

Ferry Terminal Development Project

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Field Survey: September 2008

1. Project Profile and Japan's ODA Loan



Location of the project site



Ferry terminal constructed under this project (Muntok)

1.1 Background

At the time of appraisal (1995) it was believed that modes of transport, marine transport in particular, would play an important role in social and economic development of Indonesia that covers a vastly extensive territory as an archipelagic nation. In terms of the share of the marine transport services against the transport services between and among islands, the cargo transportation, in particular, accounted for as high as 87% (based on the actual ton-kilometers of 1993). Among such modes of marine transport, ferry transport played an important role in transporting local products and daily necessities as well as people. In order to deal with a growing demand for transportation, it was considered necessary to develop further a network of ferry routes.

As of 1994 there were 70 ferry routes in service (as of 2005, the number was increased to 182 routes¹), out of which many of them were for short distance. The ferry routes that were well developed were concentrated on the “south trunk routes” that connected Sumatra to Timor via Java Island at the center. The National Ferry Transportation Network Plan had been formulated for the further expansion of a

¹ “Transportation of River, Lake and Ferry Services,” 2005, Directorate General of Land Transportation (DGLT).

well-balanced local ferry network in the entire nation. Other than the “south trunk routes,” the Plan defined the “central trunk routes,” the “north trunk routes” and the “Maluku-Irian route” as major trunk routes. After the formulation of the Plan, ferry routes had been under development at a quick pace. However, there were many routes that were forced to start their service with the basic facilities that had not been fully developed or many existing routes were faced with the problem of wearing-out.

In the study carried out by JICA in 1992, a master plan was formulated and target ferry routes were selected from the standpoint of developing a national ferry network with the ultimate aim of narrowing regional disparities, etc. The master plan also implied “strengthening a medium distance ferry network,” “placing priority on strengthening a route connecting Java, Kalimantan and Sulawesi,” etc. as a direction to develop a ferry network.

The two routes of Bajoe-Kolaka and Palembang-Muntok, the target routes of this project, were medium-distance routes and at the same time were defined as local routes for daily necessities that constituted a part of the “central trunk routes.” It was expected that demand for both routes would grow greatly and their profitability would be high.

1.2 Objective

The project is to develop and/or improve the basic facilities such as mooring facilities and terminals for the two ferry routes (Bajoe in South Sulawesi Province ~ Kolaka in Southeast Sulawesi Province, and Palembang in South Sumatra Province ~ Muntok in Bangka Island in Bangka-Belitung Province), for which demand is expected to grow greatly among the “central trunk routes” in the Indonesian National Ferry Transportation Network Plan. It aims for enhancing the reliability, safety and convenience of their ferry transport services and expanding their functions in inter-regional networks, thereby eventually contributing to the growth of regional economy and the narrowing of regional disparities.

Logical framework applied for ex-post evaluation

Goal	The regional economy is promoted.
Project's objective	The reliability, safety and convenience of ferry transport services is enhanced and their functions in inter-regional networks are expanded,
Output	Basic facilities such as mooring facilities and terminals are constructed for the two routes among the “central trunk routes.”
Input	1. Civil works for constructing ferry terminals (such as wharfs and ferry terminals) 2. Consulting service (detailed design and construction supervision) (Plan: Project cost – ¥3,681 million / Project period – October 1995 - July

	2001)
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1.3 Borrower/Executing Agency

Republic of Indonesia / Directorate General of Land Transportation (DGLT) ,
Ministry of Transportation

1.4 Outline of loan agreement

Loan Amount/Loan Disbursed Amount	3,129 million yen / 2,789 million yen
Exchange of Notes/ Loan Agreement	December 1, 1995 / December 1, 1995
Terms and conditions	
-Interest rate	2.5% p.a. (2.3% p.a. for the consultant)
-Repayment period	30 years (including a grace period of 10 years)
-Procurement	General untied
Completion date of loan	June 28, 2005
Main contractors	Package I: PT. Pembangunan Perumahan (Indonesia)
Consultant services	Pacific Consultants International (Japan) / PT. Pedicinal, PT. Inti Era Cipta, PT. Sat Windu Utama (these three firms are Indonesian)
Feasibility Study (F/S), etc.	The Development Study on the National Ferry Service Routes in the Republic of Indonesia, by JICA, January 1992 ~ March 1993

2. Evaluation Result (Rating: C)

2.1 Relevance (Rating: a)

This project was planned and implemented in accordance with the Indonesia's development policies and plans. The concept underlying the development policy of the "central trunk routes" is delineated within the scope of the national transportation networks of Indonesia at the time of the ex-post evaluation. It is evaluated that the project is relevant with the policies, particularly when contribution to smoother flows of commodities is taken into account. This project is sufficiently relevant with development needs and development policies at the times of both appraisal and ex-post evaluation. Thus, the relevance of this project's implementation is high.

