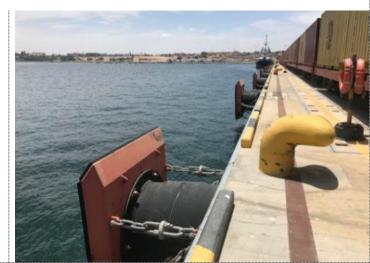
FY2023 Simplified Ex-Post Evaluation Report of Japanese Grant Aid Project

External Evaluator: Tatsuro Yokawa, Chuo Kaihatsu Corporation Duration of the Study: September 2022-February 2024 Duration of the Field Study: January 7, 2023-January 21, 2023

Country Name The Project for Improvement of Namibe Port Republic of Angola Democratic Republic of the Congo Luanda Angola Namibe Zambia Namibia



Location of the Project site

(source: Edited by the evaluator from a map site)

Cell-type fenders and mooring bollard installed at Namibe Port (source: photographed by the evaluator)

# I. Project Outline

From 2008 to 2010, JICA renovated port facilities mainly at 3A berth of Namibe Port through grant aid under "The Project for Emergency Rehabilitation of Port Facilities." In April 2010, two experts in port operation management and port facility/equipment management were dispatched to the Port of Namibe Enterprise (EPN) to restore the functionality of Namibe Port, a logistics hub in the southern part of the country. Yet even in areas other than the 3A quay already renovated, inspections revealed deficiencies in the fenders, aging of the mooring bollard, damages incurred to hulls and the quay during the berthing and mooring of ships, and low work efficiency and low safety resulting from the unpaved condition of the aprons. As the volume of cargo handled in this country has been increasing since 2010 due to rapid economic development, further improvement of the port facilities (which currently form a logistics bottleneck) has been an urgent issue. The grant aid under the "The Project for Improvement of Namibe Port" (February 2017 to June 2019) was provided to improve logistics and promote development in the southern region of Angola.

Objectives of the Project

Background

This project aimed to strengthen the transportation capacity of the southern region of Angola by rehabilitating the port facilities of Namibe Port in Namibe Province, and to thereby further promote logistics in the region.

1. Project site: Namibe Port in Namibe Province

Contents of the Project

- Japanese side: Rehabilitation of the quay wall, the pavement of apron/yard on and behind 3B berth, improvement of the facilities for the reefer containers
- Angolan side: Proper operation and maintenance of equipment and facilities after installation, and environmental monitoring

Implementation

January 15, 2016 E/N Date

Disbursement Date

Date, Year

Schedule

G/A or L/A

Completion Date

May 29, 2019 (Completion of construction)

Month

February 27, 2017 Date

E/N Grant Limit / G/A Grant Limit: 2,136 million yen, After scope change due to preparatory survey

**Project Cost** 

(review): 1,698 million yen<sup>1</sup>, Actual Grant Amount: 1,658 million yen

**Executing Agency** Conditions (Loan only)

Port of Namibe Enterprise (EPN: Empresa Portuária do Namibe)

Borrower (Loan only)

Main Consultant(s): Joint Venture of Oriental Consultants Global Co., Ltd. and PADECO Co., Ltd.

Contracted Agencies Main Contractor(s): TOA Corporation

As the project contents were changed due to the 2016 preparatory survey (review), the project cost and project period were based on the 2016 preparatory survey (review).

