Indonesia

Ujung Pandang Port Urgent Rehabilitation Project

Report Date ：June, 2002

Field Survey ：July, 2001

1. Project Profile and Japan's ODA Loan

Project Location Map

Hatta Quay of Makassar Port

1.1 Background

The Hatta Quay of Ujung Pandang Port (recently renamed Makassar Port) had 5 berths in total, but because of deterioration, only 4 berths could be used. Superannuation of the facilities had also made it necessary to impose a cargo loading limit of only 1.5 tons per meter. The port facility risked collapse in five years unless corrective action was taken. If Hatta Quay lost its viability, it was estimated that the excessive cargo concentration in the Soekarno Quay would result in a five-day wait for vessels. The narrow handling yard and the port access road also posed problems. All of these factors collectively suggested an urgent need to re-construct and rebuild Hatta Quay.

Makassar Port is one of four major ports in Indonesia. The others - Surabaya, Tanjung Priok and Belawan - had already been developed using loans from the World Bank and from the Asian Development Bank. Because of Makassar's deteriorating situation, the Government of Indonesia requested financial assistance from the Government of Japan on the basis that this was a top priority project.

1.2 Objectives

Construction of a New Hatta Quay with related necessary facilities, in order to keep port activities in reasonable condition and to enable continuing performance as a gateway port.

1.3 Project Scope

a) Construction of the New Hatta Quay and related facilities, including buildings and roads, with utility supplies

b) Consulting services for detailed design of new passenger terminal facilities and supervision of construction work

1.4 Borrower/Executing Agency

Republic of Indonesia / Directorate General of Sea Communications, Ministry of Communications

1.5 Outline of Loan Agreement

Loan Amount Loan Disbursed Amount	6,658 million yen 5,038 million yen
Exchange of Note Loan Agreement	December 1990 December 1990
Terms and Conditions Interest Rate Repayment Period (Grace Period) Procurement	 2.5 % p.a. 30 years (10 years) General Untied (Partially Untied for Consulting Services)
Final Disbursement Date	December 1999

2. Results and Evaluation

2.1 Relevance

The national development policy of the Republic of Indonesia has been based on two long-term (25-year) economic development strategies (PJPI (I) between 1969 and 1993 and PJPI (II) between 1994 and 2019), as well as subordinate five-year development plans, REPELITA I to VI, covering the past 30 years. The basic port sector development policy at the time of project appraisal in 1990 was described as follows in REPELITA V (1989-1993):

a. Port development in order to contribute to export promotion
b. Infrastructure development in the less developed areas, particularly Eastern Indonesia, with the aim of reducing regional disparities in social and economic activities.
c. Improvement of ports in order to cope with the global trend of containerization

Ujung Pandang Port has been designated one of four "Gateway Ports[1)]" in Indonesia since 1983. The development of this port was thus extremely important, not only for the transport sector, but also for the national economy. These basic policies are maintained in the current national development plan, PROPENAS (2000-2004), where the expansion of exports and the promotion of regional development have been prioritized as basic strategies. This project aimed to reconstruct the Hatta Quay so that it would function effectively as a Gateway Port. Accordingly, it can be said that the project was appropriate from the viewpoint of the national development policies at the time of appraisal and continues to be consistent with national policy.

[1)] Based on the Maritime Transport Development Program, prepared in June 1983, the commercial ports in Indonesia have been classified into four categories: Gateway port, Collector port, Trunk port and Feeder port. Gateway ports are expected to function as regional hub ports by intensively handling export/import cargo to/from the corresponding regions.

2.2 Efficiency

(2.2.1) Project Scope

The main changes in the project scope are as follows:

a. Construction of two additional berths on Hatta Quay
b. Additional civil works, such as dredging, replacement and reclamation related to the above change
c. Construction of the passenger terminal was removed from the scope.

These changes were made based on the following reasons:

a.,b. The increase in the rate of container cargo usage at the time of engineering design was much higher than estimated at the time of project appraisal. Therefore, it was anticipated that cargo demand would exceed capacity within several years after completion without a change in the project scope.

c. The passenger terminal was originally to be constructed at the south side of the multi-purpose terminal. However, planners determined that the New Hatta Quay would function more effectively if that area could be used as a multi-purpose yard, to cope with the increasing demand for cargo container usage, rather than as a passenger terminal. Instead of building a new passenger terminal on Hatta Quay, the existing terminal at Soekarno Quay could be improved, even though Soekarno Quay is not included in this project. By doing so, major movements of passengers and cargo will be separated.

