adequate scale of the facilities and equipment, the ownership of local governments is high, most of the ports are maintained and managed by their own efforts, and the sustainability is high.

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

1. Project Description



Project Locations

Roxas Port constructed by the Project

1.1 Background

In the Philippines, an archipelago country which consists of more than 7,100 islands, the role of maritime transport is important. 35% / 115 million tons of cargo transport (domestic cargo was 56%) and 8% / 36 million of passenger transport shared the transportation sector in 1993. Looking at the history of the growth rate of the amount of marine transportation, after a period of stagnation in the first half of the 1980s, growth began from 1987 and it showed about 15% growth per year in 1986-1990. The Government of the Philippines had expected that the number of passengers and the volume of cargo handling would increase by average 5% per year in the marine transport sector by 2010[1]. By constructing the ports, it was expected that sale of local agricultural and fishery products are activated by activating the distribution of man and commodity. After that, poverty reduction was also expected by increasing the volume of sales and the sales price, creating employment around the ports etc.

In the public ports, the development of regional port system was initiated by the Department of Public Works and Highways in 1982. Feasibility studies were conducted by urgency of development for over 141 ports across the country, and assistance for development was requested to Japan (ODA Loan), the Asian Development Bank and USAID, etc. ODA Loan from Japan was requested for the development of 56 ports out of 141 ports and construction of 27 ports and detailed designs for 31 ports were conducted in the "Nationwide Feeder Ports Development Program (herein after referred to as NFPDP) Package I ", and its implementation and supervision were transferred to the Department of Transportation and Communications (hereinafter referred to as DOTC) through the Project Management Office for Ports (hereinafter referred to as PMO-Ports).

After that, because the development needs of the local ports were continuously high and the necessity of poverty eradication was growing, the government of the Philippines requested this project.

1.2 Project Outline

The objective of this project is to vitalize the economic activities by improving ports and related infrastructures such as buildings, utilities and access roads to the ports, in isolated areas where the main means of access with other regions was only shipping, thereby contributing to eradication of poverty among impoverished people (farmers and fishermen, etc.).

[1] Material provided by JICA

Loan Approved Amount/ Disbursed Amount	5,746 million yen / 4,286 million yen
Exchange of Notes Date/ Loan Agreement Signing Date	March, 1997 / March, 1997
Terms and Conditions	Interest Rate: 2.7％ Repayment Period: 30 years (Grace Period: 10 years) Conditions for Procurement: General untied （Procurement of the consultants is general untied）
Borrower/Executing Agency	DOTC / Ditto Guarantor: Government of the Philippines
Final Disbursement Date	December, 2008
Main Contractor (Over 1 billion yen)	Golden City Engineering and Construction (Philippines) ／ Home Construction Inc. (Philippines)・J.E. Manalo Co., Inc (Philippines) (JV)／Marra Construction (Philippines)・C.S. Santiago Construction Co., (Philippines) (JV)／Equi-Parco Construction (Philippines)・Sunwest Construction & Development Corp. (Philippines)・Atlantic Erectors Inc. (Philippines) (JV)
Main Consultant (Over 100 million yen)	Nippon Koei Co., LTD (Japan)・The Overseas Coastal Area Development Institute of Japan (Japan)・Basic Technology and Management Corporation (Philippines)・BCEOM Societe Française D'ingénierie (France)・PKII (Philippines)・Schema Konsult Inc. (Philippines)
Feasibility Studies, etc.	National Economic and Development Authority (herein after referred to as NEDA)
Related Projects	Nationwide Feeder Ports Development Project (NFPDP) Package I (1988) Infrastructure Program for Municipal Ports (1992-1994, ADB) Palawan Integrated Area Development Project (ADB) Port Projects for Small island Province (KFW) Rural Infrastructure Fund Project (USAID)

2. Outline of the Evaluation Study

2.1 External Evaluator

Satoshi Nagashima (ICONS Inc.)

2.2 Duration of Evaluation Study

Duration of the Study: December, 2011 – January, 2013

Duration of the Field Study: January 15th – February 2nd 2012, May 19th – June 2nd, 2012

2.3 Constraints during the Evaluation Study

In this project, 34 ports were constructed throughout the Philippines. From the resources and time constraints, it was impossible to conduct a site survey for all target ports. Therefore, site survey was carried out for 15 ports (direct management by the external evaluator and referral to a local consultant) and a questionnaire survey was also conducted for the rest (11 ports out of 19 ports had responded). Finally, information on 26 ports in total was collected and the project was evaluated[2].

The local ports which were targeted in this project are mainly managed by Local Government Units (hereinafter referred to as LGU), and the situation regarding collection of the statistics before and after implementation of this project is different by each LGU. Therefore, it was difficult to make cross-sectional comparison of statistics on the ports that were obtained through questionnaires and site surveys. In addition, the DOTC which is the executing agency collected statistical information on the ports constructed in the project by submission through the internet on a voluntary basis, and the acquisition of continuous statistical information from the beginning of the project to the present was also difficult. For these reasons, the statistical information of the impact assessment survey which was conducted within the framework of this project in 2008 was used for the evaluation of the effectiveness of the project.

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

3.1 Relevance (Rating: ③[4])

3.1.1 Relevance with the Development Plans of the Philippines

[2] For the site survey, eight ports which weren't covered in the impact assessment survey after completion of the project were selected. In addition, seven ports which several ports locate in near area to carry out the survey efficiently during the limited period were also selected. Therefore total 15 ports were surveyed.

[3] A: Highly satisfactory, B: Satisfactory, C: Partially satisfactory, D: Unsatisfactory

[4] ③: High, ②: Fair, ①: Low

Then President Ramos aimed at equitable growth and announced Medium-Term Development Plan in 1993 and the Social Reform Agenda (hereinafter referred to as SRA) in the following year (in 1994), and worked for the eradication of poverty as a top priority. About two-thirds of these poor were landless farmers, small-scale farmers, fishermen, etc., and raising their income was the main purpose of the SRA.

