

Nicaragua

Ex-post Evaluation of Japanese Grant Aid Project
“The Project for Improvement of Fishery Facilities at
San Juan del Sur Port in the Republic of Nicaragua”

External Evaluator: Keiko Asato,
Foundation for Advanced Studies on International Development

0. Summary

The Sun Juan del Sur (hereinafter referred to as “SJDS”) fishing port used to be where the largest amount of fish was brought to docks compared with other fishing ports on the Pacific Coast in the Republic of Nicaragua. However, the discharging efficiency was low, and the port had problems in maintaining the freshness of fish caught as well as in respect to post-harvest losses. Against this background, this project was carried out with a view to reducing post-harvest losses through improvements to the discharging efficiency as well as maintaining the freshness of fish caught, thereby increasing the total catch of fish to be handled at this port.

Through the implementation of this project, although no improvement has been seen in terms of the discharging efficiency, the freshness of fish caught has improved and the objective of reducing post-harvest losses has partially been achieved. On the other hand, due to the significant effects of external factors such as the decline of fish stock in nearby waters, the objective of this project, i.e. to increase the total catch handled at this port, has not been met. Therefore, the overall effectiveness of the project is low. At the time of ex-post evaluation, another project plan has been formulated to make additional investments and to transform the facilities constructed under this project into a base for processing and exporting the catch, in order to achieve the Overall Goal at the time of the ex-ante evaluation, i.e. “to improve the lives and the revenue of local fishermen”. However, in spite of efforts having been made by relevant persons in our partner country as well as in Japan, the project implementation structure is far from stabilized and deficits have continued due to the effects of political regime change. In this respect, the sustainability of the project is low. On the other hand, measures are being undertaken at the moment to develop an implementation structure (e.g. recruitment of persons who have been involved in similar projects, organizational restructuring, etc.) and to ensure sufficient budgets (i.e. approval for loans from private financial institutions) at the time of Ex-post evaluation. Should these positive elements be pursued in the future, it is expected that the sustainability may rise.

The partial achievement of the Project Purpose can be attributed to the internal factor of the project design, which was formulated based on activities that might have been difficult for our partner government to carry out. In addition, even though the Overall Goal, “to improve the lives and the revenue of local fishermen” is still in place, as the policy of utilization of the port facilities has changed due to the political regime change

after the completion of this project, the approach to implement the Project may not be fully compatible with the policy of the current government. In this context, the relevance of this project is fair.

In light of the above, even though we can observe the effect of the Project at certain level, the Project Purpose has been achieved partially due to change of the external factor and unfeasible project design. Therefore, this Project is evaluated to be unsatisfactory.

1 . Project Description



Map of Project Site



Overview of facility of SJDS port

1.1 Background

SJDS is a fishing village located on the Pacific Coast. The port used to be a major one, accounting for approximately 30% of the total volume of fish discharged from the docks along the Pacific Coast of Nicaragua and approximately 16% of the total catch nationwide. However, it faced some issues in discharging efficiency and maintaining the freshness of fish, and post-harvest losses became a problem.

The Nicaraguan government made a request for aid in the form of a grant to renovate the fishery facilities and equipment to increase the handling and sales volume of fresh fish at SJDS port.

1.2 Summary of the Project

The objective of this project is to reduce post-harvest losses by renovating the fishery facilities and equipment at SJDS port.

Grant Limit/Actual Amount	Grant	119.6 million JPY / 119.6 million JPY
Exchange of Notes Date		June 2005
Implementing Agency		ADPESCA (Administración Nacional de Pesca y Acuicultura) (ADPESCA was restructured and

	transformed into INPECA, Instituto Nicaragüense de la Pesca y Acuicultura, as of January 2007.)
Project Completion Date	January 2007
Main Contractor	WAKACHIKU CONSTRUCTION CO., LTD
Main Consultant	ECOH CORPORATION
Basic Design	(First) October 2004 - March 2005 (Second) April 2005 - June 2005
Related Projects (if any)	<p>< Technical cooperation ></p> <ul style="list-style-type: none"> • Five experts (till 2002) • Two JOCV personnel (till 1998) • Training in Japan (technical training) for eight trainees (till 2002) • Overseas senior volunteer personnel (for two years from 2002) <p>< Grant aid project ></p> <ul style="list-style-type: none"> • Project to develop small-scale fisheries on the North Atlantic Coast (in 1995) <p>< Other ></p> <ul style="list-style-type: none"> • The Netherlands “Comprehensive Development Plan for Small-scale Fisheries in Pearl Lagoon” (from 1998 to 2001)

2. Outline of the Evaluation Study

2.1 External Evaluators

Keiko Asato, Foundation for Advanced Studies on International Development

2.2 Duration of Evaluation Study

Duration of the Study: November 2010 – October 2011

Duration of the Field Study: January 23, 2011 – February 2, 2011

May 14, 2011 – May 20, 2011

2.3 Constraints during the Evaluation Study

First of all, the numerical indicators of the amount of post-harvest losses and the total amount and volume handled at the port, as an indicator to directly measure the degree of achievement of the Project Purpose, were not set at the time of the ex-ante evaluation. Furthermore, at the time of the ex-post evaluation, the SJDS port had not identified the volume of post-harvest losses and it was unable to obtain the numerical information as

well as the total volume handled at the port. As a result, the degree of achievement of the objective was indirectly assessed by the degrees of achievement of what would have an effect thereon, i.e. “measures for maintaining the freshness of fresh fish” and “the discharging efficiency”. These parameters show the similar effect with the effect of original two indicators; the amount of post-harvest losses and the total amount and volume handled at the port. Therefore, the adoption of these indirect parameters is considered appropriate to measure the effect of the Project Purpose. Moreover, with regard to the impact on the lives of local fishermen, the number of fishermen to be interviewed was limited due to their absence in order to undertake their work at sea (interviews were held with 81 of 208 registered fishermen).

Secondly, with regard to the factors that affect the project effectiveness, it was difficult to obtain the numerical information concerning the volume of fisheries resources, and so the evaluation was performed in reference to data provided by the secondary source. In addition to these constraints, sufficient information regarding the background of the project formulation could not be obtained either.

3. Result of the evaluation (Overall rating D¹)

3.1 Relevance (Rating : ②²)

3.1.1 Relevance to the Development Plan of Nicaragua

At the time of the ex-ante evaluation, under the National Development Plan of the Republic of Nicaragua, “Strengthened Growth and Poverty Reduction Strategy” (“SGPRS” hereinafter) (July 2001), the fishing industry was a valuable foreign exchange earner and was considered to provide a source of protein to its people. Within the framework of the fishing industry, 80% of the fishery production came from fresh fish at sea, of which 50% was accounted for by the catch brought to the SJDS port. The “Fisheries Development Plan” (2003) aimed to transform the fishing industry into: ① an industry that generates over 100 million USD per year in ex; ② a major foreign exchange earner; ③ a source of employment; and ④ a source of a stable food supply for its people.

Under the “National Human Development Plan (Nacional de Desarrollo Humano 2008-2012)” carried out by the current Ortega administration, fishing is regarded as a major industry ranked third in terms of export trade value. Fishing is also considered to be an effective method to earn foreign currencies through efforts to stop overfishing and the need to formulate a strategy for sustainable fishing is emphasized. The “National Fisheries Plan (Plan Nacional de Pesca y Acuicultura, 2007-2011)” has set its objective to improve the lives of local fishermen by maintaining the sustainability of fishery resources,

¹ A : “highly satisfactory”, B “satisfactory”, C “partially satisfactory”, D “low”

² ③ : “high”, ② “fair”, ① : “low”

to increase profits of people involved in fishing, to promote the effective use of existing fishing facilities, to facilitate loans to fishermen, and to improve fishing techniques.