#### II. Result of the Evaluation

Summary

This project aimed to strengthen the transportation capacity of the southern region of Angola by rehabilitating the port facilities of Namibe Port and contribute to the promotion of logistics in the region. The project was consistent with the development policy and development needs of Angola and Japan's ODA policy at the time of the ex-ante evaluation. By utilizing the lessons learned from the previous project, "The Project for Emergency Rehabilitation of Port Facilities," the construction work was completed without any major delays. After the project, however, the implementation of the Environmental Management Plan (EMP) and the submission of environmental monitoring results reports to JICA (quarterly), two responsibilities of the recipient country, could not be verified. Whether JICA Angola monitored the organizational, technical, and financial capabilities of the executing agency was also left unverified. As JICA Angola cold not easily pay frequent visits to Namibe, a province located far from the capital, this plan may not have been realistic. Regarding the "internal consistency" (specific collaboration and coordination with other JICA projects) and "external consistency" (cooperation with organizations outside of JICA) of the project, no specific collaboration or coordination was planned, and no actual collaboration took place. Based on the above, the Relevance/Coherence of the project is evaluated as high. The Implementation of this project has improved the work efficiency of the transport machinery and shortened the time required for container-handling cycles, which in turn has helped to promote logistics, strengthen transportation capacity, and reduce logistics costs. The quantitative indicators, however, were only partially achieved: confirmable results were not obtained for any of the indicators, and the effects of the economic recession in Angola curbed the increase in the logistics volume to less than what had been expected before the project implementation. As qualitative effects, the safety and efficiency of the working machines were improved through the paving of the roads and the expansion of the container transportation space and reefer container space. This led to positive impacts, including a reduction in the incidence of respiratory disease among port workers, and no negative impacts were reported. Therefore, the effectiveness and impact of the project can be evaluated as high. The efficiency of this project was very high, as the project cost was within the plan and the project period was as planned. No specific problems with regard to sustainability are noted in terms of the national policy and system, as improved port functionality is a priority in Angola's national policy and a contract with the private concessionaire was made for an extended period up to 2034. In terms of the organization and structure, the private concessionaire company is well structured to operate and maintain the port facilities sustainably. The private concessionaire has staff with sufficient experience, and there are no concerns regarding the technical aspects of port facility operation. In terms of finances, the Namibe Port operation business operated by the private concessionaire continues to be in the red, though the EPN has been operating in the black since 2017. While the deficit operation of the private concessionaire is not a serious problem as the company's Luanda port operation business is compensating, the private concessionaire and EPN should ideally hold discussions to ensure stable management of the Namibe Port operation. Regarding the environmental and social aspects, no negative impacts were confirmed in the regular environmental monitoring carried out during the construction period, and no concerns regarding the response to risks were noted. In terms of operation and maintenance, some areas were found to be in need of repair in the renovated facility, but these have since been repaired and are currently maintained and operated without remarkable problems. For these reasons, the effects produced by this project are considered to be highly sustainable.

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

<sup>&</sup>lt;sup>2</sup> A: Highly satisfactory, B: Satisfactory, C: Partially satisfactory, D: Unsatisfactory

<sup>&</sup>lt;sup>3</sup> ①: Very High ③: High, ②: Moderately low, ①: Low

<Special Perspectives Considered in the Ex-Post Evaluation / Constraints of the Ex-post Evaluation>

This project is a continuation of the grant aid under "The Project for Emergency Rehabilitation of Port Facilities," a project conducted to rehabilitate the port facilities mainly on 3A berth of Namibe Port between 2008 and 2010, and Angolan government requested Japan to renovate Namibe Port facilities, including Berth 3B. Based on the "Preparatory Survey of the Improvement of Namibe Port" conducted from November 2010 to May 2011 in response to the request, JICA determined that the 3B quay renovation was necessary and decided to implement the renovation, at a Japanese Cabinet meeting held in May 2012. However, E/N negotiations were interrupted and stalled for various reasons. Negotiations resumed in 2015, and an E/N was signed on January 15, 2016 with a maximum grant amount of 2.136 billion yen. As more than three years had passed since the Cabinet decision, a cooperation preparatory survey (review) was conducted from January 2016 to September 2016 to revise the details of the project. Therefore, the project cost and period of the original plan reported in the ex-ante evaluation were based on the contents of the E/N, that is, the results of the preparatory survey conducted in 2011, while the project details were determined based on the preparatory survey (review) in 2016. Due to the change of the project content by the preparatory survey (review) in 2016, the project cost and period of the 2016 survey were considered as the original plan.

