Japanese ODA Loan

Ex-Ante Evaluation (for Japanese ODA Loan)

1. Name of the Project

Country: The Republic of Mozambique
Project: Nacala Port Development Project Phase I
Loan Agreement: March 7, 2013
Loan Amount: 7,889 million yen
Borrower: The Government of the Republic of Mozambique

2. Background and Necessity of the Project

(1) Current State and Issues of the Port Sector in Mozambique

Mozambique has three major commercial ports: Maputo, Beira, and Nacala Ports. Among them, Nacala Port is ranked third in terms of cargo and container handling; however, with a depth of 14 meters, the port is one of the best natural harbors in southeastern Africa. Located in the northern part of the country, this port also has advantages such as easy access to Middle Eastern and Asian markets. The port is expected to handle the increasing volume of agricultural products in the future since the Government of Mozambique is actively promoting agricultural and industrial development in the Nacala Corridor region included in the hinterland of the port, in cooperation with Japan and other international donors. Also, Nacala Port is expected to handle 10 times more cargo in 2030 than at present and become a hub port in southeastern Africa when the road and railway under construction reach Malawi and Zambia and start handling transit cargo instead of Beira Port and Durban Port in South Africa, both of which are being pushed to the limit in terms of throughput capacity.

Nevertheless, Nacala Port has not been upgraded for years; therefore, it lacks capacity to handle the growing volume of cargo. Moreover, it has not been maintained properly due to the insufficient capacity of the Northern Corridor Development (CDN), which is responsible for operation and maintenance of the port under the tripartite concession agreement with the National Department of Ports of the Ministry of Transport and Communications (MTC) and Mozambique Ports and Railways (Portos e Caminhos de Ferro de Moçambique; CFM). Furthermore, the port is not sufficiently equipped with facilities such as cargo-handling equipment. For these reasons, the port faces a serious problem of inefficient cargo handling.

(2) Development Policies for the Port Sector in Mozambique

The Government of Mozambique has identified Maputo, Beira, and Nacala Ports as three important international ports essential to the future economic development of the international corridors in their hinterlands. In particular, Nacala Port is given high priority because Beira Port has little room for further expansion. The Strategy for Integrated Development of the Transportation System also gives top priority to the modernization of Nacala Port. Moreover, the development of Nacala Port has been identified as a priority

project in the agreement on the development of the Nacala Corridor adopted at a Zambia-Malawi-Mozambique summit meeting in July 2012.

(3) Japan and JICA's Policy and Operations in the Port Sector

The Government of Japan emphasized the "acceleration of growth" as one of the priority areas in the Yokohama Action Plan at the Fourth Tokyo International Conference on African Development (TICAD IV) in May 2008. To this end, the government has placed a special emphasis on the development of economic and social infrastructure that can benefit a wide area across the borders. This Project is in line with this assistance policy.

Moreover, this Project is listed in the Rolling Plan for Mozambique under the Nacala Corridor Development Program in the priority area "regional economic revitalization." For the port sector, Japan has implemented grant aid projects since 1998, such as the Project for Construction of Dredger at Beira Port and the Project for Reinforcement of Dredging Capabilities for Beira Port. Assistance for Nacala Port started with the Preparatory Survey on the Nacala Port Development Project in 2010.

(4) Other Donors' Activity

The World Bank implemented the Railways and Ports Restructuring Project from 1999 to 2009 in order to improve the organization of CFM. African Development Bank is expected to cover some components of the phase II project.

(5) Necessity of the Project

This Project is to be implemented in northern Mozambique, which is experiencing rapid development, with aims of solving the bottleneck of logistics in the region, such as the deterioration and inefficient operation of Nacala Port; improving logistics efficiency to contribute to the development of landlocked countries along the Nacala Corridor such as Malawi and Zambia; and promoting regional integration. Thus, this Project is designed to address the problems faced by Mozambique and in line with the development policies of the country. Moreover, it is consistent with the assistance policies of the Government of Japan and JICA. Therefore, it is highly necessary and relevant for JICA to support this Project.