After the SRA was completed, there were several presidential elections in 1998, in 2001, in 2004 and in 2010, and not only were new policies formulated, but also the organization of DOTC which had implemented these policies changed greatly. However, reducing the poverty by economic revitalization thorough the construction of ports was aimed for in succeeding policies such as “the Strong Republic Nautical Highway” in 2003 by former President Arroyo. In addition, the current policy “Philippine Development Plan 2011-2016” is also aiming to activate the local economy by establishment of maritime routes and to improve the situation of food security and income in rural areas by development of agriculture and fisheries. Therefore, “poverty reduction through the construction of the ports” has been passed down by succeeding policies, and the basic policy hasn’t changed.

3.1.2 Relevance with Development Needs of the Philippines

The Philippines is an archipelago country and means of transport were limited to seaway in the areas where the road condition was inadequate. Human and goods exchanges were limited because the means of transportation were limited. Though agriculture and fisheries were important income sources in the rural area, the poor distribution of agricultural and fishery products was a big bottleneck for rural development in the Philippines.

At the timing of the ex-post evaluation, the situation continues as access roads were inadequate and means of transport in remote islands were limited only to maritime transport, and this situation has prevented the development of the agriculture and fisheries. Therefore the project, which aims to eliminate poverty by constructing ports in the areas where the means of the transportation are limited to only maritime transportation and activating the flow of goods, is consistent with the development needs.

3.1.3 Relevance with Japan’s ODA Policy

According to the survey and the study conducted by Japan on the actual situation and the agenda for development and the development plans in the Philippines, and Country Assistance Program for the Republic of the Philippines based on the policy dialogue with the Philippines by the economic cooperation study team, etc. dispatched in March

1999, priority goals were mentioned as (1) Strengthening the economy and overcoming growth constraints toward sustained economic growth, (c) Improving economic infrastructure (energy, transportation etc.): “overcoming the underdeveloped economic base which could be a bottleneck for economic development (especially, considering the balance between urban and rural areas and strengthening the industrial base)“, and (2) Rectification of disparities (alleviating poverty and redressing regional disparities), (a) agriculture and rural development: “improvement of basic social and economic infrastructure in the rural area”. Hence, this project is consistent with Japan’s ODA policy.

This project has been highly relevant with the country’s development plans and development needs as well as Japan’s ODA policy, therefore its relevance is high.

3.2 Effectiveness[5]（Rating: ②）

3.2.1 Quantitative Effects (Operation and Effect Indicators)

In the project, construction and rehabilitation of 34 ports were divided into five packages as Package A to Package E and were implemented as shown in Table 1 below[6].

Table 1 Name of the ports from Package A to Package E

	Name of ports
Package A	Caramoan port, San Jose port, Tamban port, Pasacao port, Real port, Polillo port
Package B	Looc port, Said port, Liminangcong port, Roxas port, Araceli port, Estancia port, Culasi port, Conception port
Package C	Banton port, Corcuera port, Alabat port, Atimonan port, Dumangas port
Package D	San Jacinto port, Aroroy port, Cataingan port, Mangingisda port, Cuyo port, San Sebastian port, Placer port
Package E	Dingalan port, Pitogo port, Sabtang port, Recode port, Alegria port, Victorias port, Ivana port, Soccoro port

Source: Material provided by JICA

As mentioned in “2.3 Constraints during the Evaluation Study”, due to the constraints

[5] Sub-rating for Effectiveness is to be put with consideration of Impact

[6] In the previous project NFPDP, two model ports were packaged separately and 25 ports were packaged as one, and it was divided into three packages. Therefore it took extra 30 months for preparation due to the scattered distribution of 25 ports, lack of machineries and manpower, and damage of natural disasters, etc. Because of the lessons learned from the previous project, it seems that the project was divided into five packages. However, for the package E, the target ports were changed after commencement of the project, the target ports weren’t located in a region and it was scattered.

of statistical information, comparison was made between before and after completion of the ports by using the statistics of the impact assessment survey for the evaluation of the quantitative effects[7]. About the operation and effect indicators for the ports of package A-D, Table 2 below shows a summary of the results.

Table 2 Number of ports of Package A to D which have more than 120% of growth rate from 1998 (before the implementation) to 2007(after completion)[8]

Indicators	Number of ports which have more than 120% growth rate / Number of all ports
Volume of cargo handling	18 ports / 26 ports (69.2%)
Number of passenger transportation	17 ports / 26 ports (65.3%)
Number of ship calls	8 ports / 26 ports (30.8%)
Volume of fish catch	8 ports / 17 ports (47.1%)[9]

Source: Impact assessment survey

On the other hand, site survey was carried out for all eight ports of the Package E, because the ports of package E weren't included in the target in the impact assessment survey and additional information was necessary. However, there was no LGU that had kept previous statistics, and there were also no statistics of the pre-construction in the feasibility study report. Therefore, quantitative evaluation of the effectiveness was attempted by using the predicted value in the feasibility study[10]. As a result, the value of statistics of six out of eight ports (except Soccoro port and Sabtang port) was found to be less than the predicted value of feasibility study.

From this result, on the trends of number of passenger transportation and volume of cargo handling, the number of ports where the value after the project completion exceeds the value before the project isn't enough and the effect is distant. For the package E, there was delay in generating the effect of the project for the following

[7] In this evaluation, there was no choice but to use only the information in 1998 and in 2007 mentioned in the report of the impact assessment survey from the constraints of available information. However, the value of statistics such as number of passenger transportation and volume of cargo handling has large annual variation and it is difficult to evaluate the project only by those results.