#### 1 Relevance/Coherence

- <Relevance>
- Consistency with the Development Policy of Angola at the Time of Ex-Ante (and Ex-Post Evaluation\*)

The National Development Plan of Angola (2013-2017) set out strategic development goals for each province. Among them, five priority strategic development goals for Namibe are listed. One priority development item was the expansion of the functions of Namibe Port. Port renovation was positioned as an action plan in the National Transport Strategy (2000-2015), and this project supported the policy. Meanwhile, the functional expansion, renovation, and modernization of Namibe Port were set as priority issues based on the National Development Plan 2013-2017, the action plan formulated by the Institute of Maritime and Ports of Angola of Ministry of Transport. The purpose of this project, to strengthen the transportation capacity of the southern region of Angola by renovating the port facilities at Namibe Port, was consistent with these development policies.

- Consistency with the Development Needs of Angola at the Time of Ex-Ante (and Ex-Post Evaluation\*)

The container-handling volume at Namibe Port was expected to have increased at the time of the ex-ante evaluation. Further headway in rehabilitating the aging port facilities of Namibe Port was positioned as an urgent issue to deal with the expected increase in the container-handling volume. The purpose of this project, to strengthen the transportation capacity of the southern region of the country by renovating the port facilities at Namibe Port, was consistent with the development needs.

- Appropriateness of Project Design/Approach\*
- \* Add only when there is a clear problem with effectiveness or sustainability

Since the E/N was concluded more than three years after the Cabinet decision in 2012, a preparatory survey (review) was conducted in 2016 to review the project details. In addition, the lessons learned from the previous project, "The Project for Emergency Rehabilitation of Port Facilities," were utilized, and the grant agreement (G/A) was also to specify matters such as tax exemption at customs clearance, the prompt issuance of work visas and payment authorizations, etc., as obligations of the recipient government. The project was completed without any major delays associated with the regular monitoring performed by PMR

On the other hand, whether JICA Angola monitored the organizational, technical, and financial capabilities of the executing agency, which was the lessons learned to this project, was left unverified. The implementation of the Environmental Management Plan and submission of environmental monitoring reports to JICA (quarterly), which were the obligations of the recipient country after the project, were also left unconfirmed. Further, the implementation method for these monitoring activities was unclear, and geographic factors made it difficult for JICA Angola to make frequent visits to Namibe, a prefecture far from the capital. As a consequence, the plan may not have been suited for practical implementation.

# <Coherence>

- Consistency with Japan's ODA Policy at the Time of Ex-Ante Evaluation

This project is categorized as an "Infrastructure Development Program" covering a priority area for "Economic Development Support for Industrial Diversification" under Japan's ODA policy for the Republic of Angola (July 2017), and will contribute to the promotion of logistics. The renovation of Namibe Port, an important infrastructure for promoting domestic logistics, is also necessary from the perspective of regional economic development, and this project is consistent with this policy.

#### - Internal Coherence

There was no specific collaboration or coordination plan with other JICA projects at the time of project formulation, and there was no collaboration during the project implementation period. The internal coherence could not be confirmed.

#### - External Coherence

There was no specific collaboration or coordination plan with other donor agencies at the time of project formulation, and there was no collaboration during the project implementation period. The external consistency could not be confirmed.

### <Evaluation Result>

Therefore, its relevance and coherence are high<sup>4</sup>.

# 2 Effectiveness/Impacts<sup>5</sup>

# <Effectiveness>

# (1) Quantitative Effects

Table 1 shows the effectiveness and quantitative effect indicators (standard values, target values, and actual values) of this project. The number of collisions between the quay and the hulls of berthed ships was zero for 3B berth one year after project completion, so it can be said that the target value was achieved. As the indicator of the dust reduction during the apron and yard work had not been measured by the executing agency, it was not possible to determine whether the indicators were achieved. Furthermore, the geographic position of Namibe Port in a desert area made it impossible to completely eliminate the effects of sandstorms from the surrounding area during strong winds. As such, a reduction to zero impact was deemed unlikely to have been achieved. However, the paving of the ground surface with concrete greatly reduced the effects of dust and improved the work efficiency of the transport machinery, hence a sufficient dust-reduction effect can be evaluated. The target time required for the container cargo-handling cycle set for 2022 was achieved, although there were factors outside this project that affected the cargo-handling time (such as the introduction of a new machine called a mobile harbor crane).