The existing passenger terminal building on the Soekarno Quay is expected to be expanded to cope with growing demand.

The overall improvement plan for Soekarno Quay, including expansion of the passenger terminal, is currently under preparation by the Port Office.

(2.2.2) Implementation Schedule

The project, including the engineering study, was originally scheduled to be implemented from June 1991 to March 1996. Actual implementation took place between July 1992 and October 1998, an increase in implementation time of 1.5 years. Construction work was implemented during the 54 months from May 1994 to October 1998, which was not significantly different from the originally scheduled 51 months. The delay in completion was due mainly to the additional engineering studies carried out, and to the time required to approve the changes in project scope.

(2.2.3) Project Cost

The original project cost estimate was 7,833 million yen, but the actual cost is estimated to have been 6,282 million yen, according to information from the executing agency. The 1,531 million yen cost under-run can be attributed in part to lower construction costs for the local currency portion of the project. The elimination of the passenger terminal from the project scope and the devaluation of the rupiah during the period from the signing of loan agreement to the completion may have accounted for a significant portion of the cost under-run.

2.3 Effectiveness

(2.3.1) Total Cargo Volume

The total tonnage of cargo handled at Makassar Port has almost doubled during the past ten years, from 3.7 million tons in 1990 to 6.3 million tons in 2000, growing, on average, 5.5% per annum. The growth rate after project completion in 1998 rose to 13.8% per annum. These growth rates are much higher than those expected at the time of project appraisal (2.54%/yr).

The new Hatta Quay is presently used as a multipurpose terminal for general cargo and container cargo. The domestic general cargo in 2000 was about 3.4 million tons, which is also much higher than the 2.0 million ton demand forecasted at the time of project appraisal.

The rapid cargo growth is considered to be a direct result of the project.

Table 1: Total Cargo Handled at Makassar Port

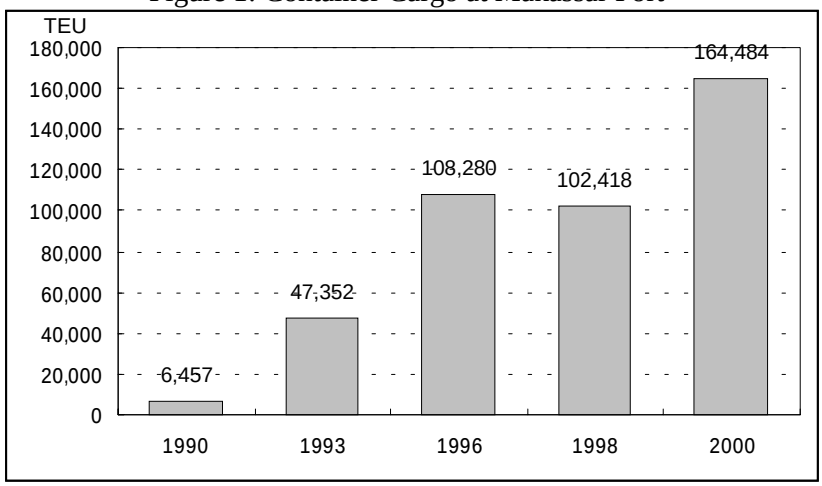
		Year of Appraisal 1990	1993	1996	Year of Completion 1998	2000
Total Cargo volume (1000 ton/year)	Forecast	3,500	3,774	4,068	4,278	4,498
	Actual	3,727	4,079	5,277	4,901	6,353
Domestic Dry Cargo (ILS) (1000 tons)	Forecast	1,548	-	—	—	1,967
(1000 tons)	Actual	2,047	2,317	3,057	2,651	3,360

Note: Forecast is the figures at the time of project appraisal.
Source: Makassar Port Office

(2.3.2) Container Cargo

Since the completion of the project, most of the container cargo has been directed through the new Hatta Quay. The total volume of container cargo has increased rapidly during the past decade, with an average growth rate of 38% p.a. in TEU (Twenty-foot Equivalent Units). This increasing tendency is likely to continue, given the global trend towards containerization. The trend may justify the changes made in the project scope, as well as it may further prove the function of Hatta Quay as a main cargo terminal and a "Gateway Port". The terminal has been extended 180 meters beyond the original scope, and terminal space for passenger ships has also been adapted to multipurpose use, particularly for use as a container yard.