[8] As the growth rate of maritime sector in the Philippines is about 2% per year, and if there is a growth rate of more than 120% for ten years, it is presumably by the result of the project. However, Corcuera port wasn't operated in January 2012 because it was damaged by the typhoon (the restoration plan is in progress).

[9] Three ports which are difficult to compare the situation before and after are not included.

[10] In the feasibility study, future number of passenger transport and volume of cargo were estimated based on the plan. By comparing the value with actual value of statistic, the effectiveness was evaluated whether the ports were utilized as planned.

reasons: 1) the development needs were changed because of the delay in completion time; 2) there was a problem on the accuracy of the feasibility study; and 3) there wasn't sufficient follow-up by the DOTC (such as training) to place the operations in orbit after the completion of the construction.

In addition, it was also revealed that the number of ship calls tends to decrease after completion of the construction of the ports. As this factor, according to interviews with DOTC, it was explained that larger vessels were able to call at more ports than before because of the construction of the pier and RO-RO ramp[11], and transporting large volume of cargo and number of passengers has been possible at a time.

3.2.2 Qualitative Effects

Among the ports constructed under the project, Pasacao port, Estancia port and Roxas port have been operating smoothly because awareness of the LGU is high, and the revenue of these ports is one of the important sources for the LGU. The fact that the income of the port becomes an important source of revenue of LGU means that the revenue becomes source for conducting the public works and it is important from the viewpoint of redistributing the economic effect of the port to local population.

In this ex-post evaluation, beneficiary survey[12] was conducted to verify the benefit after the completion of the project at four ports out of the 34 ports. The result is shown in Table 3 below. According to the results of this survey, the benefits were: reduction of travel time (the percentage of beneficiaries who answered "there was a benefit" was 48.7%), reduction of loading and unloading time for cargo (the percentage of beneficiaries who answered "there was a benefit" was 41.1%), reduction of damaged cargo (the percentage of beneficiaries who answered "there was a benefit" was 23.2%), increase the volume of transportation of cargo (the percentage of beneficiaries who answered "there was a benefit" was 21.4%), and increase of volume of fish catch (the percentage of beneficiaries who answered "there was a benefit" was 19.5%). For the reduction of travel time and reduction of loading and unloading time for cargo, half of the beneficiaries feel that there were some benefits. However, for reduction of damaged cargo and increase in the volume of transportation of cargo, 80% of the beneficiaries didn't recognize a significant change after the project. These benefits are mainly for the business operators of cargo and passenger boats, and it seems that it

[11] RO-RO ship (roll-on/roll-off ship) is a kind of cargo boat which is installed a ramp as a ferry and has a deck boat for cars to store cargo trucks etc.

[12] Beneficiary survey was conducted by a questionnaire for the users of Pasacao port, Tamban port, Estancia port and Alegria port at the survey time and samples were randomly selected.

isn't reflected in the results of the beneficiary survey.

Table 3 Result of the beneficiary survey at 4 ports

	Yes	No
Reduction of travel time	48.7%	51.3%
Reduction of loading and unloading time for cargo	41.1%	58.9%
Reduction of damaged cargo	23.2%	76.8%
Increasing volume of transportation of cargo	21.4%	78.6%

Source: Beneficiary survey

3.3 Impact

3.3.1 Intended Impacts

(1) Economic revitalization of the surrounding area

In the ports visited in this survey, Pasacao port, Tamban port, Estancia port, Dumangas port, Mangingisda port and Roxas port, ten years have passed since the completion of construction and the access roads to neighboring areas have been constructed. Because of this, these ports are functioning as the hub ports to transport cargos and passengers between the markets and surrounding islands and barangays[13] for which the means of transport are limited to only maritime transport. In addition, job creation such as porters and new openings of restaurant have been seen in the many of the ports constructed in this project, and it thus contributes to activate the peripheral economy.

Photo: Transshipment of fish in Estancia port

Photo: Passenger boat from surrounding barangay to Tamban port

On the other hand, though the operation of a passenger and cargo boat was planned in Alegria port, the operation of the boat was stopped after one month of the opening of

[13] Smallest local governing unit of cities and towns in the Philippines

the port because the boat couldn't be anchored safely for rough waves. For that reason, it is considered that the aim of the project to development rural economy by increasing number of passengers and cargo handling with other ports hasn't been achieved adequately.

(2) Additional investment by self-help efforts of the Government of the Philippines

In Dumangas port and Aroroy port which are operated by PPA, PPA constructed a RO-RO ramp, pier, etc. under its own funding. In particular in Aroroy port, EIRR[14] was 18.32% in the feasibility study, but it had become 52.78% when it was recalculated in 2007. This is because Aroroy port becomes part of the nautical highway of the RO-RO ferries and the economic effect is high compared with other ports. These ports have re-invested in the port facilities based on this project and utilized them effectively, and the impact of the project has been high.

Photo: Re-invested part of the Dumangas port

3.3.2 Other Impact

3.3.2.1 Impacts on the natural environment

By the result of the interview survey in DOTC and each port, no major negative impact on environment has been seen in the project.

3.3.2.2 Land Acquisition and Resettlement

According to the interview survey in DOTC, all land of the project sites was the property of the Philippines government and no problem occurred in the land acquisition and resettlement.

3.3.2.3 Unintended Positive/Negative Impact

According to the transition of LGU's population and revenue classification[15] in the target LGU of the project, the ports from package A to package D where the revenue classification of LGU increased by more than one step from 1995 to 2012 were 23

[14] Economic Internal Rate of Return

[15] In Philippine, LGU is classified by the level of the income from 1st class (more than 50 million php) to 6th class (Less than 10 million php).

ports out of 26 ports. Among them, there were 14 ports where the revenue clarification of LGU increased by two or more steps. For Dumangas LGU, it increased three. There were only two ports in package E where it was possible to compare the revenue classification data before and after the project, and both of them rose by one step. For the port where revenue classification of the LGU increased two steps, it seems that the project contributed to increase the revenue of the LGU by the economic impact[16] of increasing the number of transported passengers and the volume of cargo after the construction of the port because the timing of the increase matched the timing of the construction period.