Table 1 Result of indicators

Table 1 Result of filulcators							
Indicators	Baseline 2011 Baseline Year	Target 2022 3 Years after Completion	Actual 2019 Completion Year	Actual 2020 1 Year after Completion	Actual 2021 2 Years after Completion	Actual 2022 3 Years after Completion	
Indicator 1 Vessel contact with berth during berthing	147 (A+B)*1	0	8 (A+B)	9 (A only)	11 (A only)	11 (A only)	
Indicator 2 Number of days dust was generated in apron and yard	360	0	Not measured*2	Not measured	Not measured	Not measured	
Indicator 3 Cargo handling time from vessel to apron and to vard	13 minutes 11 seconds	10 minutes 35 seconds	10 minutes 00 seconds	9 minutes 58 seconds	10 minutes 45 seconds	4 minutes 58 seconds	

<sup>\*1.</sup> The number of contacts between 3A berth: A and 3B berth: B (Namibe Port has 3A berth, which was renovated in 2010 by the previous grant project, and 3B berth, which was renovated in this project. This data is total of 3A and 3B berths combined. The fender repaired at berth 3A was already damaged in 2016, and after this project, the number of contacts at berth 3B became zero, but the frequency of use of berth 3B is approximately 30% and 3A use is 70% so the vessel contact with berth still occurs at 3A even after this project)

Source: ex-ante evaluation, private concessionaire

# (2) Qualitative Effects

According to the EPN, this project has reduced the risks that unpaved ground surfaces create during transport machinery work, which has allowed for safer operation, significantly improved work efficiency, and reduced damage to transport machinery. Furthermore, the container transport space and reefer container space were both expanded, and safe berthing has become possible through the installation of new fenders and mooring bollards. According to the private concessionaire, the apron area has been extended 250 meters and effectively doubled, and the container capacity has likewise doubled from 1,200 to 2,400 containers. In addition, the ground surface pavement made it possible to introduce mobile harbor cranes in 2022. As a result, the rehabilitations of the port facilities by this project led to a restoration and expansion of the port functionality, and increased both the efficiency and safety of work. With the increase in export volume generated by growing demand for Angolan granite in overseas markets such as China, Europe, and the UAE, together with the higher efficiency in cargo-handling operations enabled by the new cranes, the transportation of granite by rail from inland Lubango of Huila state is growing (Moçâmedes Railway). Shipping companies report that the improved efficiency of container-handling operations has shortened the ship berthing time. While this is not an actual measurement, the shipping companies roughly estimate that a 30% to 40% reduction in the ship berthing time has been achieved, along with an approximately 30% decrease in berthing costs (payments to ships and ports). Overall, the quantitative indicators were partially achieved, and some of the results have led to improved logistics,

<sup>\*2.</sup> The number of days dust was generated in apron and yard was an indicator that was not measured by the EPN or the private concessionaire, so information could not be obtained at the time of the post-survey.

<sup>&</sup>lt;sup>4</sup> Relevance: ③, Coherence: ②

<sup>&</sup>lt;sup>5</sup> When providing the sub-rating, Effectiveness and Impacts are to be considered together.

strengthened transportation capacity, and reduced logistics costs. On the other hand, the economic recession since 2014 has led to declines in Namibe Port's cargo volume, container-handling volume, and number of incoming ships. The container-handling volume, which stood at approximately 26,000 TEU as of 2009, and was expected to increase further at the time of project formulation, but after reached 37,877 TEU in 2014, it started to decreased and recorded 20,947 TEU in 2022 (private concessionaire).