3. Project Description

(1) Project Objective

The objective of the Project is to increase the productivity of cargo handling of Nacala Port which is the hub port in northern Mozambique by improving facilities of the Port, thereby contributing to economic development and poverty reduction in Nacala Development Corridor which covers Mozambique, Malawi and Zambia.

(2) Project Site/Target Area: Nacala District, Nampula Province

(3) Project Components (including procurement method)

1) Civil works: (i) berth dredging (approx. 195,000 cubic meters), land reclamation and leveling, environmentally conscious works; (ii) construction of an access road (approx. 1000 meters); (iii) extension of the road entering the port (approx. 365 meters); (iv) construction of the container terminal gate; (v) pavement of the

container yard (approx. 33,186 square meters); and (vi) repair of the north wharf (approx. 3,200 square meters) (International competitive bidding)
In this phase (the first phase), a part of construction works of (i) (approx. 80,000 cubic meters) and (v) (approx. 29,686 square meters) as well as all of the construction works (ii), (iii), and (iv) will be covered.

2) Equipment to be procured: (i) six rubber tire gantry (RTG) transfer cranes; (ii) three gantry cranes, and (iii) yard chassis (International competitive bidding)
In this phase (the first phase), a part of (i) (three cranes) will be covered.

3) Consulting services: detailed designing, tender assistance, and construction supervision (Short list selection)

(4) Loan Amount

31,974 million yen (Loan amount: 7,889 million yen)

(5) Project Implementing Schedule (cooperation period)

March 2013 to July 2017 (53 months in total). Project completion is defined as when the facility operation is commenced (July 2017)

(6) Project Implementation Structure

1) Borrower: The Government of the Republic of Mozambique

2) Executing Agency/Implementation Structure : Ministry of Transport and Communication.

3) Operation and Maintenance System: Northern Corridor Development (CDN) (under the concession contract)

(7) Environmental and Social Consideration/Poverty Reduction/Social Development

1) Environmental and Social Consideration

① Category: B

② Reason for Categorization: This Project is not assumed to have a significant negative impact on the environment because it does not fall under the category of large-scale projects in the port sector as specified in the “JICA guidelines for environmental and social considerations” (issued in April 2010). Moreover, the Project does not have sensitive characteristics nor is located in sensitive areas as defined in the guidelines.

③ Environmental Permit: The Environmental Impact Assessment (EIA) report was approved by the Ministry of Coordination of Environment Affairs (MICOA) in November 2012

④ Anti-Pollution Measures: Water pollution during the dredging works will be minimized through utilization of the impermeable polyethylene sheet and implementing the sand pump dredging method.

⑤ Natural Environment: Since the Project is not located in or around sensitive areas such as national parks, its adverse impact on the natural environment is assumed to be minimal.

⑥ Social Environment: This Project will not require the acquisition of additional land or the relocation of residents because it will be implemented within the existing port area and government-owned area.

⑦ Other / Monitoring: In this Project, the MTC and CDN will monitor the implementation of preventive measures against infectious disease, waste management practices, soil erosion, air and water pollution, the level of noise, and other necessary matters. After the start of operations, the MTC will monitor air and water pollution, HIV/AIDS prevention activities, and other necessary matters.

2) Promotion of Poverty Reduction: none

3) Promotion of Social Development (e.g. Gender Perspective, Measure for Infectious Diseases Including HIV/AIDS, Participatory Development, Consideration for the Handicapped, etc.): Because the large-scale construction in this Project will require many people to work together in a country with a high incidence of HIV/AIDS, there is a significant concern that the disease may be prevalent in these construction workers. Therefore, in this Project, the contractor will conduct HIV prevention activities and take other measures for the hygiene and safety of workers in collaboration with local NGOs.