By the analysis above, even though there are lots of ports where the tendency of increase on volume of cargo or number of passengers after the project cannot be seen, the income of the ports accounts for substantial fraction of income source for some LGUs, and LGUs regard the existence of the ports as important, and it seems that the ports have contributed to 70% of LGUs increasing the level of the revenue classification. In addition, in the port managed by PPA, additional investment was made to construct piers, etc. and the ports were utilized more effectively. For that reason, the impact of the project has been seen.

This project has somewhat achieved its objectives, therefore its effectiveness is fair.

[16] For the income of LGU in 2010, the percentage of the income of Pasacao port was approximately 2% and the income of Estancia port was approximately 7% in the total income including revenue share from the central government. In addition, on the percentage of the income locally collected except revenue share, the percentage of the income of Pasacao port was approximately 11% and that of Estancia port was approximately 21%.

3.4 Efficiency (Rating: ②)

3.4.1 Project Outputs

34 ports were constructed or rehabilitated in the project. The plan and the actual results are shown in the Table 4 below.

Table 4 Target ports in the project (the plan and the actual result)

Planned	Actual result	Main port facilities and support facilities
1) Caramoan port 2) San Jose port 3) Tamban port 4) Pasacao port 5) Real port 6) Polillo port 7) Looc port 8) Said port 9) Liminancong port 10) Roxas port 11) Araceli port 12) Estancia port 13) Culasi port 14) Conception port 15) Banton port 16) Corcuera port 17) Alabat port 18) Atimonan port 19) Dumangas port 20) San Jacinto port 21) Aroroy port 22) Cataingan port 23) Mangingisda port 24) Cuyo port 25) San Sebastian port 26) Placer port 27) Baler port 28) Aguining port 29) Casiguran port 30) Daan Banwa port 31) Poblacion port 32) Milagros port 33) Tangub port 34) E.B. Magalona port 35) Sabtang port	1) ～26) No change 27) Dingalan port 28) Pitogo port 29) Sabtang port 30) Recodo port 31) Alegria port 32) Victorias port 33) Ivana port 34) Soccoro port	Main port facilities constructed in the project - Pier - Causeway (including renovation) - Reclamation - Breakwater - Stair landing - Navigation - RO-RO ramp - Dredging Main support facilities constructed in the project -Access road - Multi-Purpose shed (with port office and waiting room) - Ice storage - Toilet - Water supply and sewerage system - Electricity supply system - Yard lighting - Guard house - Fence and gate Others - Technical assistance for strengthening the operation and the maintenance

Source: Material provided by JICA

In the beginning, the project targeted 12 ports which had already finished the detailed design in the previous project, NFPDP and 23 ports which had not yet finished the detailed design were selected. However, even for 12 ports which had already finished

the detailed design, review and revision of the target port and the target component were carried out by the consultant again after the beginning of the project. For the revision of the target components, it was reasonable that the main reasons to change were for more effective use as changes in the natural environment (such as changes in water depth by siltation) or expansion of the target area after the feasibility study. In addition, for changes in the target ports, it was also reasonable that the main reason of the changes was decreasing the importance of the port because of improvement of the roads in their partner ports[17] or low EIRR at the target ports.

According to DOTC, it is essential to review the scope of works of the project after loan approval, and difficult to eliminate the review works. Therefore it is necessary to improve as 1) the Philippines government includes extra period in the project schedule to carry out the review of the feasibility study result after commencement of the project, and 2) the Philippines government simplifies and integrates the procedure such as having approval each time from NEDA when part of the contents of the project changes.

3.4.2 Project Inputs

3.4.2.1 Project Cost

On the cost of the project, total cost in the plan was estimated as 7,661 million JY (the part of ODA Loan had been 5,746 million JY) and the actual total cost was 5,529 million JY (the part of ODA Loan had been 4,286 million JY), and it is lower than planned (72% by comparing with the plan).

On the total cost, the difference of estimated and actual cost was 2,132 million JY. It is considered that is because the exchange rate of Yen against Peso was approximately 4 JY in the planning stage (in 1996), but it decreased to approximately 2.34 JY[18] in 2008.

3.4.2.2 Project Period

On the project period, L/A signing was planned in March 1997 and the beginning of the civil works was planned after one year and nine months, and completion of the works estimated four years and four months, and the total period was planned for six years and one month (73 months). The actual project period was between September 1997 and December 2008, and the total period was for eleven years and three months (135 months). As a result, the actual project period was longer than planned (185% compared to the plan).

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[17] The definition of partner ports in Philippines is the port of other party which mainly transports the cargo and passengers. In case of constructing cargo and passenger ports, impact of the development will be higher if a port and the partner ports are constructed at once.

[18] The average has been calculated based on the annual data of 2008 from OANDA.

In the project, the project period was extended five years and ten months by the procedure of change of the scope of works of the facility and change of the target ports in the Philippines government. According to the interviews survey in DOTC and documents provided by JICA, the major reasons for this are as follows.

(1) Regarding ports which change the contents of the facilities, it was necessary to re-evaluate the feasibility study as requirement of NEDA, and procurement of the consultant and the contractors was delayed.

(2) Because of increased project costs of packages A-D, target ports for the package E were changed after the beginning of the project and it took more time for the process for obtaining the additional allocation of the budget from the Department of Budget Management for package E.

(3) Postponement of the meetings for the selection of the ports for package E due to the change of high-ranking officials of DOTC, prolonged the procedure of selection of target ports of package E.