Figure 1: Container Cargo at Makassar Port



Source: Makassar Port Office

(2.3.3) Average Waiting Time

The berth occupancy rate at one time reached 86% in 1994, nearly equaling the permissible ratio at that time, before the rehabilitation work on Hatta Quay was started. The average waiting time for vessels had increased to 4.7 days, an extreme situation that could have prevented some vessels from berthing. The completion of the project has significantly reduced the berth occupancy rate to about 50%. The project also achieved a significant reduction in the average waiting time, down to 1.58 days in 1998 and 1.24 days in 2000, which fulfilled the target waiting time set at the time of project appraisal. In addition to the rehabilitation work on Hatta Quay, the trend toward containerization seems to have contributed greatly to reduce waiting time.

Table 2: Average Waiting Time and Berth Occupancy Ratio

		Year of Appraisal 1990	1994	Year of Completion 1998	2000
Average Waiting time (days/ship)	Forecast	1.58	4.63	1.68	1.83
	Actual	1.96	4.68	1.58	1.24
Berth Occupancy Rate (%)	Forecast	—	84	58	61
	Actual		86.6	49.4	68.2

Source: JBIC (Forecast), Makassar Port Office (Actual)

(2.3.4) Traffic Congestion on Urban Roads

Construction of a connecting road inside the port area as part of the project was expected to alleviate traffic congestion on urban roads in Makassar City. According to the Makassar Port Office, traffic congestion on the urban roads around the port area has been mitigated, however, it seems to be due to a new port access road that connects with the toll road toward Central Sulawesi. This new access road was funded from the budget of the toll road construction a few months after this port rehabilitation project was completed.

(2.3.5) Internal Rate of Return

a. EIRR

The economic internal rate of return (EIRR) was re-calculated with the actual project cost and actual benefits, estimated from average waiting time based on the cargo handling results. In the original plan, New Hatta Quay was to be used partly as a multi-purpose terminal and partly as a passenger terminal, while in actuality it handles cargo exclusively, particularly containers. Accordingly, project benefits are defined only by cargo handling. The re-estimated EIRR is 25.6%, slightly higher than that estimated at the time of project appraisal (21.17%). The reason is probably due to the decrease in the project cost.

b. FIRR

The financial internal rate of return (FIRR) was re-estimated using the actual costs and revenues. The FIRR is estimated at 10.4%, which is, again, higher than the original estimate at the time of

project appraisal (3.87%). This increase is attributed to the change from passenger terminal, for which the tariffs are set at a low rate in consideration of social impacts, to cargo terminal.

2.4 Impact

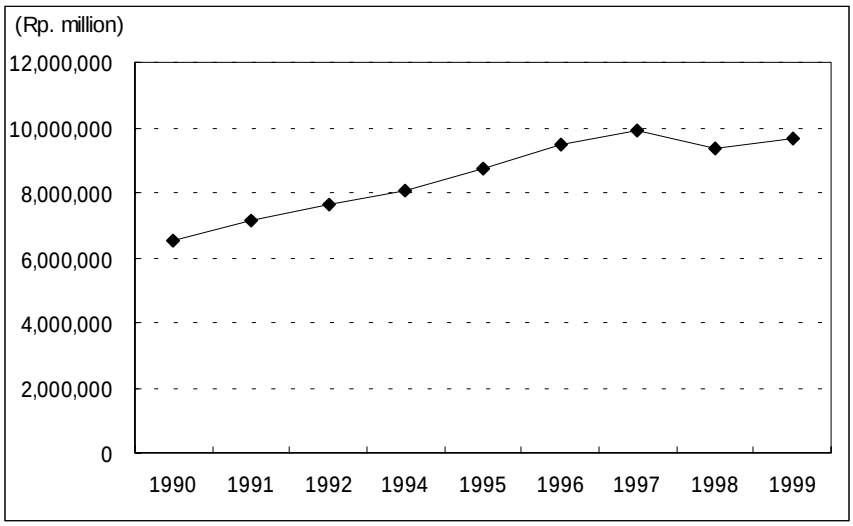
(2.4.1) Socio-Economic Indicators

At the time of appraisal, expected impacts of the project included enhanced regional development and creation of job opportunities. As a result of the Asian Financial Crisis of 1997, however, the GRDP of South Sulawesi declined sharply in 1998. While post-completion statistical data is available only for 1999, GRDP for that year increased by as much as 3% from the previous year. Given the recent growth of cargo handling at Makassar Port, however, the economy of South Sulawesi may be on the way to recovery.

