

## Indonesia

### Ferry Terminal in East Java and Bali Islands Urgent Rehabilitation Project

Report Date: June 2000

Field Survey: May 2000

#### 1. Project Profile and Japan's ODA Loan

##### (1) Background

Indonesia is a nation made up of many islands and thus the establishment of reliable means of transportation between the various islands is positioned as an important policy issue in terms of unifying the nation's economy. Therefore, Indonesia has been positively promoting the construction of roads, harbors, airports and other needed social infrastructure. Particularly the ferry sector, which serves as an arm of the nation's marine transport system, is regarded as a part of the nation's road network, and there have been signs of growing demand for this sector. Ferry routes between East Java and Bali Islands are expected to see a huge increase in demand for transport of passengers, vehicles and cargo. Therefore, there has been the need to bolster ferry terminal functions, increase transport capacity and improve safety.

##### (2) Objectives

This project was to rehabilitate and improve the functions of the three routes and five terminals (Ketapang, Gilimanuk, Ujung, Kamal, Padangbai) that function as the main ferry routes between East Java and Bali Islands.

##### (3) Project Scope

The ODA loan provided by the Japan Bank for International Cooperation (then OECF) covers the total foreign currency portion and a part of the local currency amount for procuring the materials, equipment and labor needed to implement this project. The loan agreement was concluded in fiscal 1990.

##### (4) Borrower/Executing Agency

Government of Indonesia / Directorate General of Land Communications, Ministry of Communication

##### (5) Outline of Loan Agreement

Loan Amount/Loan Disbursed Amount	¥4,219 million / ¥3,282 million
Exchange of Notes/Loan Agreement	December 1990 / December 1990
Terms and Conditions	Interest rate: 2.5%, Repayment period: 30 years (10 years for grace period) General Untied (Partially Untied for Consulting Services)
Final Disbursement Date	December 1997

## 2. Results and Evaluation

### (1) Relevance

A portion of the project scope was changed during and after the detailed design. These changes of scope were basically related to the decision by the Indonesian government in August 1992 to increase the capacity of the Ketapang and Gilimanuk terminals so that they could handle 2,000GRT<sup>1</sup> ferries, and due to the inevitable design changes brought about by the delays in land acquisition. However, the actual scope of the project did not deviate much from the initial plan at the time of appraisal. Further, the specifications for the equipment and facilities were in line with those specified in the initial project objectives and thus these changes did not result in any particular problems.

### (2) Efficiency

The implementation schedule was vastly delayed due to the lack of equipment and personnel on the part of the contractors as well as the design changes resulting from the modifications to the project scope. However, the number of ferry runs along each route in a year at the time around project completion was Exceeding the same before the project started, and ferry service was managed to continue even during implementation of the project. It is therefore considered that the delays in the implementation schedule did not result in any major inconveniences for the ferry users.

The delays in implementing the project were supposed to raise project costs. While, the rupee lost value against the yen, thus the project actually saw a cost under-run in yen-terms.

### (3) Effectiveness

#### i) Quantitative effects

##### 1) Economic internal rate of return (EIRR)

During the appraisal the EIRR (Economic Internal Rate of Return) was calculated for each route. For these calculations the expenses related to terminal construction and maintenance and the purchases of ferryboats (only for Ketapang – Gilimanuk) were seen as “cost” and the anticipated reduction in car unloading waiting time (car transport demand x car time value x reduced waiting time) was seen as “benefit”. The project life was set at 25 years, taking into consideration the physical life of the ferry terminal facilities. The results of these calculations pointed to high profit rates of 13% for Ujung-Kamal, 15.7% for Ketapang-Gilimanuk and 9.7% for Padangbai.

The EIRR was recalculated using the same methods as during the appraisal for Ujung-Kamal, where actual and projected maintenance costs could be obtained. The project for this terminal was completed in 1996, thus 1995 was taken as a standard year for the calculation. The increase in benefits after completion of the project was assumed as “benefit” resulting from the project. Along with this, vehicle time values at the time of appraisal, construction costs and maintenance costs were revised based on the increase rates in consumer prices. The result of these recalculation was an EIRR of 24.6%. This was a vast increase in comparison with the calculated results at the time of appraisal. This was due mainly to the increase in the volume of vehicles, which demonstrates how this project has been effective in dealing with an increase in vehicle demand.

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<sup>1</sup> Gross registered ton: A unit of volume used to represent a ship's size.

## 2) Financial Internal Rate of Return (FIRR)

FIRR (Financial Internal Rate of Return) was calculated for three routes during the appraisal stage of this project. Expenses related to the construction of terminals and other facilities, maintenance and the purchase of ferryboats (only for Ketapang-Gilimanuk) were calculated as “costs“, while passenger fares, port entry fees, cargo measuring fees and ferry docking fees were calculated as “revenue“. This financial analysis resulted in an FIRR of 5.9%.