3.1.2 Relevance to the Development Needs of Nicaragua

At the time of the ex-ante evaluation, the SJDS fishing port was one of the major fishing ports in the Republic of Nicaragua, but the efficiency of discharging fish to its docks was inferior due to a large height difference between the sea level and the level of the wharf, causing difficulties in keeping order within the port premises. Ice, brought in from the capital, was expensive and the melting rate was high: it was therefore not possible to procure a sufficient amount of ice to maintain the freshness of fish caught. Furthermore, as the berth was small, the fish was discharged at the beach, piled up on the sandy beach, causing concern about freshness as well as sanitation problems.

Additionally, due to the lack of a loan system, fishermen had to rely on brokers and export traders for the costs of ship repairs and for the costs of going to sea. As a result, a broker-dominant business relationship had been established between fishermen and brokers/export traders. Fishermen were obliged to sell their catch to the brokers who had borne the costs of their going to sea and had no discretion in choosing brokers who would buy their catch at fair price. Commercial practices had been that fishermen sell the catch at a price determined by brokers based on foreign/domestic markets and the revenue for fishermen was kept small.

In response to the issues listed above, this project set its objective to reduce post-harvest losses and to increase the total amount and volume to be handled at the port by improving the discharging efficiency with the introduction of auction trading, taking measures to maintain the freshness of fish caught, and improving sanitation in fish cargo handling. These improvements were expected to bring about an increase in revenue and an improvement in the lives of local fishermen.

However, with the political regime change in February 2007, the government's policy changed. Auction trading was not implemented and the policy to make use of fishing port facilities was abandoned and a revised policy "to transform these facilities into a base which buys the catch from fishermen, processes the catch, and exports the processed products" was formulated. It should be noted that, even after the change in policy, the government maintains "improvement in the revenue and the lives of local fishermen" as the Overall Goal (an important issue) of this project.

With the change of the direction of the project in the Nicaraguan side, the goals set at the time of the ex-ante evaluation, i.e. to reduce post-harvest losses and to increase the total catch to be handled at the port with the introduction of auction trading, are not consistent with the development needs of the current administration.

3.1.3 Relevance to Japan's ODA Policy

An aid policy for the Republic of Nicaragua was formulated in 2002. Japan identified

six key target areas in order to facilitate poverty reduction and promote economic growth in Nicaragua, i.e. 1) agriculture and rural development; 2) medical and public health; 3) education; 4) road/transportation infrastructure; 5) support for democratization; and 6) disaster prevention. The fourth key target area, “road/transportation infrastructure”, refers to investment in the production sector to achieve economic growth, and the development of economic infrastructure to raise export capacity. Specific measures in this context include support for initiatives to ensure access to commercial and industrial zones, to promote export and import trade, and to improve production and distribution routes of agricultural products.

In this respect, the development of these fishing port facilities is also consistent with Japan’s aid policy at the time of the ex-ante evaluation.

3.1.4 Adequacy of Project Design

This project aimed to “reduce post-harvest losses and to increase the total catch handled at the SJDS port.” However, judging from information from the basic design study (“BD” hereinafter), it is believed that by carrying out this project, the Project Purpose (i.e. increase the total catch to be handled at the port) would be achieved and that, at the same time, the broker dependence of fishermen would be reduced and a new trading system to guarantee a fair price for their catch would be set up through the introduction of auction trading. Through these changes, it was expected that the Overall Goal, “to improve the lives of local fishermen” would be achieved.

The scope of the project, the Project Purpose, the Overall Goal, and the activities carried out by the partner country are summarized in Figure 1.

Auction trading, which was to be introduced in Nicaragua, is a type of trading that was previously unfamiliar to the republic. Moreover, the introduction of auction trading is closely related to the pricing process of the catch applied in this country, as well as to the financial dependence of fishermen on brokers. Addition to the change of these conventional business practices, the introduction of micro finance system was also necessary in order to implement the auction trading system. Therefore, the auction training may not have been a commercial practice that can easily be introduced³.

This project was designed to incorporate the introduction of auction trading in consideration of a ripple effect on the Project Purpose as well as on the Overall Goal⁴. However, this commercial practice was quite new for the partner country as stated in

³ According to the interviews with the staff of INPESCA and the fishermen, they expressed the difficulty in changing these business practices

⁴ (5) 7th issue faced in the fishing industry in SJDS in Chapter 2 on page 21 of the BD: “The urgent issue is to improve the distribution structure in such a way as to ensure that both fishermen and distributors are on an equal footing in trading.” Also, in the section “Flow of fish and equipment for disposal of cargo” in Chapter 3 on page 50, it was planned that the catch should be unloaded with a crane mounted on a truck carrier from the pangas and the lanchas in the deck, in order to conduct an auction (bidding) and sale at the cargo disposal are.

above, and might have been difficult to be introduced, and in fact this trading modality was not introduced. As a consequence, the Project Purpose was achieved only partially. At the time of the ex-ante evaluation, difficulties in implementing activities related to the auction trading were already acknowledged and complementary technical assistance was brought in to support these activities by the partner government. However, such efforts were not sufficient to succeed at introducing and establishing a completely new commercial practice.⁵ If the project had exclusively focused on the achievement of the Project Purpose, it may not have been an absolute necessity to introduce the method of auction style trading in order to improve the discharging efficiency. However, in this case, it was intended to reach the effect of Project Purpose as well as the Overall Goal. As a result, the introduction of a new commercial practice whose feasibility was unclear (i.e. auction trading), was contemplated, which ultimately contributed to a rather unrealistic project design.

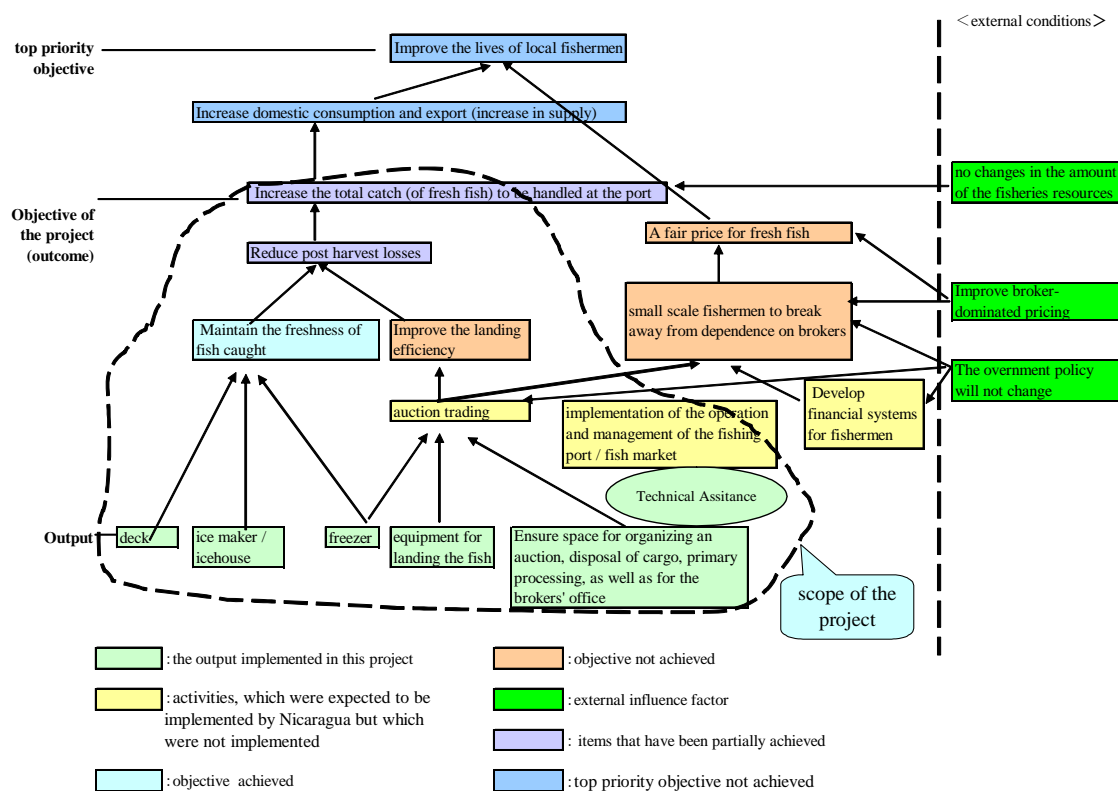


Figure 1 : Scope of the project (the Project Purpose/the Overall Goal) and activities carried out by the partner country

⁵ From 17th to 26th January 2007, technical assistance was given to the Entity in respect of market management, the procedures to sort and measure the catch, the technology for primary processing of fish to be stored frozen, and the method to identify the price of the catch unloaded and that of the wholesale shipment, etc. A manual, i.e. a guideline for the use of fishing port facilities was produced, but it was insufficient to make the parties in Nicaragua comprehend, implement and establish a completely new facility operation method.