2.1.1 Relevance with the Indonesia's development policies

(1) Relevance with policies and measures

At the time of appraisal, the two target routes of this project, Bajoe-Kolaka and Palembang-Muntok, were used for daily living to connect Makassar (then called Ujung Pandang) with local cities and Palembang with local cities respectively. They were

also used as an only mode of transport to transport commercial crops grown in farms and estates to markets. Thus, they were playing an important role in the economic development of related regions. At the same time, they constituted a part of the priority development routes, that is, “central trunk routes” that connected Sumatra, Kalimantan and Sulawesi and also they were defined as the existing medium-distance ferries that urgently required the enhancement of their facilities.²

The Mid-term Development Plan (2004 ~ 2009) defines ferry service as a reliable mode of transport that connects various islands, thereby contributing to the national unity of Indonesia. Thus, the policy relevance has not changed. The meaning of the central trunk routes from the national standpoint, particularly the “central trunk routes connecting Sumatra, Kalimantan and Sulawesi,” is that they are interprovincial ferry transport routes that connect with national road network and interprovincial railroad network. This significance of the central trunk routes as well as other routes such as north trunk routes and south trunk routes is confirmed in the Government’s regulation No. 26 (2008)³. The findings of our interview survey also endorse the fact that the two routes continuously contribute to smooth distribution of goods as ferry routes that connect Makassar with local cities and connect local cities via Palembang respectively. Thus, the project’s relevance with the government’s macro policies and regional economic policies has been acknowledged.

2.1.2 Relevance with needs

At the time of appraisal, the importance of ferry routes in economic development was pointed out as a mode to transport passengers and goods regularly among islands. However, there had been a growing concern over the reliability and safety of the transport service because of old facilities and inadequate basic facilities. Under this project, a movable bridge was constructed, thereby enabling ferryboats to approach the pier without being affected by tide level or vehicles to get on or off the ferryboat smoothly. The land facilities such as passenger terminals were improved under this project as well. Thus, the project has relevance with the needs of users.

2.2 Efficiency (Rating: b)

The implementation period of the project was extended to 180% of the original plan including a guarantee period. The project cost was cut down to 79% of the plan. The beginning of construction was extensively delayed due to the impacts of the Asian currency crisis that took place during the project’s implementation. However, after an

² The JICA’s study in 1992 suggested the following two priority criteria to be considered when ferry networks would be developed in the future based on the viewpoint of networking ferries for narrowing regional gaps: “strengthening of medium-distance ferry routes” and “strengthening of the central trunk routes that connect Sumatra, Kalimantan and Sulawesi.”

³ It is the Government regulation No. 26/2008 concerning national landscape planning. Article 24 of the regulation lists ferry services that constitute each route.

extension of the disbursement period of L/A, the work was completed almost within the original scope.

2.2.1 Output

The difference in the output was caused by the design changes, which were made as a result of the detailed design except the additional work described in the following (1) and (2). Based on the confirmation made by the visit to the site at the time of ex-post evaluation, it is judged that the project has been completed almost as per the initial scope of the project.

(1) Rehabilitation of the existing trestle in Bajoe

(2) Collection and analysis work of the wind data prior to the construction of a breakwater at Muntok

A new package was added in order to carry out the work (1). In the procurement plan at the time of appraisal, it was originally planned to implement the main works in two different packages by dividing them into Sumatra Island and Sulawesi Island. Subsequently, at the time of the field study carried out by consultants (November 1999 ~ March 2000), it was discovered that the existing trestle at Bajoe had been damaged and would require rehabilitation work. Hence, the rehabilitation work was carried out as package 3. At the stage of detailed design by the consultants, it was also revealed that it would be necessary to collect new wind data on Muntok. As a result, the data were collected from June 2000 to August 2001. After having reviewed the design based on the above work (2) and new wind data, a breakwater was constructed as package 4 (separated from package 2).

Table 1: Comparison of original and actual outputs of the project

Item	Original	Actual
Civil works	Project site: Bajoe, Kolaka, Palembang and Muntok <u>Water front facilities</u> Breasting dolphin Movable bridge Landing pier and access bridge Dredging works (only Bajoe) Breakwater (only Muntok) Navigation aids equipment <u>Land facilities (ferry terminal)</u> Reclamation works (excluding Palembang) Land preparation works (only Palembang) Revetment works Road and pavement works Passenger terminal construction Water supply and electric power supply	Project site: Bajoe, Kolaka, Palembang and Muntok <u>Water front facilities</u> Breasting dolphin Movable bridge Landing pier and access bridge Dredging works (only Bajoe) Breakwater (only Muntok) Navigation aids equipment <u>Land facilities (ferry terminal)</u> Reclamation works (only Bajoe) Land preparation works (only Palembang) Revetment works Road and pavement works Passenger terminal construction Water supply and electric power supply
Consulting service	Total 420 M/M a) Foreign: 92 M/M b) Local: 328 M/M (Professional staff)	Total 555 M/M a) Foreign: 156 M/M b) Local: 399 M/M (Professional staff)

Source: Project Completion Report (PCR)

2.2.2 Project period

The period of this project was originally set for five years and ten months from October 1995 to July 2001 (including a guarantee period of one year). However, it actually took a period of ten years and six months from December 1995 to May 2006. That is, the completion of the project was delayed by about four years, and the project period was 180% of the original plan, thus taking much longer than planned.