The working population in Makassar grew from 321,000 persons in 1995 to 372,000 persons in 1999. The growth rates in the number of employees in manufacturing, construction and retail were particularly notable, ranging from 9% to 13 %.

The development of the port facilities is considered to have contributed to the growth of the working population. For instance, at the Makassar industrial estate, located about 8km from the port, a flour mill factory was established in 2000. This factory imports and processes wheat at the plant, and then distributes it to the eastern part of Indonesia, including Sulawesi. The improvement of port efficiency as a result of the project is regarded as one of the factors that determined site selection. The factory has also contributed to new employment opportunities in Makassar.

Figure 2: GRDP of South Sulawesi Province (1993 constant prices)



Source: Statistical Yearbook Indonesia 1999

(2.4.2) Other Socio-economic Impacts

The passenger terminal remains at Soekarno Quay, and therefore the project has had no direct impact on residents. If the project had not been implemented, however, the Soekarno Quay would

have become more congested with mixed traffic.

(2.4.3) Environmental Impacts

The construction work for New Hatta Quay included the dredging and disposal of the seabed soft layer. This work posed the risk of water pollution, particularly of solid particulates endangering plankton and live coral reefs at Dayang–dayangan Island, which is 17km southwest of the site, and at the Samalona Islands, northwest of the site. Methods to minimize negative impacts, based on the environmental impact studies, were adopted for dredging and disposal work.. In order to prevent leaking of dredged soil, the bottom doors of the hopper barges were closed firmly and double-checked during the transportation plying between the dredging and dumping sites. Care was also taken to avoid overloading the hopper barge with dredged soil. The monitoring records of actual condition during construction are not available, but according to the Makassar Port Office, there were no serious negative impacts on the environment caused by the project.

2.5 Sustainability

(2.5.1) Organization for Operation and Maintenance

Makassar Port is operated and maintained by the Makassar Port Administration Office (ADPEL), under state-owned PT.PELINDO IV, which is responsible for the 22 commercial ports in Eastern Indonesia. The state port companies (PELINDO I – PELINDO IV) are managed independently, but supervised by the Directorate General of Sea Communications (DGSC), in terms of port development and management policy formation. The roles of the related organizations are as follows:

a. Ministry of Communication: Overall transport policy including port development
b. Directorate General of Sea Communications (DGSC): Realization of maritime transport policy as determined by the Ministry of Communications
c. PT.PELINDO IV: Management of commercial ports, including Makassar Port
d. Makassar port administration office: Operation and maintenance of Makassar Port

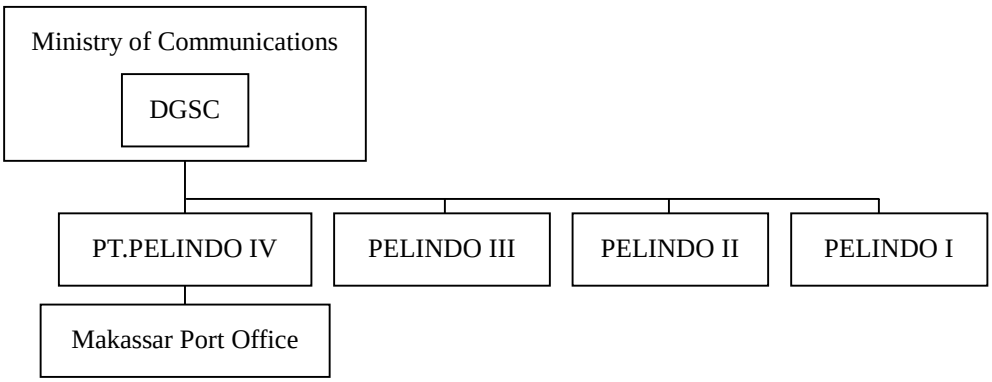


Figure 3: Institutional Framework of Makassar Port

The general manager of the Makassar port office is appointed by PT.PELINDO IV, while a representative of PELINDO IV is sent from the DGSC.

(2.5.2) Financial Status

The total revenue of Makassar Port in 1999 was Rp 35.4 billion, while the total operation and maintenance cost, including the depreciation cost, was Rp 20.0 billion, creating an operating surplus of Rp 15.5 billion. In 2000, port revenue increased to Rp 42.6 billion, reflecting the high growth of cargo handling business, and operating profit also expanded to Rp 18.9 billion. Judging from the following financial statement, the current port operations are financially sound.