(Source) produced in reference to the BD as well as to the results of interviews carried out with the persons involved in the project

The previous government was willing to work on this difficult hurdle to change the business practices. However, as stated in 3.1.2, the current government aims to achieve the goal of improving the lives and the revenue of local fishermen by the different approach, and the government policy to use this port facility has change, which is considered as external condition to the Project. These are the factors which have impeded the achievement of the Project Purpose.

Due to the change of the policy mentioned above because of the government alteration, this project was partly irrelevant to the country's development needs at the time of the ex-post evaluation, and the project design included the issue to be considered, therefore its relevance is fair.

3.2 Efficiency (Rating : ③)

3.2.1 Project Outputs

With regard to the output from the Japanese side, what was planned included: deployment of fishing facilities, equipment and the pier; and provision of technical assistance for the operation and maintenance of the SJDS fishing port (i.e. complementary technical assistance).

Table 1 Major outputs

Major output	Difference from the plan
Deck repair (quays development, landfill, development and maintenance of slipway, etc.)	As per plan
Facilities (two-story administration building : cargo disposal area, ice-maker/icehouse, brokers' offices/administration office, etc.)	As per plan
Equipment for disposal of goods	As per plan
Ship repair equipment	As per plan except the high-speed cutting machine
Complementary technical assistance (technical assistance on market management, the procedures to sort and measure the catch, the techniques for primary processing of fish to be stored frozen, and the method to identify the amount of the catch unloaded and that of the wholesale shipment were given to the Entity)	As per plan

(Source) Project Completion Report

The construction/procurement of facilities and equipment, except the high-speed cutting machine and the tow truck, were carried out as per plan. The incidence of ship repair work that requires a high-speed cutting machine was not high, and the tow truck was judged unnecessary as it can be substituted with other equipment. No impediment to the operation of the fishing port facilities due to a lack of this equipment has been identified. (For the details of each output, please see the appendix attached to the last page.)

In respect to the output from the Republic of Nicaragua, what was envisaged and implemented without trouble included: deployment of personnel for the operation and maintenance of this project; procurement of electricity, water and telephone services; removal of existing facilities (warehouses, etc.) that may affect the construction of facilities in the plan, etc.

3.2.2 Project Inputs

3.2.2.1 Project Cost

The project cost to be borne by Japan was estimated at 119.6 million JPY and the actual cost incurred was also 119.6 million JPY as per plan (100% compared to plan).

Table 2 Estimate of the project cost and the actual cost incurred
By the Japanese side (unit: 1,000 JPY)

	Estimate	Local procurement	Procurement in Japan	Procurement in the third country	Total
Construction costs		504,724	504,387	43,889	1,053,000
Equipment costs		0	33,400	3,600	37,000
Design and administrative costs		0	96,920	8,857	105,777
合計	1,196,000	504,724	634,707	56,346	1,195,777

(Source) Project Completion Report

The project cost incurred by Nicaragua was 59,233 USD (equivalent to 6.4 million JPY) against the estimate of 7.9 million JPY, i.e. an input of 81% compared to the estimate. While the cost incurred for the procurement of water services was more or less equal to the estimate, procurement of electricity services was achieved at 83% of the estimated cost. It should be noted that there are some office spaces that have not been used as originally planned. This is why only 70% of the total equipment envisaged has been installed at facilities. As a result, the total cost incurred on the Nicaraguan side was

81%, which was lower than planned.

3.2.2.2 Project Period

The project period was designed to be 21 months (from June 2005 to February 2007) at the time of the BD including the period for detailed design. The actual project period was a 20-month period from June 2005 to January 2007 (at 95% of the estimated cost), which was shorter than planned.

The project cost was as planned and the project period was within the plan, therefore the efficiency of the project is high.

3.3 Effectiveness⁶ (Rating : ①)

The degree of achievement of the Project Purpose was determined in a comprehensive manner in reference to the quantitative effects, the level of use of output (i.e. status of use of the equipment and facilities deployed in this project), as well as the qualitative effects.

Although the improvement of discharging efficiency is limited, the freshness of fish caught has improved, which can contribute to the reduction of the volume of fish caught that cannot be sold. Therefore, even though the numerical data could not be obtained, it is assessed that post-harvest losses, attributable to the improvement in freshness, have been reduced partially as a result of the project. On the other hand, due to the fact that the envisaged auction trading has not been introduced, a number of facilities and equipment were left under-used. Furthermore, because the external condition that was set, i.e. “the maintenance of fishery resources in nearby waters”, has not been satisfied, the Project Purpose, i.e. an increase in the total catch to be handled at the port, has only partially been achieved.

3.3.1 Quantitative Effects

As an indicator to measure quantitative effects of this project, a direct indicator for the Project Purpose, i.e. “the amount of post-harvest losses” and “an increase in the volume of fresh fish to be handled at the port” had not been set at the time of the ex-ante evaluation. Nor had the numerical information been identified by the SJDS port even at the time of the ex-post evaluation. However, it can be considered that the change of “improvement in the discharging efficiency” and “the freshness of fish caught” have the similar tendency with that of the Project Purpose. As a consequence, “a decline in the number of workers involved in the discharging operation on small fishing boats (panga and lancha⁷)” was set to measure the achievement of the former indicator, and “a decline in the price of ice” was set for the latter indicator. By this method, the level of achievement of the Project Purpose was evaluated.

⁶ In determining the effectiveness, the rating is identified in reference to the impact.

⁷ “Panga” is a small fishing boat with an outboard motor, and “Lancha” is a small fishing boat with an inboard motor.

3.3.1.1 Improvement in the Discharging Efficiency

Table 3 : Changes in the number of workers involved in the discharging operation

Indicator	Actual performance in 2005	2009 (target)	2009 (actual performance)	2011 (at the time of ex-post evaluation)
Number of workers involved in the discharging operation on panga	Three persons/ discharging	Two persons/ discharging	NA	Four persons/discharging (crew members of panga)
Number of workers involved in the discharging operation on lancha	Six persons/ discharging	Three persons / discharging	NA	6 persons/discharging (crew members of lancha) + brokers

(Source) An interview with INPESCA

Discharging of the catch is still being performed by the crew members of the fishing boat. They directly transfer the cargo from their fishing boat to the truck carriers parked alongside the deck by brokers and export traders. At the time of the BD, it was planned that the catch would be directly discharged from the deck to the cargo disposal area, using the discharging equipment (i.e. a crane mounted on a truck carrier), with a view to reducing the number of workers involved in the discharging operation and minimizing the time required to complete the discharging operation. However, the same method employed prior to this project is still being used at the moment and at the time of ex-post evaluation. As a consequence, neither the number of workers nor the time required to unload the cargo has been reduced.



Crew member of fish boat to unload the fish caught

It is considered that one of the reasons for a lack of change in the method of discharging the catch before and after the project is that “auction style trading” was not introduced for fish trade.

Auction trading is a commercial practice quite new to Nicaragua as described in 3.1.4. It was not the system to be introduced easily in Nicaragua, and in fact it was not introduced due to the policy change by the administration transfer. At the commencement of this project, training sessions were organized to give guidance on the method of operating a fishing port through complementary technical assistance. However, its implementation period was short and the Entity had not yet been set up. The

training was targeted exclusively at the managing director of that Entity.⁸ Under these circumstances, it was difficult to introduce and establish a new commercial practice through unilateral efforts on the Nicaraguan side. As a result, there was no longer the necessity to carry the catch directly into the cargo disposal area utilizing the discharging machines procured by this project. As was the case in the past, truck carriers belonging to brokers are still brought directly alongside the deck, onto which crew members of the fishing boats load the catch. There has been no improvement made in respect to the discharging efficiency.