Because of the delay of the process above, the packages A-D of the project were delayed 16-20 months and it took approximately five extra years to complete the pre-construction and construction activities package E. Thus, for the project period, it can be cited that the factors causing the planned project period to be exceeded were the change of target ports in the package E and the long procedure of its change. In addition, the experience under the NFPDP, the project sites of the packages A-D were grouped in the neighboring regions but the project sites of the package E had to be scattered about because the selection of the target ports was started after the start of the project. As seen above, the effectiveness was decreased on the side of the construction.

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

In the project, the ports in the packages A-D had already been completed and started operation in 2003 and the impact assessment survey was carried out by DOTC in 2008. The result of the EIRR is compiled as shown in Table 5 below.

Table 5 Revised value of EIRR on Package A-D

	Package A-D
Number of ports where the EIRR at the time of impact assessment survey (in 2007) was higher than the one at the feasibility study (in 1998)	21 ports / 26 ports[19]
Number of ports where the EIRR was over 15% (baseline set by NEDA) at the time of impact assessment survey (in 2007)	26 ports / 26 ports

Source: The data in the impact assessment survey is assembled by the writer

According to the impact assessment survey, the EIRR of all ports in packages A-D exceeded more than 15% which the value was set by NEDA, and the EIRR after the completion of the project was higher than the EIRR calculated before the project at approximately 80% of ports. In addition, the EIRRs of Dumangas port and Arroy port were greatly improved (from 21.59 % to 86.36 % for Dumangas port and from 18.32 % to 52.78 % for Aroroy port). The reason for the difference can be considered that the number of transported passengers and volume of cargo handling increased largely compared with the plan.

For the ports of package E, revision of the EIRR was done at each port during this ex-post evaluation study. The result was assembled as shown in Table 6 below.

Table 6 Revision of EIRR for Package E

	Package E
Number of ports which the EIRR at the ex-post evaluation study (in 2012) is higher than the one at the feasibility study (in 2000)	1 port / 8 ports (Note)
Number of ports where the EIRR is over 15% (baseline set by NEDA)	3 ports / 8 ports (Note)

Source: Result of site survey

(Note) To evaluate the whole picture of the project, 1) some ports where hadn't started, 2) some ports where had just started the operation, and it was impossible to calculate the EIRR, are also included in the Figure.

On the ports of the package E, three ports out of eight ports exceeded the 15% EIRR set by NEDA and the result was lower than in packages A-D because all ports exceeded 15% of the EIRR in packages A-D. However, for the package E, the operation and the management of four ports hadn't started or had just started and it

[19] However, Corcuera port was damaged by typhoon and currently not used. Repairing is being implemented as of January, 2012.

was impossible to calculate. This was one of the factors in lowering the result of EIRR for the package E.

Although the project cost was within the plan, the project period was significantly exceeded, therefore efficiency of the project was fair.

3.5 Sustainability (Rating: ③)

3.5.1 Structural Aspects of Operation and Maintenance

The 34 ports constructed in the project were different in terms of the scale and the function. Four of middle scale passenger and cargo ports had been transferred to PPA after completion of the project and directly managed by PPA now. The operation of the other 30 small scale passenger and cargo ports and fish ports had been transferred to LGU, and these ports are still managed by LGU.

For the ports managed by LGU, Port Management Unit (hereinafter referred to as PMU) organized by LGU is the management body. Though all LGU ports are run by PMU, the structure of the PMU is varied. For example in the LGU ports visited in the site survey, full-time LGU employees are working as the port managers in Tamban port, Estancia port and Roxas port, the port manager in Pasacao port has another post in the LGU, and in Mangingisda port, a port manager (LGU employee) in the central fish port manages not only the Mangingisda port but other satellite ports.

According to the interview survey and the questionnaire survey, lack of professional staffs is seen in the ports run by LGU. However the management of most of the LGU ports in the project is just to collect utilization fees and no critical problem has been seen in the management by the LGU. However, according to the interview survey with DOTC, some LGU change the port managers every three years at the timing of mayors' terms, and it causes the problems in continuity of port management of the LGU ports.

On the other hand, in the middle scale passenger and cargo ports managed by PPA; Dumangas port, Aroroy port, Cuyo port and Liminangcong port, the port managers are PPA staffs and the management itself is normally entrusted to the private cargo handling companies. In the case of Dumangas port, a PPA staff who had professional training on port management was a port manager and there was no problem in the management.

The project management was done by PMO-Ports. After the completion of the project in 2008, PMO-Ports ceased its activities but a web site "dotcfeederports.asia" is being operated by DOTC to collect the statistics on the operation and the project effect,

and to measure the capacity of the LGU. DOTC is collecting information of each ports through the website; however, 1) submission of the statistics is on a voluntary basis, 2) there are some ports which don't have internet connection, and 3) after renewal of the website, some port managers don't know how to fill in or login, and there are only seven ports out of 34 ports which submit the statistics every month as of January, 2012. In addition, there is another reason for the low submission rate in that DOTC doesn't show them how DOTC utilizes the collected data. In this manner, the monitoring body of the project has been unclear after the project completion.

To deal with this situation, DOTC has prepared a department order and is requesting the monitoring and technical assistance to PPA and Philippines Fisheries Development Authority (hereinafter referred to as PFDA).

For the monitoring activities of ten ports which are categorized as the fish ports, a Minute of Agreement (hereinafter referred to as MOA) was signed with DOTC and PFDA in 2010 and PFDA is currently trying to have MOA with each LGU of the ports (LGUs of Dingalan port and Recode port have signed the MOA at the timing until June 2012). When LGUs sign the MOA, LGUs can receive technical assistance from PFDA as participating training courses but there is also duty to pay equivalent to 10 % of net income to PFDA. For that reason, some LGUs like Estancia and Pasacao refuse to sign the MOA because there isn't necessity for the technical assistance and it is unreasonable to pay 10 % of net income to PFDA. In addition, PFDA also doesn't have any budget for site visits and the conclusion works of MOA haven't progressed smoothly.