Table 2: Comparison of the project period between original and actual

Item	Plan at the time of appraisal	Actual
1. L/A signed	October 1995	December 1995
2. Employment of consultant	Sept. 1995 ~ Aug. 1996	June 1996 ~ July 1997
3. Consulting service	Sept. 1996 ~ June 2000	July 1997 ~ June 2005
4. Detailed design	Sept. 1996 ~ April 1997	July 1997 ~ June 1998
5. Tender assistance	Feb. 1997 ~ June 1998	June 1998 ~ March 2002
6. Civil works (4 packages)	July 1998 ~ June 2000	Sept. 2001 ~ May 2005
7. Maintenance period (4 Packages)	July 2000 ~ June 2001	April 2004 ~ May 2006

Source: Appraisal documents, PCR and Project-related documents

Note 1) The maintenance period (actual) was estimated from the consultant contract-related documents.

Note 2) Project period was from December 1995 to May 2006 (10 years and 6 months). The last month of the guarantee period was regarded as the last month of the project.

Note 3) According to PCR, the implementation period of each package (actual) is as follows:

Package 1: (Bajoe ~ Kolaka): March 2002 ~ March 2005

Package 2: (Palembang ~ Muntok): September 2001 ~ April 2004

Package 3: (Bajoe): December 2003 ~ January 2005

Package 4: (Muntok): October 2003 ~ May 2005

The delay in the completion of the project was caused primarily by changes to the design, financial problems related to the economic and political crisis of Indonesia and matters whose implementations were beyond control. More specifically speaking, the following factors were involved. The delay in the stage of procurement was caused by delay in the procurement of consultants (for eleven months). Initially, it was scheduled to start the employment of consultants in September 1995. In fact, however, it was started only in June 1996. First of all, in the backdrop lay the fact that there was a need to deal with the request made by the Indonesian's consultant association concerning the procurement method. Second, it was delayed by two months in the process of selection due to negotiations as to the new standards of the National Development Planning Agency of Indonesia (BAPPENAS) about consulting service fees. It was originally planned that construction would be begun in July 1998. In actuality, it was started in September 2001, that is, a delay of 38 months. Some factors lying behind this delay were the impacts of the Asian currency crisis, social and economic confusions caused by the crisis and also organizational reforms led by the crisis. Particularly, the process of pre-qualification (P/Q) took 25 months (from the completion of P/Q documents in July 1998 to notification of the P/Q result to the

contractor in August 2000), which was far much longer than planned (three months). Similarly, as stated above, the rehabilitation works of the existing trestle at Bajoe were carried out as package 3, and a breakwater at Muntok was constructed as package 4 by dividing the planned package after additional data had been collected. Such separation and implementation constituted one factor to delay the entire operation process of the project. Viewed from the other side of the coin, however, it may be also argued that careful measures were taken to deal with each situation.

A number of factors can be also pointed out, which caused the delay during the construction phase. The construction period was initially planned for 23 months from 1998 to 2000. However, in actuality, it took 44 months from 2001 to 2005. First of all, package 1 (Bajoe ~ Kolaka) was prolonged by such facts as delay in securing the work site, sinking of steel pipe piles during transportation from Surabaya to Kolaka (in August 2002), response to address newly found facts about the bearing strata as a result of a subsoil investigation carried out for driving steel pipe piles⁴ into the seabed, greater difficulty to procure rubble stones due to the impact of the bombings that happened in Bali on October 12, 2002⁵, increased work volume, and problems with the management capacity of the contractor. Second, the factor that can be pointed out for the delay in package 2 (Palembang ~ Muntok) was the flood that struck Palembang in December 2003. Third, package 4 (construction of a breakwater in Muntok) was delayed by the shortage of steel materials.⁶ In order to recover the delayed implementation schedule, the procurement of contractors for packages 3 and 4 was done through the process of local competitive bidding (LCB) without pre-qualification (P/Q).

2.2.3 Project cost

The project cost was estimated at 3,681 million yen, whereas the project actually cost 2,902 million yen. That is, it was 79% of the estimate, thus being lower than planned. The following tables compare the planned and actual project costs based on the plan at the time of appraisal, yen loan disbursement data, the project completion report and consultant reports.

⁴ Deeper bearing strata were found every time subsoil investigations were conducted.

⁵ This problem was dealt with by changing the design of revetment (based on the progress report for the October ~ December period in 2004).

⁶ The steel price soared steeply since the end of November in 2003. For procuring steels, the possibility of applying the Price Escalation Clause was studied, but the consensus was not formed within the Ministry of Transportation.

Table 3: Comparison of the planned project cost and the actual project cost

(Planned)				(Actual)					
Unit: Million yen				Unit: Million yen					
Item	Foreign currency	Local currency		Total	Item	Foreign currency	Local currency		Total
	JICA	GOI				JICA	GOI		
Construction works	1,623	949		2,572	Construction works	865	1,359	113	2,337
Consulting services	331	186		517	Consulting services	419	146	-	565
Contingencies	163	94		257	Total	1,284	1,505	113	2,902
Tax	-	-	335	335	JICA sub-total: 2,789				
Total	2,117	1,564		3,681					
JICA sub-total: 3,129				552					

Source: Appraisal documents

Note: Exchange rate - Rp1=JPY 0.045

Price contingencies: Foreign currency - 2.0% per annum, local currency - 2.0% per annum

Physical contingencies: construction work: 10% both for foreign currency and local currency

Consulting service: 5% both for foreign currency and local currency

Base-year of cost estimate: April 1995

Source: Consultant's reports and JICA's disbursement data

Note 1) Exchange rate: Rp1=JPY 0.012 (Weighted average from 1996 to 2005)

Note 2) In addition to the above, compensation was paid for land acquisition at the Muntok Ferry Terminal.