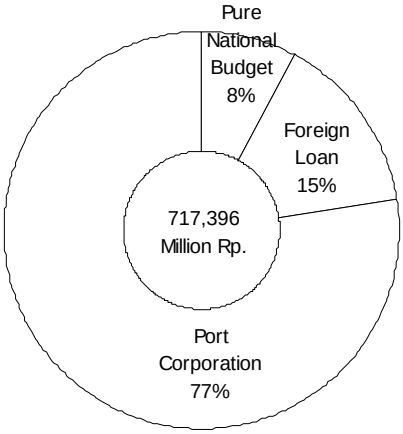
Table 3: Profit and Loss Statement of Makassar Port *(in Rp million)*

ITEM/YEAR	1999	2000
1) Operating Revenue		
Ship Berthing Charge	16,560	18,220
Cargo Handling Charge	12,450	16,884
Others	6,389	7,452
Revenue Total	35,399	42,556
2) Operating Costs		
Personnel Costs	4,280	5,268
Material Costs	3,243	3,369
Maintenance Costs	3,493	3,447
Depreciation Costs	3,621	5,558
Other Administration Costs	5,308	6,020
Costs Total	19,945	23,662
3) Net Operating Income	15,454	18,894
4) Non Operating Revenue	233	1,469
5) Non Operating Costs	127	0
6) Net Income Before Tax	15,560	20,363

Source: PELINDO IV Makassar Port (1999-2000)

The development budget for ports in eastern Indonesia, including Makassar, consists of the government budget and of the PELINDO IV (state-owned corporation) budget. The government budget portion has been decreasing in recent years. The total financial input from the government to all the commercial ports in Indonesia in 1997 was Rp 136 billion, dropping drastically to Rp 55 billion in 1998 because of the economic recession. Hence, most of the resources for port development in 1998 came from the port corporation, as shown in Figure 4. The total port development budget of PELINDO IV in 1998 was Rp 48.8 billion.

Figure 4. Port Development Budget in 1998 (Indonesia Total)



Source: DGSC

(2.5.3) Privatization

Private sector financing was first introduced for procuring container handling equipment and for constructing the terminal building at Tanjung Priok port in 1997. In April 1999, the container terminals at Tanjung Priok and Tanjung Perak (Surabaya) were privatized, suggesting the likelihood that financial resources from the private sector would be used for the development of terminal facilities as well. PROPENAS (2000-2004) also emphasizes the importance of private sector involvement in infrastructure development, but there is no such movement at present for Makassar Port because of relatively lower profitability due to less cargo demand compared to the ports in Jakarta and Surabaya.

(2.5.4) Technical Capability

The newly constructed Hatta Quay, as well as the related facilities, has all been well maintained. The port received ISO 9002 certification for its container services in 1999. The total number of port staff is 332 persons, including 40 engineers who specialize in maintenance work. According to Makassar port officials, the staff is trained periodically, thereby lessening the likelihood of shortfalls in skilled personnel. Container cargo demand is likely to increase with a high growth rate. Cargo demand for Makassar Port is forecasted to grow 10% per annum for the years from 2000 to 2003, according to the projection by PELINDO IV. In order to cope with the growth of cargo demand, additional procurement of handling equipment, particularly of gantry cranes, will be among the central issues for port operations in the near future.

Another issue will be the steadily increasing occupancy ratio. In order to reduce the ratio without investing large sums of money, the further increase in cargo handling efficiency must be achieved through container handling specialization, computerization of logistics and other means as determined by various process reviews.