Table 2 Cargo volume and number of vessels of Namibe Port

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
(1) Namibe Port cargo handling volume	971, 925	1,381,730	1,255,487	881,995	573,443	803,446	848,497	990,874	797,539	922,062	954,567	1,352,232
(tons)												
(2) Namibe Port container handling volume (TEU)	24,475	27,811	35,059	37,877	30,870	21,807	26,032	25,384	20,577	28,832	19,727	20,947
(3) Number of vessels entering Namibe Port	248	248	247	237	189	201	243	238	167	187	229	221

<sup>&</sup>lt;Source> Questionnaire responses (private concessionaire), previous grant project (emergency port rehabilitation project ex-post evaluation p.10, plan preparatory survey (review) p.4

### <Impacts>

According to the EPN, air pollution and water pollution were monitored monthly during the construction period, and the impacts on waste management and the social environment (noise/vibration, working environment, accidents) were reported in monthly construction reports. No confirmed problems were pointed out in these reports. Pollution prevention membranes were also installed, and construction waste locations were set in certain places. These safeguards prevented accidents that led to pollution, so the absence of negative impacts on the natural environment could be confirmed. The project was not a type expected to have impacts on the social environment (land acquisition, resident relocation) or gender, and the absence of such impacts was confirmed. Other positive impacts include a reduction in respiratory illnesses among port workers and improved traffic safety due to a reduction in the number of trucks passing through the town (EPN, Moçâmedes Railway).

#### <Evaluation Result>

Therefore, effectiveness and impacts of the project are high.

#### 3 Efficiency

## <Output>

The output of this project was generally achieved as described above in "I Project Outline - Contents of the Project," although some project design changes from the content of the preparatory survey (review) were prompted by technical reviews. Regarding the obligations of the recipient government, the items specified for the project implementation period were completed. Several items specified for the period after project completion, however, are not thought to have been implemented. The EPN was unaware of several its obligations, such as the Environmental Management Plan and the submission of the environmental monitoring results to JICA. The communication and agreement between JICA Angola and the EPN are thought to have been impeded at the time by the structural changes taking place in the JICA Angola Office during its shift from a field office to an office, as well as the forced return-to-home orders and restrictions on domestic travel necessitated by the COVID-19 pandemic.

Table 3 Contents of design changes

	Tuote y Contents of design changes						
	Facility	Quantity of plan	Quantity of	Reason for change			
		(preparatory survey -	implementation	(The project implementation consultant)			
		review)	(completion report)	,			
1	Quay wall of 3B berth (240 m)						
	1) Concrete of superstructure	240 m	240 m				
	2) Cell Fender (1,250 H)	16 units	20 units	Results of a review of the fender installation intervals in consideration of the berthing of small ships.			
	3) Mooring bollard (100 t)	150t type 1 unit, 100t type 7 units	100t type 8 units	Results of a review of the standards for the mooring bollard based on the berthing ships.			
	4) Mooring ring	3 units	3 units				
	5) Rubber ladder	1 unit	1 unit				
	6) Car stop block	240 m	240 m				
2	Concrete pavement of the apron and container yard	Apron 1,584 m <sup>2</sup> Yard 11,256 m <sup>2</sup>	Apron 1,584 m <sup>2</sup> Yard 11,256 m <sup>2</sup>				
3	Concrete pavement of facilities for reefer containers	840 m <sup>2</sup>	1,530.5 m <sup>2</sup>	Results of a review of the plan to partially pave the reefer container yard in order to ensure dust prevention and the safe transportation of cargo-handling machines.			

#### <Innut>

As mentioned before, this ex-post evaluation assumes that the planned project cost was set at 1,698 million yen after the scope was changed by the 2016 preparatory survey (review)<sup>6</sup>. The actual project cost was 1,658 million yen, a level within 98%, and

<sup>&</sup>lt;sup>6</sup> Assuming that the maximum amount cost under the grant agreement of 2,136 million yen was the planned cost, the actual project cost of 1,658 million

therefore not exceeding the plan. The actual cost of implementation by the partner country was 8 million yen (16,414,000 Kwanza), which was 87% of the planned cost of 10 million yen (18,813,000 Kwanza). The amount came in lower than the plan because there was no longer any need for expenditures related to securing the land necessary for the project.

The planned project period was February 2017 to February 2019, but the actual period was May 2017 to May 2019. The duration of the actual period was 100% of that of the planned period, namely, 25 months<sup>7</sup>.