Prior to the ex-post evaluation, FIRR was recalculated based on the same method used during the appraisal to serve as a reference, as both actual and projected maintenance costs for Ujung-Kamal route could only be obtained. The recalculation was also based on the same conditions for the standard year and expense used when recalculating EIRR, and revenue was calculated based on actual and projected amounts gained by the terminals. The result was an FIRR of 1.2%. Fares collected by the ferry passengers were enough to cover all of the maintenance costs for the Ketapang-Gilimanuk route. However, this was not the case for the Ujung-Kamal route where the recalculated FIRR value was below the figure obtained at the time of appraisal. Actual amounts of transport were vastly larger than the expected demand, but it is considered that the Indonesian government keeps ferry fares at a low level from the viewpoint of social consideration.

### (ii) Qualitative effects

At the time of the appraisal it was assumed that the implementation of the project would result in the following three qualitative effects:

- Passenger safety would be improved by providing separate movable ramps that allow for the separate boarding of cars and passengers
- Increased ferry terminal-related employment opportunities brought about by stimulation of each ferry route
- Improved flow of people and goods between Java and Eastern Indonesia, while contributing to the development of the surrounding economies by improving a ferry network to serve as the main method of transportation between Java and Madura, Java and Bali, and Bali and Lombok.

It can be assessed that the above-mentioned qualitative effects have been generally achieved when considering the state of ferry and terminal operations and maintenance. Terminals that did not have separate ramps for passengers and cars had to deal with the problem of cars bumping into the passengers. However, safety was improved by providing the separate ramps. Though it was not assumed at the time of appraisal, the collection of passenger fares became highly improved as a result of preparing exclusive ramps for passengers. It can be evaluated that the implementation of this project helped terminals to prevent passengers trying to ride for free.

## **(4) Impact**

As for economic effects for the surrounding areas, there was an increase in the number of ferry terminal users after completing the improvement of terminal facilities. This in turn resulted in some positive secondary effects such as stimulated commercial activity around the terminals and improved convenience for the surrounding region. The improved ferry terminals have attracted not only the common peddlers, but restaurants, shops and bank ATM machines have also been springing up in the surrounding areas.

### **(5) Sustainability**

After completion of this project, operations and maintenance responsibilities were handed over to PT. ASDP, a state-operated ferry company. Revenues from ferry users at Ketapang and Gilimanuk have been very solid and thus all O&M can be covered by the fares from these routes. However, at Ujung, Kamal and Padangbai the revenues user fares have not been enough to cover all O&M costs and some assistance has had to be provided by the headquarters. However, all of the ferry terminal facilities are being operated favorably and there are no particular problems in the operation and maintenance scheme.

### **3. Lessons Learned**

There are no notable lessons learned.

### **4. Recommendations**

There are no particular recommendations.

### Comparison of Original and Actual Scope

Item	Plan	Actual
<b>1. Project Scope (Note)</b>		
Repairs of the deteriorating bridges		
Ketapang	2 x 1,000 GRT/Length: 70m	2,000 GRT/ Length: 79.66m 2,000 GRT/ Length: 103.51m
Gilimanuk	2 x 1,000 GRT/ Length: 70m	2,000 GRT/ Length: 53.97m 2,000 GRT/ Length: 53.97m
Ujung	Not planned	1 x 650 GRT/ Length: 25m
Kamal	1 x 400 GRT/ Length: 40m	1 x 650 GRT/ Length: 20.2m
Padangbai	1 x 500 GRT/ Length: 50m	1 x 1,000 GRT/ Length: 44.23m
Installation of movable bridges		
Ketapang	2 x 20 x 16m	23,5 x 8m, 23.5 x 5m
Gilimanuk	2 x 20 x 16m	23.5 x 8m, 23.5 x 6m
Ujung	1 x 20 x 10m	19.7 x 7m, 19 x 5m
Kamal	1 x 12 x 8m	19 x 7 m, 19 x 5 m
Padangbai	1 x 20 x 30m	19 x 7m, 19 x 5 m
Paving of parking zone		
Ketapang	14,900m <sup>2</sup>	17,766m <sup>2</sup>
Gilimanuk	24,100m <sup>2</sup>	17,294m <sup>2</sup>
Ujung	5,700m <sup>2</sup>	6,280m <sup>2</sup>
Kamal	3,500m <sup>2</sup>	10,623m <sup>2</sup>
Padangbai	8,000m <sup>2</sup>	11,978m <sup>2</sup>
Embankment		
Ketapang	400m	191,76m
Gilimanuk	400m	316.6m
Ujung	Not planned	-
Kamal	300m	345m
Padangbai	Not planned	274.7m
<b>2. Implementation Schedule</b>		
Start ~ Completion	Jul. 1993 ~ Dec. 1994	Jun. 1994 ~ Feb. 1997
<b>3. Project Cost</b>		
Foreign currency	¥3454 million	¥3282 million
Local currency	Rp.18871 million	Rp.4283 million
Total	¥4964 million	¥3486 million
Exchange rate	Rp.1 = ¥0.08	Rp.1 = ¥0.0476

Note: Extending and repairing of approach ramps, construction of passenger bridges, terminal repairs, installation of electrical equipment and others were implemented in accordance with the plan drafted during the appraisal.



Ketapang Terminal



Ujung Terminal



Padangdai Terminal