Comparison of Original and Actual Scope

Item	Plan	Actual
(1) Project Scope		
A. Demolishing Existing Facilities	Lump sum 1 set	Lump sum 1 set
B. Dredging, Replacement and Reclamation	Dredging 700,000m^3 Sand fill for replacement 340,000 m^3 Reclamation 864,000 m^3	1,589,472.16m^3 340,274.89m^3 1,715,375.69m^3
C. Soil Improvement	Lump sum 1 set	Lump sum 1 set
D. South Revetment	L = 154 m	
E. Main Quay Wall		
- For ILS service apron	5 No × 90m = 450m	490m
- For Heavy Vessels Berth apron	1 No × 45m = 45m	180m
- For Passenger Terminal Wharf	1 No × 180m = 180m	180
- Conjunction area	= 76m	-
F. Small Quay Wall	1 No × 70m = 70m	154m
G. Revetment at Hasanuddin Basin	L = 89 m	
H. Road and Yard Revetment	Total length approx. 1,950m Paving area approx. 24,700 m^2 Interport road W x L = 19m x 435.5m Port service road W = 12m to 19m Open storage yard = 22,610 m^2	Total paving area: 193,000 m2
I. Gate and Fence	Lump sum 1 set	Lump sum 1 set
J. Storm Water Drainage System	Lump sum 1 set	Lump sum 1 set
K. Building and Offices		
- Transit Shed	[65m x 40m]x 4 No = 10,400 m^2	[100m×40m]×1No = 4,000 m^2
- Transit Shed along Passenger Building	= 1,000 m^2	
- Maintenance shop and garage	= 945 m^2	
- Other building / gate house, Sub-station, pump house	= 315 m^2	
L. Passenger Building	5,000 m^2	
M. Water Supply and Fire Fighting	Lump sum 1 set	Lump sum 1 set
N. Power Supply, Telecommunication Lighting System	Lump sum 1 set	Lump sum 1 set
O. Portable Fire Fighting System	Lump sum 1 set	Lump sum 1 set
P. Bunker Supply System	Lump sum 1 set	Lump sum 1 set
(2) Implementation Schedule		
Consultant	Jul 1990 - Mar 1996	Aug 1992 - Oct 1998
Construction works	Jan 1992 - Mar1996	May 1994 - Oct 1998
(3) Project Cost		
Foreign currency	2,602 million yen	3,314.8 million yen
Local currency	5,231 million yen	2,352,2 million yen
Total	7,833 million yen	5,667 million yen
ODA Loan Portion	6,658 million yen	5,038 million yen
Exchange Rate	1 rupiah = 0.08 yen	1 rupiah = 0.05 yen

Independent Evaluator's Opinion on Ujung Pandang Port Urgent Rehabilitation Project

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The objectives of the project, although slightly adjusted during the implementation to accommodate changes in the field, are still relevant to the government of Indonesia development program. In fact, it could be argued that, as an archipelagic state with an expanding economy, Indonesia needs to construct additional new ports or improve of the existing ports to facilitate economic development across the archipelago. Movements of goods and people using sea transportation are expected to rise in the years to come and to accommodate them will require ports with good facilities and high quality of services.

The report claims that the project resulted in positive economics and social impacts, and there is no reason to dispute the statement. The indicators that are used to support the claim are problematic, however. For example, the report claims that the development of the port facilities have contributed to the growth in the working population in Makassar from 321,000 in 1995 to 372,000 in 1999. It might be so, but by how much? There were other factors that might have contributed to the growth in question. There are other indicators that may be used to measure the economic impact of the project. The changes in volumes of both domestic and foreign trades (exports and imports) handled at the port could be used as indicators. The report does have some information on this matter. As has been cited earlier, between 1990 and 2000, both total cargo and container cargo handled at the Makassar Port increased significantly.

The report states (Section 2.4.2): "The passenger terminal remains at Soekarno Quay, and therefore the project has had no direct impact on residents." We beg to disagree with this conclusion. There are other direct impacts of the project on residents than their ability to travel through the port. Additional jobs in the port after the completion of the project surely benefited the residents. Presumably, data on the latter are available at the port office.

Finally, on the environmental impact, the report states that the project could have negative environmental impacts plankton and coral reefs at Dayang-Dayang Island and Samalona Islands. It also states that, according to Makassar Port Office, there were no serious negative environmental impacts of the project. However, the port officer has all the reasons to portray a good image of the project. Presumably, the information on the subject is available at the South Sulawesi Environmental Impact Agency (Bapedalda).

Based on the survey report, it seems that the port will be in a good condition, at least in the short run. Currently, the port is under management of PELINDO IV, a state-owned but profit oriented company. The port staff seems to have enough technical capability to maintain the port. In the long run, however, the sustainability is questionable. As with some other state-owned companies, the management of PELINDO IV may have the incentive to pursue short run objectives rather than long run ones. Meanwhile, it seems that private companies are not interested in managing the Makassar Port because of the lower profitability there relative to ports in Jakarta and Surabaya. As a result, there will be no real pressure on PELINDO IV to take a long run view of the port management and maintenance.

* I have benefited from discussions with Ms Titik Anas who has been kind enough to provide some insightful comments about the report. The usual disclaimer applied.