The consulting cost was higher than initially planned. The key factors behind this higher cost were the prolonged project period and additional services rendered (such as rehabilitation works of the trestle and collection of data), as has been discussed above.

The cost of this project was lower than planned, but the project period was far much longer than planned. Hence, the efficiency of this project is evaluated to be moderate.

2.3 Effectiveness (Rating: b)

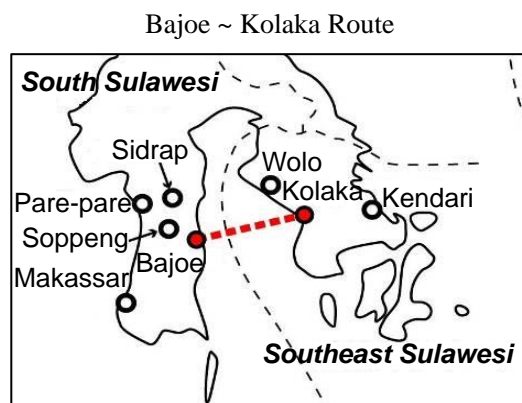
2.3.1 Volumes of the passengers and freight transported

According to the data collected at the time of ex-post evaluation, the numbers of passengers hovered low in comparison to the plan at the time of appraisal, and the numbers of vehicles transported by ferries did not reach the planned figure, either. These ferry routes are neither the only transport route nor the only mode of transport that connects main local cities. Thus, the convenience of users may have increased by introducing multiple alternative routes or alternative modes of transport. However, the fact remains that the actual numbers of passengers transported by the target routes of this project, in particular, have hovered low compared to the initial plan.⁷ Although the volume of passengers transported was low, it would be necessary to look at the effects of this project that could not be grasped quantitatively in this survey such as developing transport networks and assuring the local people a safe mode of transport. Each route is discussed in the following sections.

⁷ As discussed above, the number of ferry routes has increased from 72 at the time of appraisal (in 1994) to 182 (as of 2005).

(1) Bajoe ~ Kolaka route

The numbers of both passengers and vehicles were lower than originally planned (10% for passengers and 44% for vehicles of the 2010 plan). The Bajoe Branch Office of PT. ASDP Indonesia Ferry, which is responsible for the operation and maintenance of the ferry terminals of both Bajoe and Kolaka, points out the following reasons lying in the background of such low numbers: alternative routes were developed⁸ and the passengers in a bus are no longer counted as the passengers of the ferryboat while the bus transported by ferry is counted as one vehicle since 2004 (Ministerial Decree No. 58 of 2003)⁹. In addition, there are land routes as alternative routes.¹⁰

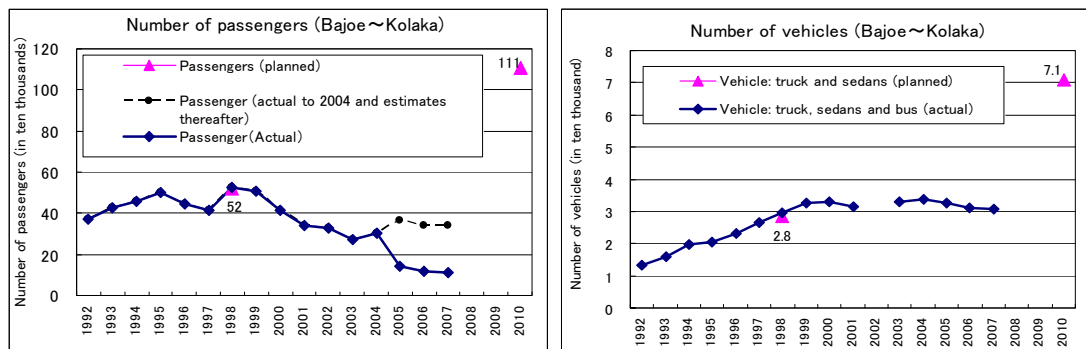


⁸ Alternative sea routes include, for instance, 1) Bira ~ Tondasi (P. Muna), 2) Siwa ~ Tobako (Lasusuwa), 3) Siwa ~ Kolaka. By using a part of the “Maritime Transportation Sector Loan in Eastern Indonesia” which is an ODA loan project (L/A signed on: September 25, 1991), ferry terminal improvement projects have been underway at six locations – Bau Bau, Wara, Torobulu, Tampo, Bira and Pamatata – in South Sulawesi and Southeast Sulawesi. The Bira that has been enumerated as one of alternative routes is the target of yen loans as well.

⁹ It is the Ministerial Decree (No. 58 Year 2003) regarding mechanism of determination and formulation of ferry tariff calculation (enforced on January 1, 2004). Prior to the issuance of the ministerial decree on the fare system, the ferry fare was charged to each passenger on vehicles such as bus (excluding the driver of the vehicle), separately from the fare for the vehicle. Since it is difficult to have an accurate number of passengers, the number of passengers is no longer counted and instead only a fare per vehicle is charged in compliance to this Ministerial Decree. Just like the toll collection system on the toll road, it can be said that the concept has been changed to “selling a space” (interviews at DGLT in December 2008).