Moreover, the facilities and the equipment developed in order to implement auction trading have not been used for their initial purposes, and are at best, being used irregularly.⁹

Although offices for brokers had been installed in which to conduct auctions, no broker has moved into the facility. At the moment, these spaces are being used for other purposes, e.g. as an office for HACCP projects;¹⁰ an office housing the fishermen's association; and a kiosk where daily commodities for fishermen are being sold.



Areas for disposal of fish caught



Truck without crane

3.3.1.2 Measures to Maintain the Freshness of Fish Caught

Although the purchase price of the ice offered to fishermen has not come down to the target level at the time of ex-ante evaluation, it is still lower than the market price (by 40%). Fishermen are therefore able to buy ice at a preferential price.

Table 4 : Changes in the price of the ice

⁸ In addition, representatives from the SJDS Town Hall, fishermen and brokers also attended the training sessions but they were not parties directly involved in the operation of fishing port facilities.

⁹ In January, April, May and June in 2010, a demonstration of fish processing work and a seafood festival were organized. On these occasions, these facilities and equipment were utilized for the disposal of cargo and sales of fish, such as sardines, swordfish, sharks and others.

¹⁰ HACCP (Hazard Analysis and Critical Control Point) is a systematic preventive approach used at all stages of food production and preparation processes to identify potential food safety hazards, so that key actions can be taken to reduce or eliminate the risk of the hazards being realized.

Indicator	2005(actual performance)	2009 (target)	2009 (actual performance)	2011 (at the time of ex-post evaluation)
Purchase price offered to the SJDS fishermen	0.056 USD/kg	0.037 USD/kg	NA	0.058 USD/kg (C65/QTR)
Market price of ice		NA	NA	0.08 USD/kg (C110/QTR)

(Source) Reference materials collected from the Entity

The results of interviews with fishermen identified that 96% of them would buy crushed ice at the fishing port and would keep the catch cool with ice while at sea. 77% of them also responded that the freshness of fish caught had improved after they started buying ice under this project. Some fishermen also indicated that ice would last longer than before.

Table 5 : Levels of usage of ice and its impact on the freshness of fish caught (%)

	Yes	No
Do you keep your fish on ice while at sea?	96	4
Do you find your fish in a fresher condition than before when you return to port?	77	23

(Source) Results of interviews with 81 fishermen (composed of 24 ship owners, 57 small-scale fishermen)

3.3.1.3 Decline of Fishery Resources in nearby Waters

The external factor that prevented the total volume of catch handled at SJDS port from increasing can be attributed to “a decrease in fishery resources in the waters around SJDS”.

Figure 2 shows a transition in the volume of the catch landed per major fishing port on the Pacific Coast in Nicaragua. Prior to the implementation of this project, the volume of the catch landed at SJDS fishing port was by far greater than other major fishing ports on the Pacific Coast with the discharge of commercial fishing vessels. However, since 2003 onward, the volume of the catch landed at this port has rapidly declined. The reason being cited by people working at SJDS fishing port is the decline of fishery resources in nearby waters. Since the 1990s, a survey has not been conducted on the volume of fishery resources and it was not possible to obtain objective data. However, according to the SJDS fishing port director and people at the fishing port, overexploitation of fishery resources by “gillnet (trasmallo) fishing” is one of the causes of the decline of fishery resources in the waters around the SJDS fishing port.

With little prospect of finding a good catch at sea, fishermen refrained from going to sea. As a consequence, the volume of the catch being landed at SJDS fishing port did not

increase. In the meantime, there were some fishermen who left the SJDS port or who changed their jobs and became employed in the tourism industry. Furthermore, commercial fishing vessels that had visited the SJDS port for unloading their catch until 2003 stopped coming to the waters around SJDS. These vessels stopped visiting the water area around SJDS due to its decline in fishery resources, and shifted to other ports to land their catch. This has also contributed to a decline in the total catch handled at SJDS Port.

It should be noted that gillnet (trasmallo) fishing, which causes substantial damage to fish, was banned in 2006 and since then the volume of fishery resources has gradually grown.

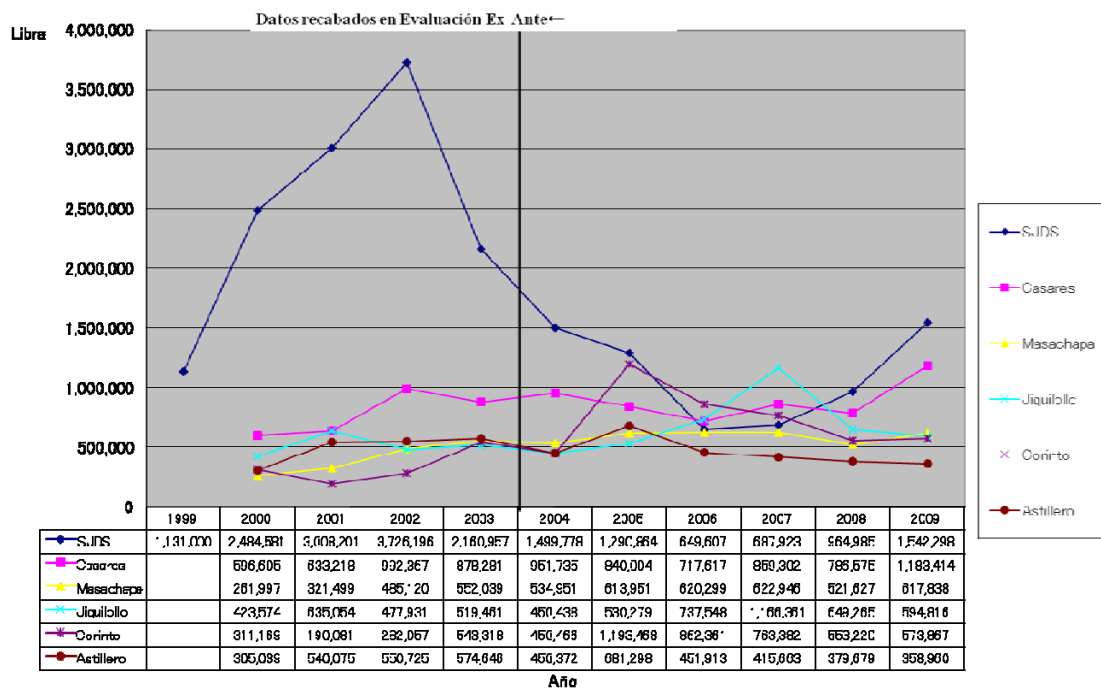


Figure 3 : Changes in the amount of the catch landed per major fishing port on the Pacific Coast in Nicaragua

(Source) Produced in reference to “Anuario Pesquero y Acuicola en Nicaragua” published by ADPESCA and INPESCA

Addition to the factors mentioned above, the increase of the fuel cost due to the global price rise of the crude oil affected the frequency of the fishing. This was another external factor which impeded the increase of the volumen of fish catch at SJDS fishery port.

3.3.2 Qualitative Effects

Fishing vessels based at SJDS port now use the deck constructed under this project. The facilities are available from 0600hrs until 1800hrs in principle and anyone can freely access its services as long as they have permission granted. Permission is granted to

fishermen, personnel working at fishing port facilities, brokers, etc. Services will be made available outside these hours if necessary and, as such, the facilities are in reality operable 24 hours a day.

3.3.3 The Level of Use of Facilities and Equipment

The level of use of major output developed under this project is shown in Table 6 below. (For the level of use as well as the reason for not being in use, please refer to the relevant section/s.)