(8) Collaboration with Other Donors: The Project for Urgent Rehabilitation of Nacala Port (grant aid) is being implemented to solve urgent issues in order to secure the safety and operation of the port. Meanwhile, the Project for Improvement of Nacala Port (loan-related technical cooperation project) is being carried out to provide advice on the formulation of a medium- to long-term port development plan and develop human resources for the port. Moreover, the Project for Nacala Corridor Economic Development Strategies (development study-type technical cooperation) is being implemented to formulate development strategies for the hinterland of the port, including landlocked countries such as Malawi and Zambia. In this development study, Nacala Port is regarded as a gateway for the region and given the highest priority in the development of the region. African Development Bank is expected to cover some portions of the phase II project.

(9) Other Important Issues:

None

4. Targeted Outcomes

(1) Quantitative effect

(1) Operation and Effect Indicator

Indicator	Baseline (Actual Value in 2011)	Target (2019) 【2 years after project completion】
Cargo throughput (tons per year)	1,639,000	4,738,000
Annual container throughput (TEUs per year)	89,714	234,000

Indicator	Baseline (Actual Value in 2011)	Target (2019) 【2 years after project completion】
Annual average number of containers handed per unit time spent by a vessel at berth (boxes per hour)	6.7	24.0
Annual average number of containers handled per unit time spent loading and unloading (boxes per hour)	8.0	29.0
Annual average number of containers handled by gantry cranes per unit time spent by a vessel at berth (boxes per hour)	-(Note)	31.0
Annual average number of containers handled by gantry cranes per unit time spent loading and unloading (boxes per hour)	-(Note)	40.0

Note: The gantry cranes have not been installed yet.

2) Internal Rate of Return

Based on the conditions indicated below, the economic internal rate of return (EIRR) is 11.5% and the financial internal rate of return (FIRR) of the Project is 16.8%.

【EIRR】

Cost: Project cost, operation and maintenance cost

Benefit: Reduction of container throughput storage costs, reduction of bulk cargo inland transportation expenses

Project Life: 40 years

【FIRR】

Cost: Project cost, operation and maintenance cost

Benefit: Port utilization fee

Project Life: 40 years

(2) Qualitative effective

Promotion of trading in Nacala corridor, promotion of economic growth and unification in the South Africa region and improvement of access to the logistics base.

5. External Factors and Risk Control

(1) The political stability and public safety will be maintained in Mozambique and neighboring countries.

(2) There will be no major natural disasters or events that can delay the construction.

6. Lessons Learned from Findings of Similar Projects Undertaken in the Past

(1) Findings of Similar Projects

The ex-post evaluation of the Laem Chabang Commercial Port Project in Thailand indicates that it is important to actively support not only the development of facilities but also the survey and planning activities that can contribute to the improvement of operational efficiency, including the analysis of the operation mechanism of the port terminals, in order to ensure the sustainability of the facilities.

(2) Lessons Learned to the Project

Operation capacity of Nacala port is not sufficient yet; thus, in order for the port to implement projects continuously and efficiently, also taking into account the above finding, a technical cooperation project is being implemented to develop human resources that can contribute to improving the operational efficiency of the port. The technical cooperation project is also providing support for the comprehensive development of port management capacity, including advice on the concession agreement.

7. Plan for Future Evaluation

(1) Indicators to be Used

1) Cargo throughput (tons per year)
2) Annual container throughput (TEUs per year)
3) Annual average number of containers handed per unit time spent by a vessel at berth (boxes per hour)
4) Annual average number of containers handled per unit time spent loading and unloading (boxes per hour)
5) Annual average number of containers handled by gantry cranes per unit time spent by a vessel at berth (boxes per hour)
6) Annual average number of containers handled by gantry cranes per unit time spent by a vessel at berth (boxes per hour)
7) Economic Internal Rate of Return (EIRR) (%)
8) Financial Internal Rate of Return (FIRR) (%)

(2) Timing of Next Evaluation: 2 years after project completion