¹⁰ According to a truck transportation dealer with whom we had an interview at the Kolaka Ferry Terminal (October 2008), there is a road available from Makassar to Kolaka via Malili. However, the land route requires 48 hours. Particularly, the section from Malili to Kolaka has many ups and downs, thus making driving difficult. Therefore, in comparison to the ferry route between Bajoe and Kolaka, the land route places a limit on the weight to be transported, and moreover is less safe and much longer. Hence, it cannot become an alternative route as far as freight transport is concerned.

Table 4: The numbers of passengers and vehicles in the Bajoe ~ Kolaka route (truck, passenger car and bus)



Source: Bajoe Branch Office, PT.ASDP Indonesia Ferry

Note 1) Total numbers of passengers and vehicles in both ways

Note 2) As for the actual number of passengers, the dotted line indicates the figures estimated under the assumption that the change of 2004 to the new fare collection system had not been applied. After the change in the fare collection system in 2004, a bus has been counted as one vehicle without counting the number of passengers on the bus. Hence, in order to compare the number of passengers with the data before 2004 on the same base, the number of passengers on sedans and busses were estimated.

Comparison between the plans at the time of appraisal and the actual numbers at the time of ex-post evaluation

Point of time	Estimated annual demand and actual numbers		Ferry transportation capacity
	Passenger	Vehicle (truck & sedan) ^{Note 1)}	
At the time of appraisal (Estimated annual demand) Plan for Year 2010	1,110,000 persons	71,000 vehicles (93,000 vehicles when motorbikes are included)	1000GT-class ferryboat (Maximum loading capacity of a standard ferryboat: 600 passengers and 27 units of eight-ton truck)
At the time of ex-post evaluation (Actual) As of 2007	112,000 persons	31,000 vehicles ^{Note 2)} (47,000 vehicles when motorbikes are included)	973GT on average (Largest 1504GT ~ Smallest 686GT; average capacities are 422 passengers and 23 vehicles per ferryboat) (The data are taken from materials of PT.ASDP Indonesia Ferry and obtained through interviews at the time of the field survey)
Actual/Plan (%)	10%	44% (51%)	

Note 1) At the time of appraisal, demand was estimated at 71,000 vehicles, 34,000 trucks and 37,000 sedans in total for 2010.

Note 2) Sedans, trucks and busses accounted for approximately 64% of the vehicles that boarded ferryboats at Kolaka in 2007. Therefore, the rate was estimated at 64% of the total number of vehicles that boarded ferryboats at the Bajoe and Kolaka terminals.

(2) Palembang ~ Muntok route

Data on the materials obtained from each ferry terminal are tabulated in the following table 5 on the actual numbers of passengers and vehicles (including motorbikes).¹¹ Since the total volume of cargoes greatly fluctuates, and the same data have no longer been collected, it is excluded from analysis. The data indicate that the

¹¹ Data obtained from the Palembang Ferry Terminal are discrepant with the data obtained from the Muntok Ferry Terminal. However, the data of the Palembang Ferry Terminal has been used because they show a longer-term trend.

numbers of both passengers and vehicles are lower than planned (17% for passengers and 70% for vehicles of the 2010 plan).

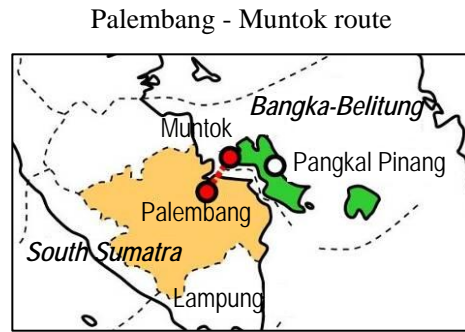
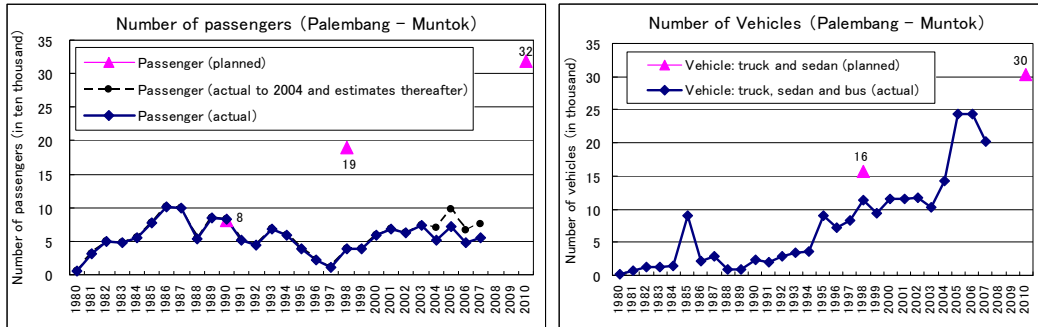


Table 5: Volume of transport in Palembang-Muntok route

(the numbers of passengers and vehicles)



Source: Palembang Ferry Terminal

Note 1) Total numbers of passengers and vehicles in both ways

Note 2) As for the actual number of passengers, the dotted line indicates the figures estimated under the assumption that the change of 2004 to the new fare collection system had not been applied.