Table 6 : Levels of use of major outputs

Major output	Level of use
Repaired deck (quays development, landfill, development and maintenance of ramps, etc.)	In use
Facilities	In use for purposes other than its original ones irregularly (the reason described in 3.3.1.1.)
- cargo disposal area	In use
- ice-maker /icehouse	In use for purposes other than its original ones (the reason described in 3.4.1.2.)
- freezer	In use for purposes other than its original ones (the reason described in 3.3.1.1.)
- brokers' offices	In use
- administration office	In use for purposes other than its original ones irregularly (the reason described in 3.3.1.1.)
Equipment for disposal of cargo	In use
Ship repair equipment	In use

(Source) Elaborated by the evaluator based on the result of the survey

Deck is used every day. According to the interview to the fishermen at the time of ex-post evaluation, all the fishermen responded that they use deck for discharging the fish caught. On the other hand, other facilities or the equipment related to disposal of cargo are used for the different purpose as stated in 3.3.1.1. For example, the space for the disposal of cargo is used for the exposition of fishery product irregularly, the freezer is used to keep bait, the brokers' offices are used for the project office of HACCP, the office of fishermen's association and a kiosk where daily commodities are being sold.

From the above it is clear that in regards to the effects of this project, because auction trading was not introduced, the facilities and the equipment installed and deployed on the assumption that new trading would be established have not been put into use, and there have been little effects attributed to an improvement in the discharging efficiency. The

freshness of fish caught was maintained using the equipment developed under this project, and post-harvest losses attributable could have reduced, although partially. On the other hand, the external condition in this project, i.e. “no decline of fishery resources in the waters around SJDS” has not been met and, as a result, the amount of fresh fish handled at SJDS fishing port has plummeted substantially.

From the above, this project has achieved its objectives at a very limited level, therefore, it’s effectiveness is low due to internal and external reasons.

3.4 Impact

3.4.1 Intended Impacts

3.4.1.1 Proactive Trade Practices by Fishermen Independent from Brokers

Fishermen have not developed the capacity to trade their catch in a proactive manner free from a dependence on brokers. Small-scale financial systems have not been developed and fishermen remain dependent on brokers for expenses incurred for going to sea (i.e. crew expenses, food, ship fuel, containers to store the catch, etc.) as well as ship repair costs. As a result, due to their financial dependence on brokers, fishermen are still unable to choose from among brokers to whom they will sell their catch. The dependence on brokers of fishermen continues to exist.

3.4.1.2 Sales of Catch at a Fair Price

The system has not yet progressed so that the catch is sold at a fair price. According to personnel working at SJDS fishing port, within a range of price fluctuation subject to the international and domestic markets, brokers may buy the catch if it maintains its freshness. However, due to the fishermen remaining dependent on brokers, it is difficult for them to choose to whom they will sell their catch even when they have landed the freshest fish. As a result, the catch is not traded at a fair price, even at maximum freshness.

From interviews with fishermen, it has been identified that 77% acknowledge that the freshness of fish caught has improved as a result of this project, but the proportion of those who believe that its freshness is reflected in the sale price to brokers is less than 15%.

In addition, freezers were also procured in this project to prevent a price drop by adjusting the volume of sales of catch to brokers through the maintenance of freshness at freezers when the discharging volume is too big. However, the brokers are not convinced of the quality of frozen fish treated by others and do not buy it. As a result, the freezers are not sufficiently being made use of.¹¹

¹¹ In Nicaragua, brokers are not convinced of the quality of frozen fish not processed by themselves and do not buy it. As such, the freezers are not being made use of to adjust the sales volume at the time of a big catch, nor do they contribute to fair trading. With regards to the level of use of equipment, please refer to the resource material attached to the last page.

3.4.1.3 Improve the Lives and the Revenue of Local Fishermen

We conducted interview surveys with fishermen in order to identify the changes this project has brought in the lives of fishermen. Only 16 of 81 fishermen (i.e. 20%) felt that the level of their income had risen as a result of this project. Also the number of fishermen who acknowledged a reduction in working hours was small because the discharging operation retains the traditional methods without making use of cranes (see Figure 4).

We interviewed the 16 fishermen who responded that “the level of their income had risen”, asking them on what they would spend an increased portion of their income (a multiple answer question). The most common answer was, “Food and related goods”. 87% of all the fishermen responded as such, on average. As far as small-scale fishermen go, all opted for this choice. An increased portion of their income is spent to enrich diet, which is one of the basic necessities of life. There was hardly any difference with respect to other purposes, with the results being: 50% allocated to health and sanitation; 44% to education of their children; and 40% to debt repayment. It should be noted that there are certain items of expenses, in respect to which there are differences in terms of purposes between ship owners and small-scale fishermen, e.g. 67% of ship owners referred to “education of their children” while only 30% of small-scale fishermen did so; and 50% of small-scale fishermen referred to “debt repayment” as opposed to only 30% of ship owners. It is dangerous to make a conclusion based on the results of this survey in which the sample size was small, but it can be observed that while the ship owners allocated more money to their children and other future investment expenditures, the small-scale fishermen are being forced to try to get out of debt repayment and to make ends meet. (See Figures 4 and 5).

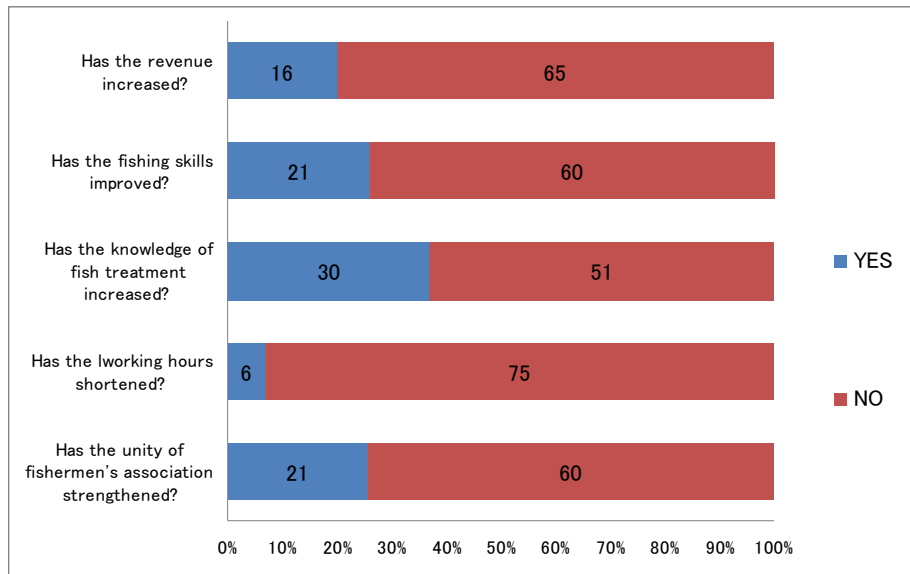


Figure 4 : Changes this project has brought in the lives of fishermen
 (Source) Results of interviews with 81 fishermen (breakdown: 24 ship owners; 57 small-scale fishermen)