#### <Evaluation Result>

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

# 4 Sustainability

### - Policy and System

One of the six pillars of the National Development Plan 2018-2022 is infrastructure development. Infrastructure development of the marine and port subsector includes the repair of infrastructure related to marine and port activities, and the development of port facilities to improve their functions and strengthen their competitiveness is one of the priority items. The construction of a new Sacomar iron ore export pier and the additional construction of a container terminal at Namibe Port (JBIC financing project of TOA Corporation and Toyota Tsusho), a phase 3 project underway for Namibe Port at the time of the ex-post evaluation, are positioned as a priority package in Angola's National Master Plan for the Transport and Road Infrastructure Sector 2019-2038. In addition, the concession contract for Namibe Port operation runs until 2034, so the current private concessionaire can operate the port in line with a long-term management strategy.

# - Institutional/Organizational Aspect

The National Maritime Agency supervises the EPN and approves its large-scale projects. No EPN organizational chart was collected in the evaluation, but the EPN outsources the operation and management of the port facilities to private concessionaires. According to the private concessionaire that actually operates and manages the port, there are 150 people in the operation department, an execution team of 100 people who operate the cranes and transport machinery, and a planning team of 50 people who plan and manage cargo handling and transportation. A technical department made up of 50 people performs maintenance on warehouses, vehicles, and cranes. The private concessionaire has established systems to sustainably operate and maintain the port facilities.

## - Technical Aspect

The technical aspects of operation and maintenance were not confirmed because no related information was collected from the EPN. On the other hand, the private concessionaire believes that the staff who operated the port facilities have sufficient experience. Internal supervisors from the private concessionaire come from the capital Luanda for inspections to check if there are no problems in operation, and the operators take training every two years. Machine maintenance is performed on a daily basis, and a machine operation checklist is used when the machines are operated. The staff was judged to have sufficient experience, as some of the staff members have worked for more than 10 years and the private concessionaire has accumulated technical experience.

### - Financial Aspect

In terms of financial management, the EPN was operating in the red before 2015 but has seen fiscal improvements since 2017 and is currently good financial condition. The reason for the deficit might have been instabilities in the budget (revenue) for the port business caused by undue dependence on the number of ships and amount of cargo handled, factors affected by the economic situation (preparatory survey - review). The port maintenance and management functions have been outsourced to the private concessionaire since 2014. While the financial situation of the EPN has improved since 2017, the Namibe Port operation work of the private concessionaire has remained in the red since the contracting in 2014. The private concessionaire attributes the deficit operation partly to insufficient growth in the number of ships and cargo handled under the constraints of the economic recession ongoing since 2014. This is not an urgent problem for the company at present, as the company's Luanda port operation business is compensating. To ensure the stable operation and appropriate use of the Namibe Port facilities going forward, however, the EPN and private concessionaire should ideally hold discussions toward those ends.

yen was 78% of the planned cost. This planned amount, however, was set based on the 2011 preparatory survey, and was later changed to 1,698 million yen based on the scope change under the 2016 preparatory survey (review).

<sup>&</sup>lt;sup>7</sup> The ex-post evaluation compared the planned and actual periods under the same conditions and calculated the number of months by including both the start date and final date. Hence, the 23.5 months stated in the preparatory survey (review) was converted to 25 months. The start date was set as the detailed design start (consultant contract date), and the final date was the date of completion of construction.

Table 4 Financial status of the EPN (Unit: thousand kwanza)

1016 4 FIII	ianciai status oi	me EFN (Onit. mo	usanu Kwanza)
	A: Income	B: Cost	A-B: Balance
2011	2,476,188	2,769,024	-292,836
2012	2,858,079	3,316,677	-458,598
2013	Not collected	Not collected	Not collected
2014	2,244,662	2,662,540	-417,878
2015	1,348,591	1,616,224	-267,633
2016	Not collected	Not collected	Not collected
2017	1,584,370	1,565,612	18,758
2018	2,102,415	1,696,857	405,558
2019	2,825,988	1,998,486	827,502
2020	4,837,636	2,103,995	2,733,641
2021	6 220 012	2 520 765	2 (00 240

