

1. Name of the Project

Country: The Republic of Mozambique

Project: Nacala Port Development Project Phase II

Loan Agreement: June 11, 2015

Loan Amount: 29,235 million yen

Borrower: The Government of the Republic of Mozambique

2. Background and Necessity of the Project

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

Among three major commercial ports in Mozambique: Maputo, Beira, and Nacala Ports, Nacala Port is ranked third in terms of cargo and container handling. With a depth of 14 meters, the port is getting attention because of its condition as one of the best natural harbors in southeastern Africa and attractive location for Indian Ocean-Rim trade. Although the progress of the development of Nacala Corridor connecting the port and inland part of the country as well as Malawi and Zambia and its surrounding areas are relatively slow within the country, along this area has high potential of underground resources, agriculture, etc.

Under such circumstances, Mozambique, in cooperation with donors, focuses on promoting economic and social development of Nacala Corridor region. With the development of the region, export of minerals and agricultural products and import of capital goods, crude oil, wheat, etc. are expected to increase dramatically in future. Against this backdrop, the cargo handling capacity of the port is approaching to the limit and the port is anticipated to handle transit cargo instead of Beira Port, Durban Port (South Africa) and other neighboring ports. Thus, Nacala Port is projected to handle 10 times more cargo in 2030 than at present. Nevertheless, the status quo of Nacala Port facilities remains to be a limited scale and deteriorating facilities have not been improved; therefore, it does not have sufficient capacity to handle the growing volume of cargo. Moreover, the port faces a problem of inefficient cargo handling due to delay in the improvement of port cargo handling system and its operation.

(2) Development Policies for the Port Sector in Mozambique

Among the major three ports, the Government of Mozambique gives priority to Nacala Port as it has large room for further expansion as well as a high potentiality along the Corridor, in particular. Thus, the Government recognized the expansion of and modernization of Nacala Port as priority projects in the Strategy for Integrated Development of the Transportation System (2009-2023), the Government of Mozambique Five-Year Plan (2015-2019), and the Economic and Social Plan for 2015.

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

The Government of Japan places "regional economic vitalization including corridor development" as one of the priority areas in the Country Assistance Policy for the Republic

of Mozambique, and this Project is recognized as the “Nacala Corridor Development and Improvement Program.” Thus, This Project is in line with this assistance policy. In this 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. Support for Nacala Port started within the Preparatory Survey on the Nacala Port Development Project in 2010, followed by a ODA loan project, the Project for Improvement of Nacala Port (2012-2015), to improve the capacity for operation and maintenance of port facilities and cargo-handling technology and a grant aid project, the Project for Urgent Rehabilitation of Nacala Port (2012-2015), to provide equipment for urgent rehabilitation and cargo handling.

#### (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 Portos e Caminhos de Ferro de Moçambique (CFM).

#### (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 “Accelerating Infrastructure and Capacity Development,” one of the Yokohama Action Plan agreed at The Fifth Tokyo International Conference on African Development (TICAD V) held in Yokohama in 2013. 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 Port, Nacala city, Nampula Province

#### (3) Project Components (including procurement method)

##### 1) Civil works (international competitive bidding)

i) berth dredging, land reclamation and leveling, environmentally conscious works; ii) construction of an access road and gate; iii) extension of the road entering the port; iv) construction of the container terminal gate; v) pavement of the container yard; vi) repair of the north wharf; vii) construction of the railway container terminal and railroads; viii)

rehabilitation of the container yard and road pavement inside the port; ix) installation of the trench duct; and x) construction of the equipment maintenance facility. In this phase (the second phase), part of i), ii), v), and vii) and vi), viii), ix), and x) will be covered.

2) Equipment to be procured (international competitive bidding)

i) rubber tire gantry (RTG) transfer cranes; ii) gantry cranes, and iii) yard chassis  
In this phase (the second phase), part of i) and ii) and iii) will be covered.

3) Consulting services (short-listing method)

i) detailed design, ii) bidding assistance, iii) construction supervision, and iv) environmental monitoring. In this phase (the second phase), ii), iii) and iv) in relation to Phase II activities will be covered.

(4) Loan Amount

Total Project Cost (Phase I and II): 46,884 million yen; Loan amount: 37,124 million yen  
Loan amount for Phase II: 29,235 million yen

(5) Project Implementation Schedule / Cooperation Period

Phase I and II: March 2013 to January 2018 (59 months in total). Project completion is defined as when the operation of port facilities for the Project is commenced (January 2018)

(6) Project Implementation Structure

1) Borrower: The Government of the Republic of Mozambique

2) Guarantor: none

3) Executing Agency/Implementation Structure: Ministry of Transport and Communication. Project Management Unit (PMU) established within the Ministry implements the Project.

4) Operation and Maintenance System: Northern Corridor Development (CDN) implements the Project financed by the Government and private sectors under the concession contract. The operation and management capacity of CDN has been enhanced through the Project for Improvement of Nacala Port. Thus their capacity for finance was confirmed to be appropriate in the appraisal process.

(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: A survey revealed that the soil in and around the Project site is contaminated with heavy metal and organic substances. They can spread to surrounding areas if water pollution occurs as a result of dredging. Therefore, water pollution during the dredging works will be minimized through utilization of the impermeable polyethylene sheet and implementing the grab bucket dredging method. The waste generated from the operation of the port is to be managed properly in accordance with the regulations of Mozambique. Moreover, the contaminated soil dredged from the bottom of the harbor is to be stored in impermeable, sealed containers and deposited in a landfill.
- 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:

There have been no projects implemented by other donors for Nacala Port Development while a Sri Lankan private enterprise has provided a field supervision of cargo handling and maintenance of equipment as its private sector activity.

4. Targeted Outcomes
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(1) Quantitative effect

1) Operation and Effect Indicator

Indicator	Baseline (Actual Value in 2012)	Target (2019) 【2 years after project completion】
Cargo throughput (tons per year)	1,351,000	5,071,000
Annual container throughput (TEUs per year)	65,163	251,000
Annual average number of containers handed per unit time spent by a vessel at berth (boxes per hour)	6.3	24
Annual average number of containers handled per unit time spent loading and unloading (boxes per hour)	8.0	29
Annual average number of containers handled by gantry cranes per unit time spent by a vessel at berth (boxes per hour)	-(Note)	31
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 10.62% and the financial internal rate of return (FIRR) of the Project is 17.65%.

### 【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

Enhancing the service capacity and international competitiveness of Nacala Port and promoting investment in areas around the port

## 5. External Factors and Risk Control

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

(2) External factors: 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. Moreover, the ex-post evaluation of other similar projects in the port sector suggests that it is essential to encourage the recipient government to take measures to promote the use of the project port.

#### (2) Lessons Learned to the Project

In relation with this Project, 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. With regard to the measures to promote the use of Nacala Port, it has been confirmed that the national development strategy of Mozambique gives high priority to the extension and modernization of the port.

### 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