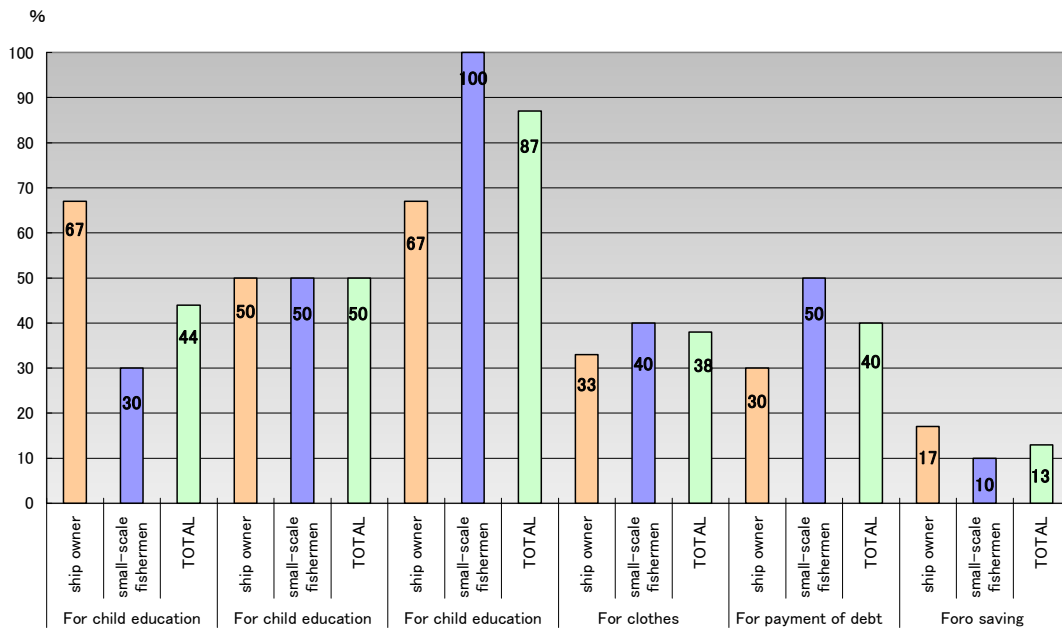


Figure 5 : Purpose of use of increased income

(Source) Results of interviews to the 16 fishermen who answered that their revenue had increased

3.4.2 Other Impacts

3.4.2.1 Impact on the Environment and Society

In this project, 1) increased turbidity in the seawater caused by landfills; 2) wastewater discharged from the completed facilities; and, 3) effects on ecosystems (i.e. effects on the spawning habitat of the pelican bird and the sea turtle) were considered. Regarding to 1), the necessary measures to prevent the turbidity of the sea water was taken, and that kind of problem was not observed at the time of evaluation ex-post. As for the concern of 2), the facility to treat the residual water was installed in this Project, and the problem related to the sewage water had not occurred. For the 3), as the work areas for this project were limited to a narrow area at the southern end of the Gulf, which is located far from the habitats of pelicans and the spawning grounds for sea turtles, it was judged by the Ministry of Environment and Natural Resources of Nicaragua (Ministerio del Ambiente y los Recursos Naturales de Nicaragua, MARENA) that impacts on the environment from the SJDS port would be minimal. In the interview surveys conducted at the time of the ex-post evaluation with the Entity and local residents, no negative effect on the environment caused by the implementation of this project were reported. It is therefore judged that the project had no negative impact on the environment.

3.4.2.2 Conflicts among Personnel related to SJDS Fishing Port

Fishermen expressed during interviews that they had expected that the construction of fishing port facilities under this project would contribute to an improvement in their revenue level and lives. Immediately after the completion of the construction of the facilities, the catch was being processed and exported, offering employment to fishermen's families. There was a certain economic impact on that immediate occasion. However, thereafter, processing and exporting operations were stopped¹² and the managing director of the facility was also replaced.¹³ Thereafter, INPESCA staff members from the headquarters in Managua were seconded to the position of managing director of the fishing port facility one after another on a frequent basis and the facilities were not made use of in a productive manner. Some fishermen believed that the inefficient operation of the facilities adopted by INPESCA was the cause of the lack of improvement in their lives and income. They were also dissatisfied with the fact that, although they were able to buy ice at a lower price and have access to the deck and the repair equipment, the facilities were not used in a way that fishermen had expected. Furthermore the catch was not traded at a fair price and there had been no increase in their income. As a result, there was a mutual sense of distrust generated between fishermen and the Entity. The decision-making process at the SJDS Fishing Port Facilities

¹² At the time the fishing port facilities did not have an export permission granted and, as such, they did not have a choice but to stop their operation.

¹³ The managing director at the time had a background in the operation of fishing port facilities as well as in processing and exporting businesses.

Coordination Committee had for some time not been smooth.

However, reflecting a change of the policy on the use of the fishing port at SJDS, the person who was in charge of the operation of processing and exporting the catch following the completion of the construction of this facility, was appointed to the position of managing director in February 2011. In formulating a new business plan to be submitted to CARUNA¹⁴ in order to apply for loans, the director formulated a project to work with the Fishermen's Association to bring the catch not only from the waters around the SJDS port but also from other regions to the SJDS fishing port, with a view to ensuring a certain volume of catch for the port. This was in response to a decline in the volume of fish being landed at SJDS port in recent years. As a result of such cooperation with fishermen, and with the project actually making solid progress, the reliable relations between fishermen and the Entity is being restored.

On the other hand, existing export traders view that investing public funds into the refurbishment of these facilities at SJDS fishery port in order to make them engage in exporting on an equal footing with private traders is nothing more than pressure on private enterprises. They are therefore taking a position against the transformation of SJDS fishing port facilities into processing/export trading facilities.

3.5 Sustainability (Rating : ①)

3.5.1 Structural Aspects of Operation and Maintenance

With respect to operation and maintenance of the fishing port facilities, the SJDS Fishing Port Facilities Coordination Committee¹⁵ was set up to formulate action policies. The daily operation of fishing port facilities was handled by the Entity, headed by the director manager of fishing port facility appointed by this Committee.

3.5.1.1 Current Operation of Entity

A change was introduced to the policy on the operation of the fishing port with the political regime change that took place in February 2007 and no measure is being undertaken at the moment to assert control over the market. The main services being offered include: access to the deck; access to the ice-maker (make and sell ice); and, repairing fishing vessels. Seminars and training sessions for fishermen are also being organized, though on a reduced scale.

With a reduction in the scope of its activities, as of January 2011, there are eighteen people in total working under the supervision of the managing director of the port facility,

¹⁴ CARUNA stands for "Caja Rural Nacional", which is the private financial organization in Nicaragua. It has much experience in loan for the sector of agriculture, such as loan for dairy product or for plantation. The application of loan to transformation of the facilities was submitted to CARUNA on April 4, 2011, and all the amount was approved at the beginning of May 2011.

¹⁵ It is comprised of MIFIC (Ministerio de Fomento, Industria y Comercio (Ministry of Promotion, Industry and Commerce), INPESCA (former ADPESCA), the SJDS Mayor, EPN (Empresa Portuaria Nacional (National Port Corporation) and a representative of fishermen.

e.g.: a finance officer, facilities/equipment operation maintenance officer, engineer, fishing port services officer, ice-maker operations staff, ice-maker operations support personnel, security guard and houseman. It was decided at the meeting of the SJDS Fishing Port Facilities Coordination Committee in November 2011 that the current organizational structure will be restructured in order to fit the transformation of the fishing port facilities into a processing/exporting facility and that there will be three departments with nineteen personnel, i.e. administration and finance department, facilities operation department and HACCP/Production department. A new organizational structure in line with the new business policy is being developed.

3.5.1.2 Current Operation of SJDS Fishing Port Facilities Coordination Committee

The Committee was to meet once a month and to discuss issues related to the operation policy. However, fishermen reported that it had met only once a year (once in 2009 and once in 2010) while INPESCA claimed that the Committee had met three to four times a year to discuss issues related to the operation of the facilities, the financial report, future plans as well as general issues. Although a representative of fishermen sits at the Committee, four out of five committee members are government representatives. Fishermen expressed therefore dissatisfaction that their views might not be reflected when a decision is made by a majority vote and that decisions would not be made in an equitable manner. However, as at the time of the ex-post evaluation the committee members had formed a basic consensus on the policy concerning the operation of the fishing port facilities, i.e. the transformation of the port facility to process/export the catch, the sense of distrust among the committee members is disappearing.

During the time that the facilities were not used in an effective manner, the Japanese side patiently encouraged the senior representatives of the Nicaraguan government to facilitate greater use of the facilities and made recommendations on the best way to make use of the facilities based on the findings of the field survey. The Nicaraguan side also formulated a policy in February 2009, through consultation with the SJDS Port Authority, the Tourism Bureau, INPESCA, the SJDS mayor, the SJDS deputy mayor, and the Ministry of External Affairs of the Republic of Nicaragua, to promote and position the SJDS Bay as a fishing and tourism center of the country. Various measures to increase the usage of the SJDS fishing port facilities were considered. As a result of these developments and the restoration of the relationship between the committee members, the Fishing Port Facilities Coordination Committee has now become a forum where business policy is determined.