Table 5 Financial status of the private concessionaire (Unit: USD)

maneral status of the private concessionance (on						
	A: Income	B: Cost	A-B: Balance			
2014	17,230	21,530	-4,300			
2015	27,354	24,235	3,119			
2016	16,111	17,280	-1,169			
2017	15,115	15,220	-105			
2018	9,325	11,580	-2,255			
2019	8,492	9,263	-771			
2020	7,531	8,125	-594			
2021	7,502	8,024	-522			
2022	15,010					

<sup>&</sup>lt;Source> Private concessionaire

<Source> EPN Annual Report (Relatorios e Contas), Preparatory survey (review) p.19

### - Environmental and Social Aspect

The project implementation consultant and construction contractor carried out regular environmental monitoring during the construction period under the supervision of the executing agency, and no environmental problems were confirmed. Two responsibilities of the recipient country after project completion, namely, the implementation of the EMP and the submission of environmental monitoring results reports to JICA (quarterly), could not be confirmed. Nonetheless, the environmental aspects have been continuously managed by the safety and environment management personnel responsible from the executing agency, and monthly safety and environment management reports are still being created after the completion of the project. Given that no negative impacts were confirmed during the field survey, and that the safety and environmental aspects are continuously managed and monitored, a management system for environmental and social considerations is judged to have been established.

#### - Preventative Measures to Risks

The project plans specified that "large-scale disasters will not occur" as an assumed external condition in setting the risk control parameters, and no large-scale disasters occurred at the port facilities, and no problems with other risks were observed.

# - Current Status of Operation and Maintenance

Although some parts of the renovated facilities were found to be in need of repairs during the project, they had already been repaired by the time of the evaluation, and the facilities were maintained and operated without problems. There was no major damage to the pavement of the apron/yard, but one spot was found to have sunk by about 5cm. The defect inspection confirmed that the sunk spot had been repaired, and the repair of the spot was later confirmed in the repair inspection conducted by the project implementation consultant on March 7, 2023. Further, during the field survey, the executing agency pointed out that the surface finish of the apron pavement was different from that of the adjacent panels. The surface paved in this project was finished by "broom finishing," a standard surface finish recognized internationally, in order to reduce the risk that machines or workers would slip when water collected on the surface. While this surface may lead to tire wear of the working machines, the consultant allayed the EPN's concerns on this point during the defect repair inspection by explaining the anti-slippage benefit. The container storage location markings on the yard still remained during the evaluation. There were no problems with the renovation to the concrete for the superstructure of Namibe Port 3B quay, car stop blocks, mooring bollards, and fenders. Parts of the fender that had rusted or were missing nuts were judged to be in need of repair in the defect inspection, and the corresponding defects were subsequently repaired.

## <Evaluation Result>

There are no specific problems regarding the national policy and system, as improvements in the port functionality were a priority under the national policy and a long-term contract was concluded with the private concessionaire. Regarding the organization and structure, while no information on the organizational structure of the EPN was obtained to shed light on the organization and structure, the private concessionaire company has the necessary structure to operate and maintain the port facilities sustainably. The private concessionaire engages staff with sufficient experience, and there are no concerns regarding the technical aspects of port facility operation. In terms of finances, the EPN has been in the black since 2017. The private concessionaire, on the other hand, has been running its Namibe Port business at a deficit since 2014, when the contract began. This is not an urgent problem for the company at present, as revenue from company's Luanda port operation business compensates. To ensure the stable operation and appropriate use of the Namibe Port facilities going forward, the EPN and private concessionaire should ideally hold discussions towards those ends. Safety and environmental management personnel are assigned responsibility for managing the safety and environmental aspects at the port working facility, so the EPN is judged to have established a system for managing environmental and social considerations. In response to risks, the large-scale disaster reflected in the risk assumption at the time of project planning did not occur. Although there were some places found to be in need of repairs in the renovated facilities during this project, they had already been repaired by the time of the evaluation, and the port facilities were maintained and operated without any problems.

Therefore, sustainability of the project effects is high.