On the other hand, though DOTC is moving forward with the procedure for MOA with PPA on the monitoring activities for the ports which were categorized as cargo and passenger ports (22 port of NFPDP and 21 ports of the project), PPA hadn't signed yet as of June 2012. According to the interview survey, the reason for the delay is; 1) some fish ports were included in the list for target ports, 2) MOA hasn't approved yet because of replacement of high officials such as the Department Secretary after change of the President. After the signing of MOA, PPA will start the procedure to have an MOA with LGU. Though LGU can receive technical assistance such as introducing a reporting system and training opportunities after sighing MOA, LGU has to pay 10 % of net income to PPA as in the case of PFDA. For that reason, as in the example of PFDA, there is a possibility that some LGU won't sign the MOA.

In this way, there are some problems on the actual monitoring system of DOTC and future monitoring system by PPA and PFDA. However, the main operation and management bodies of the ports are LGU and PPA, and it is confirmed from interview

and questionnaire survey that currently there is no problem on collecting utilization fee and management of the budget, etc. by LGU's self-help effort. In addition, high ownership of LGU was seen for the constructed ports as the ports were repaired or expanded by LGU's proprietary budget in eight ports visited in the site survey. Therefore, the little problem of the monitoring system seems not to be a big bottleneck for the project.

3.5.2 Technical Aspects of Operation and Maintenance

Except for the ports which are managed by PPA, an organization which has special technique for the port operation, the management of the LGU ports is carried out by the municipal officers who don't have any expertise on the port management. In the LGU ports, there are no permanent staffs of the port operation specialists or civil work specialists and lack of the technique is seen. To reinforce the lack of the technique of LGU, the training shown in Table 7 was conducted for LGU and PMU in the framework of the project. In addition, ten ports out of 34 ports were selected between 2009 and 2010, and additional training was conducted for the organization reinforcement by the local consultant.

Table 7 Trainings which have already been carried out

Name of training	Implemented year
Training for the operation and maintenance	1999 - 2000
OJT	- 2005
Training for Web base record, report and the monitoring system	2008
Additional training	2007 - 2008

Source: Document provided by JICA, Inception Report of "Institutional Strengthening Assistance for the Social Reform Related Feeder Ports Development Project"

Some LGU ports such as Roxas port, where the third party evaluator visited in the site survey, regarded the contents of the training such as visiting other ports to be useful. However, there were some cases where the contents of the training weren't passed over to the successor when the port manager was shifted. On the other hand, there were also some cases where new port managers learned the port operation through the Feeder Port Operation Manual (prepared by DOTC in this Project) which was took over from their predecessors. For that reason, considering the current situation, it's more effective to send the port operation manuals, etc. to the port managers regularly once in several years rather than organizing a training which is more expensive.

As seen above, it's seen that technical capacity is lacking in the LGU ports. However, most of the ports haven't installed some equipment such as an ice making plant or a refrigerator which is necessary for the regular maintenance. In addition, the operation of the port is just collecting utilization fees from users and it's simple. For that reason, the operation and the management of the ports are possible even if LGU officers don't have special expertise.

3.5.3 Financial Aspects of Operation and Maintenance

On the financial aspect, in seven out of eight LGU managing ports that the external evaluator visited in the site survey, it was confirmed that utilization fees were collected based on the municipal ordinance or port code and were entirely deposited to LGU municipal treasurer (municipal ordinance wasn't yet approved in San Sebastian LGU at the time of June 2012 and the port hadn't collected the utilization fees yet). On the expenditure, it is recorded by the municipal treasurer and some PMU didn't know the amount of the expenditure.

For the case of the PPA ports, PPA entrusts the operation to cargo handling companies and the income is collected by the company.

The information of financial aspect collected through site survey and questionnaire survey are written up as shown in Table 8 below.

Table 8 Financial situation of the 18 ports in the project

	Number of ports
Positive figure in last three years	12
Negative figure once in last three years	2
Negative figure twice in last three years	3
Negative figure in last three years	1

Source: Results of site survey and questionnaire survey

In consequence of interview surveys at the site and questionnaire surveys, 18 ports submitted the financial data and 12 ports showed positive figures in the last three years. On the other ports, there were negative figure once or twice in last year except Cuyo port. For Cuyo port, negative figure continued in last three years but LGU filled in gaps. For the LGU ports, the salary of the port managers is paid by LGU and LGU allocates the budget for repairing the facilities of port. For that reason, it is regarded that the financial situation of LGU ports is in good condition.

As a result of site survey at Alegria port, the balance was negative in 2009 and 2010.

However, the LGU explained that this is because the causeway had collapsed in the typhoon in 2008 and a large amount of budget was necessary for repairing. However, the LGU (Buruanga) allocates 50,000 php every year for the operation of Alegria port and it was also confirmed that they were also intending to manage the port and even let the negative balance continue for the aspect of the social service.

Interview and questionnaire surveys were carried out for LGU ports about the usage of the income and 15 ports responded. It was confirmed that only two ports, Conception port and Dingaran port, had special account only for maintenance of ports. For the other ports, the income used as a general account. However, even at the LGU ports which only have a general account, part of the income is used for repair of the ports as necessary.

On the PPA ports, the system is different from the LGU ports. The income is collected and deposited at PPA central office through PPA branch offices, and when money is necessary to repair the ports, budget is distributed from the PPA central office.

In this way, the short term cash flow is good in many ports. Even some ports, such as Alegria port where the balance is negative, the LGU offered support by allocating the budget every year and there was no negative effect for the management.