3.5.1.3 Transformation of Fishing Port Facilities into a Base for Processing and Exporting

A business plan was approved by the Fishing Port Facilities Coordination Committee to transform the fishing port facilities into a facility where the catch is bought by fishermen,

then processed and exported, and a new organizational structure has also been identified. It is expected that the fishing port facilities will thereby have an economic impact on the city of San Juan del Sur and contribute to improving the revenue performance and the lives of local fishermen. On the other hand, in order for the new facility to become an export base and to export fish to Western markets, it is necessary to be certified by HACCP. Technical assistance for fishing methods and fish handling was provided by the EU with a view to getting HACCP certification and the Entity has obtained corporate status.

In order to be certified by HACCP, the substantial renovation of existing facilities is required (to flatten the wall, improve ventilation and to ensure sufficient space for the disposal of cargo). The renovation cost and others, estimated at 273,205.50 USD¹⁶, was submitted to CARUNA, and an approval was granted for the total loan amount. It had been the case that an INPESCA staff member was to be seconded to the position of managing director of the fishing port facility until February 2011 when an expert with a background in processing and exporting businesses at fishing port facilities was appointed.

With respect to the facilities and equipment developed under this project, although the target expected at the time of ex-ante evaluation was not achieved, measures are being undertaken to make additional investments so as to transform the existing facilities into a processing/exporting facility, as well as to develop the facilities and implementation structure and to allocate the budget with a view to achieving the Overall Goal, i.e. “to improve the revenue performance and the lives of local fishermen”.

3.5.2 Technical Aspects of Operation and Maintenance

3.5.2.1 Equipment

Two staff members who attended the operation check training conducted at the time of the delivery of equipment remain working in the Entity. Therefore, the methods of operation and maintenance of the main equipment, such as the ice-maker, the refrigerator and the water tank, are sufficiently understood. The senior workers will give guidance to new employees on how to operate the equipment. Therefore, no technical issue has occurred.

3.5.2.2 Ship Repair

Fishermen slide their ships up the slipway and repair their ships by themselves whenever necessary using the equipment being offered. Any major problems that cannot be fixed by fishermen themselves will be attended to by outside engineers under a contract between them.

¹⁶ This amount includes the cost for construction of process area for fish caught, installation of gasoline tank, and labor cost.

3.5.2.3 Operation and Maintenance of the Fishing Port Facility

Operation guidance seminars were organized in January and February 2007 on the method how to manage and operate the facilities, since following the completion of this project it was anticipated that a new fish trading method would have been introduced once a new facility was put into operation. However, at the time the operation guidance seminars were organized, the Entity had not yet been set up. The personnel who ought to have participated to the seminar had not been employed, and only the managing director was able to attend the seminar. It was therefore unable to provide technical assistance directly to those staff that would actually be in charge of the operation and maintenance of the fishing port.¹⁷ Also, during the operation guidance seminar, the operational guidelines (i.e. the guideline and the manual) were produced to be made use of when the Entity would be set up. However, with the political regime change and with the restructuring of governmental agencies such as the transformation of ADPESCA to INPESCA, the operational guidelines were not sufficiently handed over and the operational bylaws have not yet been formulated.

However, the current fishing port facilities have faced no operational difficulties as a result of a lack of guidelines and bylaws because none of the external parties including brokers and export traders inhabit the facility space as originally expected. At the moment, the facility use rules formulated by the Entity, which are announced at fishermen's meetings and put on the bulletin board in order to fully inform fishermen thereof. According to results of interviews with fishermen conducted in this survey, 60% of ship owners and 20% of fishermen are aware of these rules.

3.5.3 Financial Aspects of Operation and Maintenance

3.5.3.1 Financial Situation of the Facilities

At the time of the ex-ante evaluation, it was assumed that facility charges would be levied in order to supplement income and operate the facilities on a stand-alone basis. However, the sources of income, e.g. discharging charge (the crane fee), cargo disposal fees and the freezer fee, which were expected to account for approximately 40% of the total revenue, have not been materialized. According to INPESCA, the facilities are being run in the red. In the past, the deficit incurred in the operation of the SJDS facilities had been compensated for by INPESCA headquarters and it is reported that support from INPESCA headquarters will continue in the future to respond to any deficit that may occur. It should also be noted that, in respect to the budget for the operation and maintenance, the actual spending in 2010 was 53,000 córdoba, which was insufficient to procure necessary replacement parts and overhaul equipment. A sufficient amount has not

¹⁷ Other people that attended these operation guidance seminars included: ADPESCA, the SJDS Town Hall, brokers, representatives from the Fishermen's Association and fishermen.

been allocated for the operation and maintenance of the facilities and equipment.

Table 7 : Annual data on the balance of payments of the SJDS Fishing Port Facilities (unit: thousand córdoba)

	2008	2009	2010
Income	3,637	3,845	5,772
Expenditure	1,418	5,762	8,904
Balance between	2,219	△ 1,917	△ 3,132

(Source) Reponses from INPESCA to the questionnaire survey

Currently, the Entity had applied to a private financial company “CARUNA” for a fund to cover expenses to be incurred in relation to the project to transform the facilities into a processing/export base and approval for a loan of 273,205.50 USD was granted in May 2011. This ensured that they would have enough financial resources to cover expenses necessary for the renovation of the facilities into those that would meet the HACCP criteria, the expansion of the processing work space and the installation of a (ship) fuel tank. The business plan submitted to CARUNA projects that in the next two years, there would be sales of between 3,697 to 4,336 thousand dollars, with expenses of 2,012 to 2,598 thousand dollars to be incurred, which brings the annual surplus to 1,685 to 1,738 thousand dollars. In order to achieve this projection, it is necessary to ensure that there is a certain volume and amount of fish handled at SJDS fishing port. In this business plan, it is therefore intended that fish will be bought not only from fishermen based at SJDS fishing port but also from the fishermen’s associations operating in the whole area along the Pacific coast and from commercial fishing vessels.

3.5.4 Current Status of the Operation and Maintenance of the Facilities and Equipment

3.5.4.1 Condition of the Facilities and the Equipment

The ice-maker is in full operation, producing 240 marketa¹⁸ (i.e. 10.91 tons) of ice per day. Part of the ice that is not picked up on the same day will be provisionally stored in the icehouse before being sold to fishermen and brokers. Two truck carriers with a crane are not being used to discharge the catch directly from the deck to the cargo disposal area, but one of them is used for moving as well as pulling up the general equipment deployed in the port, and the other has had a crane removed and is used as an ordinary truck carrier. The equipment for ship repair is stored in the locked workshop space and is used by fishermen when they repair their ships, while the equipment for discharging the fish

¹⁸ “Marketa” is the unit used in Nicaragua to measure the weight. One marketa is nearly equivalent to 0.04545 tons.

brought to the docks (e.g. cooler box, etc.) is made use of for processing work and at the time of the seafood show to be organized irregularly.

The administration building was found to have some defects, including: leaks in ceiling (several locations); bubbling on the floor (two rooms); bubbling on the wall (the toilet on the first floor); interior paint peeling (one location); and cracks in exterior walls (floor roof/fence). Leaks in the ceiling may have been caused by the crack in the concrete floor roof, but this crack was already filled at the time of the completion of construction of the building. At the time of the inspection of the completion of construction, when a pool of water was made to cover the whole roof to see if there was water leaking through the top floor ceiling, no roof leak was observed.

The rails attached to the slipway to slide the ship up were rusted and bubbling on the stone paving beneath the slipway was found. It is therefore not possible to smoothly slide lancha up. The Entity acknowledges their responsibility to repair these defects and the necessity to do so. It intends to address the issue by taking necessary budgetary measures.