Comparison between the plans at the time of appraisal and the actual number at the time of ex-post evaluation

Point of time	Estimated annual demand and actual numbers		Ferry transportation capacity
	Passenger	Vehicle (Truck & sedan)	
At the time of appraisal (Estimated annual demand) Plan for Year 2010	320,000	30,000 vehicles ^{Note 1)} (48,000 vehicles when motorbikes are included.)	500GT-class ferryboat (Maximum loading capacity of a standard ferryboat: 500 passengers and 20 4-ton truck)
At the time of ex-post evaluation (Actual) As of 2007	55,000	21,000 vehicles ^{Note 2)} (26,000 vehicles when motorbikes are included)	332GT ferryboat on average {126 passengers and 15 vehicles (Both figures are the means of six ferryboats interviewed.)}
Actual/Plan (%)	17%	70%	

Note 1) At the time of appraisal, the numbers of trucks and sedans were estimated at 19,000 and 11,000 respectively for 2010, thus 30,000 in total.

Note 2) Sedans, trucks and buses accounted for approximately 79% of the vehicles that boarded ferryboats at Palembang and Muntok in 2007. Therefore, the rate was estimated at 79% of the total number of vehicles that boarded ferryboats at the Palembang and Muntok terminals.

One of the reasons for the fact that the actual numbers is lower than estimated in the Palembang-Muntok route lies in the operation of high-speed crafts.¹² For

¹² According to the appraisal documents, the high-speed crafts (60-passenger craft and 30~40-passenger craft – one way taking three hours) had been in service since 1991 between Palembang and Muntok, but the crafts were not able to have cargoes and vehicles on board. As of the time of ex-post evaluation, three high-speed crafts (two 280-passenger crafts and one 320-passenger craft) were making one round trip respectively a day. Although vehicles cannot board the craft, the capacity of transporting passengers

instance, at the time of this survey in September 2008, the economy class fare was 136,000 Rp (from Muntok to Palembang) for the high-speed craft and 39,100 Rp (from Palembang to Muntok) for the ferry. Thus, the high-speed craft is about 3.5 times higher than ferry.¹³ However, the high-speed craft is far much faster than ferry: the high-speed craft takes three hours, whereas the ferry takes from eight hours to 12 hours. It is considered that there is a high possibility that people will choose the high-speed craft except low-income people.¹⁴

Other reasons for the less number of passengers than planned are, first, that the number of passengers on the bus has not been counted since 2004 as passengers of the ferry while a bus has been counted as one vehicle, second, that limits have been set on the total number of passengers aboard in order to assure safety, and, third, that the system to operate ferries regularly has not been well established. Another factor that may have affected demand for ferry service is the opening of an air route that connects Pangkal Pinang in Bangka Island with Palembang.¹⁵ A staff member of the Muntok Branch Office of PT. ASDP Indonesia Ferry reasoned that Bangka Island was known for the production of tin ores, but its production dropped, and such economic situation might have inflicted a negative effect on the volume of transport. On the other hand, a staff member of the Bangka-Belitung provincial government explained as one factor that the frequency of business trips of the government's officials to Jakarta has increased much greater than that of those to Palembang after the separation of the Province from South Sumatra (in 2000¹⁶).

The Central Government is now constructing a new ferry terminal at Tj. Api Api in South Sumatra, which is scheduled to be opened in 2010.¹⁷ At the time of completion, Tj. Api Api will be connected to Muntok in about one hour by a high-speed craft and in about 2.5 hours to 3 hours by ferry. It is expected that the opening of the seaport at Tj. Api Api will give a positive effect to the Muntok Ferry Terminal. On the other hand, however, there is a possibility that it may create a competitive relationship with the Palembang Ferry Terminal as a new alternative route.

has been greatly expanded.

¹³ When it is converted into Japanese yen at a rate of September 2008 (¥0.012/Rp), the fare is about ¥1,600 for the high-speed craft and about ¥460 for the ferry.

¹⁴ The Department of Transportation of the Palembang City Government states that there is a plan to transfer the operation of high-speed crafts to a ferry terminal as of the time of ex-post evaluation. As it is believed that there are multiple candidate terminals for the transfer, the specific implementation plan has not been confirmed.

¹⁵ An interview with PT. Pelindo that operates the terminal of high-speed crafts has revealed that small aircrafts had been in service, and medium aircrafts were put into service in 2006.

¹⁶ Law No. 27 (of 2000)

¹⁷ Tj. Api Api is a seaport located 70 km down the river from Palembang. Its functions are not limited to those of a ferry terminal. DGLT explains that the terminal is under construction with government's budget at the time of ex-post evaluation (December 2008). The construction of mooring facilities and others including movable bridge had already been finished. It will be necessary to develop land facilities such as passenger terminal and parking lot from now on. It is planned that the ferry terminal will start its operation in 2010.

2.3.2 Recalculation of the internal rate of return

At the time of appraisal, a financial analysis was carried out for a period of 30 years about the Bajoe-Kolaka route and Palembang-Muntok route under the conditions that the benefits (receipts) included terminal use charges and subsidiaries, and the costs (expenditures) included construction costs and terminal operation/maintenance expenses. The result demonstrated that the financial internal rate of return (FIRR) was calculated at 4.2% for both routes. For the economic internal rate of return (EIRR), the analysis was conducted for a period of 30 years. The relevant benefits (receipts) included reductions in the travel time costs of passengers and vehicles, and the costs (expenditures) included construction costs, terminal operation/maintenance costs and purchase costs of ferryboats. As a result, it was calculated at 15.7% for the Bajoe-Kolaka route and at 12.1% for the Palembang-Muntok route.