# III. Recommendations & Lessons Learned

# - Recommendations to Executing Agency

While the EPN's balance of income and expenditures is improving due to higher granite exports, the private concessionaire's business at Namibe Port is still operating in the red. The company runs a Luanda port business that currently generates funds to compensate the deficit operation and fend off urgent financial problems, but this financial situation is undesirable overall. The stable management of the private concessionaire is an important precondition for the appropriate operation of the Namibe Port facilities. In order to ensure the sustainable operation of the private concessionaire, the EPN is expected to hold discussions with the private concessionaire regarding the details of the contract (including a review of the fee structure for port users).

The fenders installed in the previous grant aid project (The Project for Emergency Rehabilitation of Port Facilities 2008-2010) were damaged within a year, so the EPN was concerned about the durability of the fenders from the time it commenced the design of this project. As the fenders installed in this project were highly durable, they were in good condition at the time of the ex-post evaluation. It will be important to continue using them appropriately, in order to keep them good condition going forward. The EPN will need to instruct and manage the private concessionaire to ensure that the facilities are used within the appropriate cargo ship weight and berthing speed ranges. The method of operation was indicated by the project implementation consultant as a notable point of operation, and it will be important to clearly state it as an operation rule if necessary.

## - Recommendations to JICA No

#### - Lessons Learned

The preparatory survey was conducted in 2011, and E/N negotiations were suspended after the adoption by a Cabinet decision. The negotiations were restarted in 2015, and the preparatory survey (review) was conducted in 2016. The standard values of the quantitative effects indicators were not reviewed in 2016, and the target values for 2022 were not reset. Neither the EPN nor private concessionaire took measurements to determine the number of days dust was generated in the apron and yard, so no information on that indicator could be obtained in the ex-post evaluation. It may be that the EPN failed to sufficiently recognize the target value for the indicators over the three years following the completion of the project. It is judged that the standard values for the quantitative effect indicators should be confirmed and set as the standard values as of the preparatory survey - review (2016), and that the target values for the three years after project completion (2022) should be reestablished according to those standard values. Furthermore, the indicators should be data that the executing agency normally measures, or the indicators of the project should be shared with the executing agency in order to build a common understanding by clarifying the indicators as target values over the three years after project completion and by requiring continuous measurement during and after the project.

The implementation of the EMP and the submission of environmental monitoring reports to JICA (quarterly) had been set as obligations of the recipient government after the project, and as a result, no consultation with JICA Angola and no implementation could be confirmed. The executing agency was unaware of the need to implement a post-project Environmental Management Plan and submit the environmental monitoring reports to JICA, and JICA Angola was unable to sufficiently communicate, reach agreements, or monitor the project. Furthermore, it is thought that the supervision by JICA headquarters was also necessary for these points.

## IV. Non-Score Criteria

- Performance
- Objective Perspective

necessitated by the COVID-19 pandemic.

The project implementation consultant held weekly coordination meetings with the executing agency, the EPN, and the private concessionaire, and good communication and cooperation throughout the construction work were maintained. According to the consultant, JICA Angola's support and tenacity in working with the Ministry of Transport, Ministry of Finance and the Ministry of Environment to obtain banking arrangements and environmental licenses for the construction work at the beginning of the project helped to reduce negative impacts on the bidding process. This helped to minimize the delays and contributed to the high efficiency of the project (especially during the project period). The construction work and construction supervision were highly evaluated as a result, and the consultant received a letter of appreciation from the EPN upon completion of the construction work. However, whether JICA Angola monitored, as planned, the organizational, technical, and financial capabilities of the executing agency during the project implementation, or analyzed to support capacity building according to the necessity of the areas where the executing agency needed knowledge and technology, could not be verified. The implementation of the Environmental Management Plan and the submission of environmental monitoring results reports to JICA (quarterly), two obligations of the recipient country after the project, were also left unconfirmed, as the EPN was unaware of these obligations and the communications and agreements between the EPN and JICA Angola Were insufficient. According to the JICA Angola, this may have been due to the structural changes taking place in the JICA Angola Office during its shift from a field office to an office, as well as the forced return-to-home orders and restrictions on domestic travel



Concrete paved apron/yard (source: photographed by the evaluator)



Concrete paved reefer container yard (source: photographed by the evaluator)

(end)