3.5.4.2 Status of Operation and Maintenance

With regard to the ice-maker, two staff members, who were trained on how to use the machine at the time of its delivery, set up a regular inspection system, operational records are to be kept, and operational problems are reported through a chain of command. The equipment is thereby properly operated and maintained. The operation manual for the machine is also kept in a place that is easy for the technical personnel to access and to take necessary measures in the event of any problems. Although one of the two truck carriers with a crane has had its crane removed, both of these two truck carriers are maintained and inspected. These are not used for the original purposes (i.e. to land the catch) but are used within the facilities.

Compressor spare parts and the ice-maker filters cannot be procured in Nicaragua and need to be purchased from agencies in Mexico or Costa Rica. The purchase of these parts has not been made due to price and the product being out of stock. In general, a compressor requires an overhaul after 100,000 hours of operation time. One of four compressors has already operated over 120,000 hours without an overhaul. Although clean water from SJDS City is used for the ice-maker, it contains a high level of lime particles and rapidly exhausts the filter. Genuine filters are expensive and the filter has not been replaced as often as necessary.

The facilities in general are inspected once a month. Any defects detected will be reported but, depending on the budgetary constraints, the necessary measures have not always been taken.

With regards to the rust on the slipway, the slipway was originally treated with an anticorrosive coating and periodic paint repair was required. These methods of operation and maintenance are detailed in the manual, but the manual is not made use of and paint repair or other measures have not been taken. Bubbling on the stone paving is a common

phenomenon in any harbor where there is a certain level of tidal variation. Re-pavement is necessary to make it flat. Maintenance staff at the Entity were not fully aware of these methods.



leaks in ceiling



functioning ice machine

It should be noted that the Nicaraguan side believed that it would be the responsibility of the Japanese side to repair these defects of the facilities at the time of first field survey in January 2011: but in May 2011, at the time of second field survey, having understood that it needs to be done by the Nicaraguan side, they are now reviewing the budgetary measures necessary for such repairs.

From 2011 onwards, a managing director with a background in processing and exporting businesses at fishing ports was brought in.¹⁹ Along with his appointment, the organizational structure was restructured in line with the new business policy. The future business plan, combined with an application for a loan, has been approved by the private financial institution, CARUNA. Sustainability is improving in respect to the operation of the facilities in the future.

In light of the above, major problems have been observed in terms of structural and financial aspects, therefore sustainability of the project effect is low. On the other hand, it is believed that if positive outputs identified at the time of the ex-post evaluation continue in the future, sustainability will be improved.

4. Conclusions, Lessons Learned and Recommendations

4.1 Conclusions

The Sun Juan del Sur (hereinafter referred to as “SJDS”) fishing port used to be where the largest amount of fish was brought to docks compared with other fishing ports on the

¹⁹ As explained in 3.4.2.2., this person was in charge of processing and exporting operations immediately after the completion of construction of facilities. He was then re-appointed to the position of facility director at this fishing port in February 2011.

Pacific Coast in the Republic of Nicaragua. However, the discharging efficiency was low, and the port had problems in maintaining the freshness of fish caught as well as in respect to post-harvest losses. Against this background, this project was carried out with a view to reducing post-harvest losses through improvements to the discharging efficiency as well as maintaining the freshness of fish caught, thereby increasing the total catch of fish to be handled at this port.

Through the implementation of this project, although no improvement has been seen in terms of the discharging efficiency, the freshness of fish caught has improved and the objective of reducing post-harvest losses has partially been achieved. On the other hand, due to the significant effects of external factors such as the decline of fish stock in nearby waters, the objective of this project, i.e. to increase the total catch handled at this port, has not been met. Therefore, the overall effectiveness of the project is low. At the time of ex-post evaluation, another project plan has been formulated to make additional investments and to transform the facilities constructed under this project into a base for processing and exporting the catch, in order to achieve the Overall Goal at the time of the ex-ante evaluation, i.e. “to improve the lives and the revenue of local fishermen”. However, in spite of efforts having been made by relevant persons in our partner country as well as in Japan, the project implementation structure is far from stabilized and deficits have continued due to the effects of political regime change. In this respect, the sustainability of the project is low. On the other hand, measures are being undertaken at the moment to develop an implementation structure (e.g. recruitment of persons who have been involved in similar projects, organizational restructuring, etc.) and to ensure sufficient budgets (i.e. approval for loans from private financial institutions) at the time of Ex-post evaluation. Should these positive elements be pursued in the future, it is expected that the sustainability may rise.

The partial achievement of the Project Purpose can be attributed to the internal factor of the project design, which was formulated based on activities that might have been difficult for our partner government to carry out. In addition, even though the Overall Goal, “to improve the lives and the revenue of local fishermen” is still in place, as the policy of utilization of the port facilities has changed due to the political regime change after the completion of this project, the approach to implement the Project may not be fully compatible with the policy of the current government. In this context, the relevance of this project is fair.

In light of the above, even though we can observe the effect of the Project at certain level, the Project Purpose has been achieved partially due to change of the external factor and unfeasible project design. Therefore, this Project is evaluated to be unsatisfactory.

4.2 Recommendations

4.2.1 Recommendations to the Implementing Agency

So far, the Entity has identified neither the information detailing the volume of

discharging nor trading at the SJDS fishing port. In order to implement the business plan submitted to CARUNA and operate the fishing port facilities on a surplus basis, accurate financial information concerning sales and expenses is required. In order to identify the income, too, measures should be taken to confirm the total volume of discharging and training handled at the port. When the business plan does not show progress as planned, necessary measures should be taken to review the business plan so as to examine the method of purchasing the catch and review expenditures.

It is necessary to ensure a certain volume of catch handled at facilities in SJDS in order to implement the business plan. For this implementation, the establishment of reliable relations between the Entity and the fishermen/the fishermen's association is important. It is highly recommended to activate the SJDS Fishing Port Facilities Coordination Committee and to ensure thorough discussion based on consensus among the relevant parties (i.e. MIFIC, INPESCA, the SJDS Town Hall, the Port Authority and fishermen) on the policy concerning the operation of fishing port facilities.

Other than the recommendations referred to above, to take the following measures are also desirable.

- To appoint staff that are familiar with HACCP/exporting businesses in order to perform processing/exporting businesses in an efficient manner.
- To take budgetary measures necessary for responding to the defect/s of the facilities and equipment as well as for the operation and maintenance thereof, arrange maintenance and repair work, and replace consumables and parts with new ones.

4.2.2 Recommendations to JICA

- With the formulation of a new facility use policy, it was decided that the facilities provided through grant aid project would be renovated and made use of in different ways from what was designed in the original plan. Confirm with the partner government that the facilities and equipment will be put into use in accordance with the E/N agreement, through consultations between Japan and Nicaragua in the same manner as in the past.

4.3 Lessons Learned

- In this project, the project design was drawn up based on the assumption that activities whose feasibility was unclear, would be carried out by the Nicaraguan side, including the introduction of a new scheme which had never been put into place in the partner country, i.e. "auction trading", and of the changes to commercial practices. In addition to above, due to the change of the external factors, such as change of government policy for the use of SJDS port facilities, those activities were not implemented, which affected the achievement of the Project Purpose. At the time of project formulation, to identify what the partner country is required to do and to consider thoroughly its feasibility is requested. Furthermore, when there is any uncertainty relating to the feasibility of any activities to be carried out solely by the partner country, the possibility if the Japanese side can offer

additional support should be examined. And if such support is not feasible, to examine if the project component can be changed is also important amongst other things.

- Thorough consideration should be given to the project management skills of the implementing body, which will be in charge of the operation and maintenance of the facilities and equipment to be developed. In this project, the project was formulated on the assumption that the implementing body would be set up. However, the launch of this body was delayed and technical assistance on the port management to the appropriate personnel could not be done effectively by the complementary technical assistance. When the introduction of an unfamiliar scheme with the cooperation-receiving society is planned, it is important to assess the capacity of the implementing body to see whether they understand the scheme and are capable of putting it into practice.