At the time of ex-post evaluation, financial and economic analyses were carried out on the Bajoe-Kolaka route. However, expected benefits had not manifested itself yet (for instance, reductions in travel time costs of passengers and transport costs of vehicles are benefits expected from the project by avoiding an overflow of passengers and vehicles). Therefore, the internal rate of return was not calculated (or the result became minus). As to the Palembang-Muntok route as well, an expected return (such as reduced amounts of the passenger's travel time costs and transport costs of vehicles and maintenance expenses for the approach channel to the old port) had not manifested itself. Hence, the internal rate of return was not computed.

2.3.3 Perceptions among beneficiaries as to the project's effect

(1) Reliability

As a part of the beneficiary survey to truck drivers, opinions on the reliability of ferry services were collected from the standpoint of punctuality. The findings are shown in Table 6.¹⁸

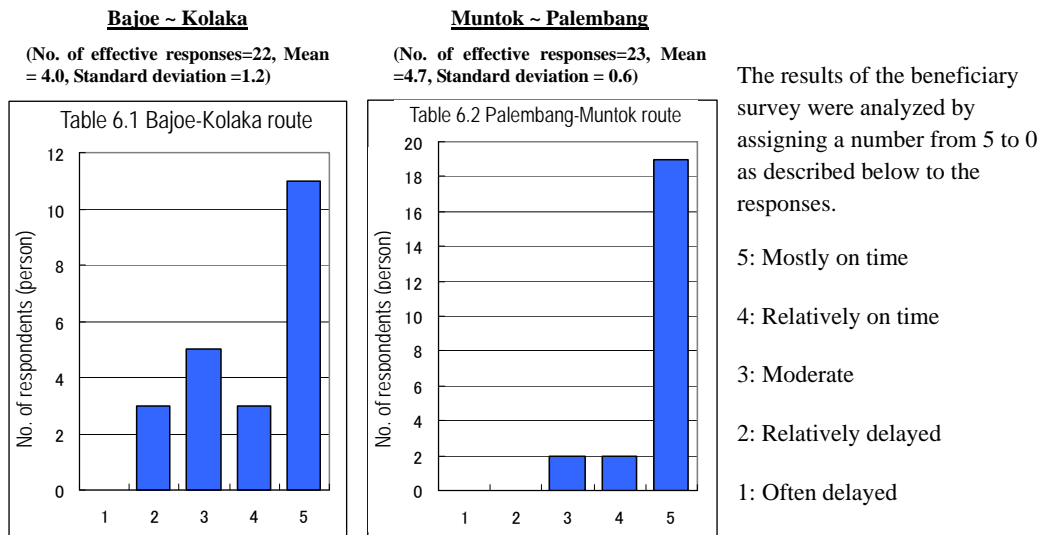
At the time of hearing we had collected comments that the departure schedule had not always been kept. However, the truck drivers who cooperated with the beneficiary survey rated high the punctuality of ferry service in general.¹⁹ However,

¹⁸ A beneficiary survey was carried out in an interview method based on the questionnaire. As interviews were conducted with truck drivers who were willing to cooperate, random sampling was not applied. The number of samples was 45 in total taken from the following ferry terminals; 13 at Palembang, 10 at Muntok, 10 at Bajoe and 12 at Kolaka. It was carried out during 27 ~ 28 October in 2008 in Palembang, during 24 ~ 25 October 2008 in Muntok, during 17 ~ 18 October 2008 in Bajoe and on October 20 and December 2, 2008 in Kolaka. Each driver was requested to evaluate the ferry service from multiple angles, and then classified the responses into six options, each of which was given a score from 5 to 0. The statistics such as mean are calculated by excluding zero which is applied to the response of "Do not know."

¹⁹ At the time of ex-post evaluation, the ferry from Bajoe bound for Kolaka had three services per day at 17:00, 20:00 and 23:00. It is assumed that the actual departure time was delayed by about one hour. A one-way trip took from 8 hours to 9 hours. The departure time of a ferryboat from Kolaka for Bajoe was

there were requests from the drivers to increase the number of ferry services, to expand the capacity of the ferryboats, to introduce new ferryboats, and to enhance the facilities at terminals. It was pointed out that there were cases in which trucks had to wait for boarding ferryboats for one week particularly at a time before or after the Lebaran depending upon a type of cargoes because needs for transporting goods tended to increase.

Table 6: Punctuality of the ferry service



(2) Safety

The drivers did not point out any particular problems as to the safety of the ferry terminal. Interviews with staff members of PT. ASDP Indonesia Ferry, the terminal operator, revealed that through the installation of a movable bridge, vehicles could board or alight from the boat smoothly and it became unnecessary to set a time for the ferryboat to wait for the tide level to reach an appropriate level. In particular, at Muntok, the ferryboat is now able to be moored at the pier any time regardless of the level of tide.²⁰

scheduled at 17:00, 20:00, and 23:00 as well. On the other hand, the ferry service from Palembang bound for Muntok had three services a day, scheduled at 8:00, 12:00 and 18:00. Depending upon a ferry, the time required was different as 8 hours, 10 hours and 12 hours. The departure from Muntok for Palembang was scheduled at 12:00, 16:00 and 18:00.