In addition, according to the survey results of income and expenditure of LGUs which have managed each port from 2009 to 2011[20], more than 80% of LGUs have available capacity in balance such as one million php which is expected to be spent on repairing minor civil works. Therefore, it is expected that LGUs assist the operation and the maintenance of the facilities even though the income of the ports hasn't been in the special account. Furthermore, it was confirmed during the interview survey at PPA that the financial base of PPA has already been established, and it is expected that PPA will continuously assist the PPA ports in the future.

3.5.4 Current Status of Operation and Maintenance

For the ports of packages A-D, most of the ports are managed properly. For the ports of package E, four ports haven't started the operation or just started the operation and it is too early to evaluate the status of the operation and the maintenance.

According to the interview and questionnaire surveys, the external evaluator confirmed plans to repair or renew the facilities and the equipment of Pasacao port, Polillo port, Looc port, Roxas port, Estancia port, Corcuera port, Dumangas port and

[20] The data has been procured form the homepage of Department of the Interior and Local Government

Dingalan port. In addition, it was also confirmed that at Estancia port, Dumangas port, Real port, Alabat port, Arroy port, Placer port, Recodo port, Alegria port, Roxas port and Caramoan port, LGUs have repaired or renewed the facilities and the equipment.

Photo: Repaired part of causeway (Alegria port)

Photo: Repaired part of the ports (Estancia port)

In the preceding projects of the NFPDP, which was carried out by Japanese ODA Loan in the Philippines, several problems were seen;

(1) Though PPA had the ownership of the ports, the details about the operation had not been determined, and the operation and maintenance structure had not been established. Therefore, only three ports out of 27 ports requested to transfer the management from PPA to LGU. As a result, the port management unit had not collected the utility fee and the budget system for the operation and the maintenance of the project was also not established.

(2) The training in operation and maintenance skills for LGU was supposed to be implemented when the PPA relegated the management to LGU.

By the lesson learned from NFPDP, four ports out of 34 ports are directly operated by PPA, and the operation of 30 ports has been already transferred to the LGUs under this project.

In this way, based on the experience in the works of NFPDP, the project implementation and the operation and maintenance have been improved.

Because of the analysis above, no problem is seen for the PPA ports in the operation structure, the operation technique and the financial aspect.

For the ports managed by LGU, minor problems are seen for monitoring structure for the operation by DOTC but no severe problems have been seen. In addition, the operation of

the LGU port is just collecting utilization fees, and it isn't so complicated and no special technique for the operation is required. The equipment which requires the regular maintenance was rarely introduced and high technical skills for hardware side aren't required, and there isn't big problem in the technical aspect. Furthermore, big problem hasn't seen for short term cash flow in the financial situation of LGUs and financial capacity of LGU was adequate to support the operation. Lastly, concerning the situation of the operation and the maintenance, the many cases of own effort by LGU have been seen to fix damaged facilities and the equipment, and the assistance by the government of the Philippines was also seen.

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

Column　Detailed Analysis for Fish Ports

Infrastructure construction for fisheries sector is underway by using fisheries grant in our ODA. In the future, in order to carry out the efficient formation of similar projects, it is important to know what kinds of factors the fishing port projects that are utilized properly and efficiently had.

In this ex-post evaluation survey, four fishing ports in the project were targeted and a more detailed analysis was carried out to extract good practices for port management, the livelihoods improving for fishermen, and some factors between fishing ports used and fishing ports not used from the viewpoint of the user. The following is a summary of the results of that analysis.

(1) Factors for successful operation and management of the port

According to the analysis on the appropriate operation and the management structure, all port managers didn't have any expertise for the port operations in 4 target ports and there was no significant difference. However, there is a significant difference depending on whether they are allocated full-time staffs for the port operation following the port manager. Problem was pointed out from DOTC that the experienced port manager sometime shifts after the election of the mayor. For that reason, it is important to allocate full-time staffs because the port operation won't be affected by the change of the mayor.

In addition, in the case of Estancia port and Pasacao port, the mayor was directly and eagerly involved in the port operation and was actively involved in solving the problems of conflict with the PPA port. For that reason, mayor's dedication to the operation and the leadership are also important factors.

Regarding the operation and the management technique, there was no significant

difference among four ports. Even Estancia port, where the situation of the operation and the maintenance goes smoothly, the record of the maintenance wasn't kept and no spare parts were stocked. One of the key factors concerning why the operation and the maintenance were working except Alegria port is that the operation itself is simple. In these ports, there are no facilities and equipment such as an ice making plant or a refrigerator that require regular maintenance, and the ports aren't involved in the transaction of fish or sale of ice, and PMU just collects the utilization fees such as fish landing fee and parking fee, etc. For that reason, it could be better to enhance the sustainability if the functions of the ports are demarcated so that the government side just supports the basic facilities of the ports as the causeway or the pier, and the private sector invests additional facilities such as ice making plants and refrigerators by their effort.

Regarding the financial aspect of the operation and the maintenance, a system to collect fees, such as fish landing fee and parking fee in accordance with the municipal ordinance has been established, and there was no significant difference in all four ports visited. However, for the Estancia port, enough personnel is working for fee collection and passenger and cargo boats always use the ports. Therefore, there is a sufficient income. Normally, balance of fish ports isn't stable because the fishing activities depend on the season and the climate, and the income is unstable. For that reason, it is important factor to diversify the income sources to stabilize the balance of the ports.

(2) Factors of fishing port contributing to the enhancement of the livelihood of fishermen
Regarding the marketing system, in Estancia port, the middlemen are coming to purchase regularly from the outside because roads to major cities have been already connected, and stable landings can be expected. Therefore, it can be seen that purchase price of fish has been rising by competition principle among the middlemen, and that is the reason that Estancia port is being used well. There is also a local market next to the port, and it is connected directly to seafood demand in the region.
On the other hand, at the four ports including Estancia port, it was confirmed that the activities of the fishermen's association aren't so active. For this reason, it is considered that fishermen haven't realized the benefits.

Regarding improvement of the productivity of the fishing activities, the dominant point in Estancia port compared to others is that it is easy to access the fuel, fishing gear, spare parts, etc. around the fishing port. Because of this factor, it is speculated that the productivity of the fishing activities is enhanced and Estancia port is widely used.
On the other hand, at the four ports including Estancia port, it was found out that there are

few opportunities for financial and technical assistance on the national level or LGU level, and there is room for improvement on the areas.

For activities other than fishing, there are many cargo and passenger boats in Estancia port, Pasacao port and Tamban port even though these ports are classified into fishing ports. Because many users use the port, employment was created, restaurants and grocery stores lined around the port, a market was constructed, and the place around the port is developing. It creates a local demand for marine products and a synergistic effect has been seen.

Photo: A market constructed near fishing port (Pasacao)

(3) Factors of utilized fishing port at the view point of fishermen

As the results of the beneficiary survey, at Estancia port, which is the most used port among the 4 ports, “fuel, fishing gear, spare parts are available near the port” and “easy access to ice making plants and refrigerators” are the most factors unlike the other ports. Fishermen consider that an infrastructure development around the fishing port has been the most important factor and if these factors are added, it may contribute to the improvement of productivity of the fishermen and it might become an incentive to use the port.

4. Conclusion, Lessons Learned and Recommendations

4.1 Conclusion

This project had been implemented to activate rural economic activities by constructing 34 ports and related facilities like access roads in the Philippines, thereby contributing to eliminate poverty among impoverished people (farmers, fishermen, etc.).

This project is in accordance with the policies and the development needs of the Philippines, and aid policies of Japan, thus the relevance is high. Since additional investment by the government of the Philippines has been seen for some ports and income classification of some of the municipalities which are the location of the ports was improved, the impact by the implementation of this project has been observed for some sites. However, the situation of the effect of the project differs according to the ports and the statistical information to prove the effect isn’t sufficient. For that reason, overall evaluation of the effectiveness and the

impact is fair. Moreover, as the project period was extended to a large extent because of the reselection of the project sites and the delay of selection of the contractors, the efficiency is fair. Many ports are managed and maintained properly by local governments because of adequate scale of the facilities and equipment, the ownership of local governments is high, most of the ports are maintained and managed by their own efforts, and the sustainability is high.

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

4.2 Recommendations

4.2.1 Recommendations to the Executing Agency

It was considered that some ports don't have an internet connection and not all ports currently submit the port operation data. However, there is other reason for the situation. It seems that it is unclear how the monitoring body utilizes the collected data and that is why the utilization of the website hasn't increased.

Even after transferring the monitoring function to PPA and PFDA, DOTC desires that PPA and PFDA continue to operate the website "dotcfeederports.asia". DOTC, PPA, and PFDA have to understand the merit of the collection of the statistics, and the utilization of the data should be carefully examined and it is necessary to show the clear objective to collect the data to each port.

The port managers in LGU ports don't have special knowledge on the port management in a lot of cases and they normally don't practice a handover to their successors. An operation manual which had been prepared in the project was used in some ports but it was also found that the manual was lost in some cases. Though the management of the LGU ports is simple, it is recommended to distribute the manual regularly to LGU ports and to assure the sustainability of the management of LGU ports.

For the indicators of the operation and the effect of the project, it seems that four indicators are suitable: "volume of cargo handling", "number of transported passengers", "number of ship calls" and "volume of fish catch". However, the unit of values and items of "volume of cargo handling" and "volume of fish catch" are currently uneven and it is difficult to compare by time and by ports. To utilize collected statistical result effectively, it is necessary to standardize the unit of the statistic "ton" only and record it. In addition, annual variability is high in these statistical indicators and it is necessary to take care about the usage of the statistic (e.g. calculate the average, etc.)

4.2.2 Recommendations to JICA

N/A

4.3 Lessons Learned

- In the project, some target ports had been changed during the review of the feasibility study after the commencement of the project, and the completion of the project was delayed five years because of the factor. For the countermeasure of the situation, it is recommended to prepare the project plan including the review period at the examination stage of the project, and it is possible to minimize the change of the project period as much as possible and progress as planned.

- In the project, quantitative indicators for effectiveness haven't been set. In the project as a lot of ports are constructed at once, it is necessary to set quantitative indicators showing how the effectiveness of the project is evaluated (e.g. rate of the ports which achieve the indicators).

Comparison of the Original and Actual Scope of the Project

Item	Original	Actual
1.Project Outputs		
Number of target ports	35 ports	34 ports
Port facilities	- Pier - Causeway (including renovation) - Reclamation - Breakwater - Stair landing - Navigation - RO-RO ramp - Dredging	As planned
Support facilities	-Access road - Multi-purpose shed (with port office and waiting room) - Ice storage - Toilet - Water supply and sewage system - Electricity supply system - Yard lighting - Guard house - Fence and gate	As planned
Consulting service	1 unit	As Planned
2.Project Period	March 1997 – May 2003 (73 months)	September 1997 – December 2008 (135 months)
3.Project Cost		
Amount paid in foreign currency	3,357 million yen	3,921.12 million yen
Amount paid in Local currency	4,304 million yen (1,076 million Php)	1607.83 million yen (803.91 million Php)
Total	7,661 million yen	5,528.95 million yen
Japanese ODA loan portion	5,746 million yen	4,286 million yen
Exchange rate	1Php＝ Approx.4 yen (As of 1996)	1Php ＝ 2.42 yen (Average between September, 1997 and December, 2008)