²⁰ At the time of appraisal, two 1,000GRT-class ferryboats were in service in the Bajoe-Kolaka route, but the then existing facilities like mooring facilities had capacity only for 500GRT-class boats. Similarly, in the Palembang-Muntok route, the specification of the facilities like mooring facilities were for only 150GRT-class boats vis-à-vis 150~300GRT-class ferryboats. Thus, they were faced with safety and operational issues (such as needs for waiting for the tide level).

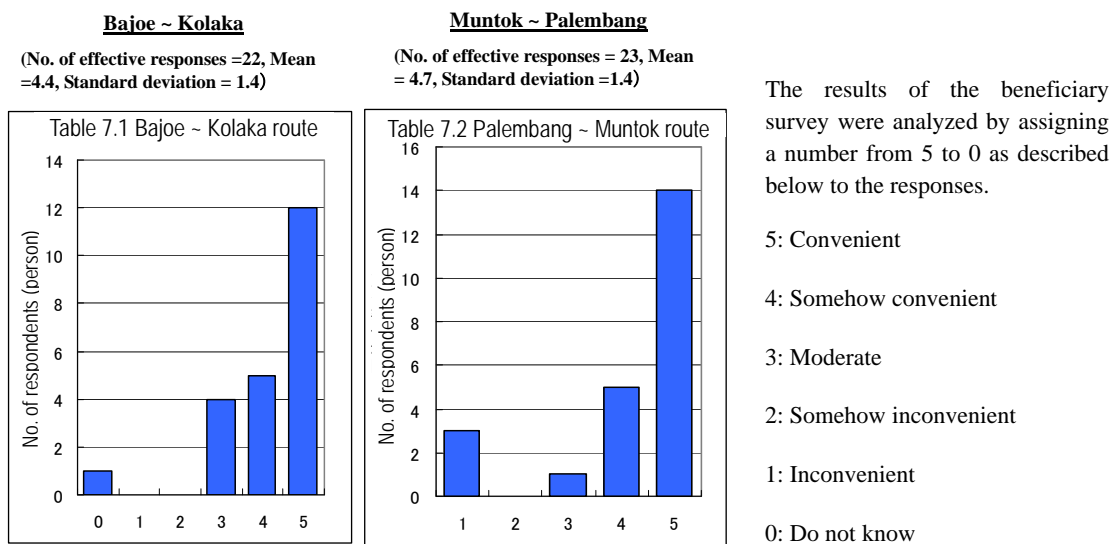
Movable bridge (left) and vehicle boarding ferryboat from the movable bridge (right)
(Kolaka Ferry Terminal)



(3) Convenience

The drivers were asked as to the convenience of departure and arrival times. It is surmised from their comments that they evaluate the departure and arrival times to be convenient in general.

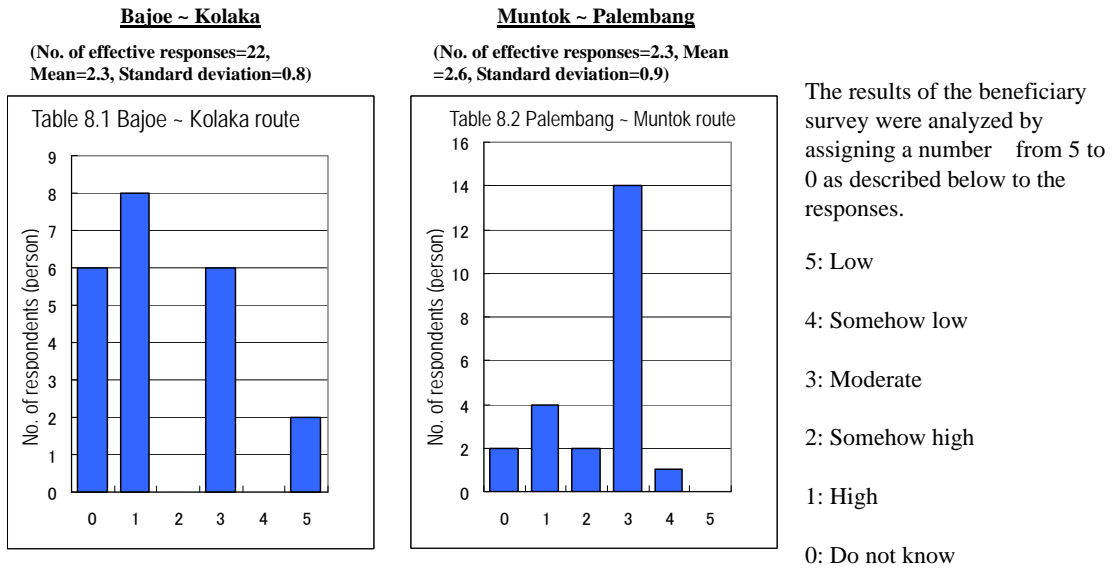
Table 7: Convenience of departure and arrival times



Note: The statistics of the mean are computed based on the responses excluding “Do not know.”

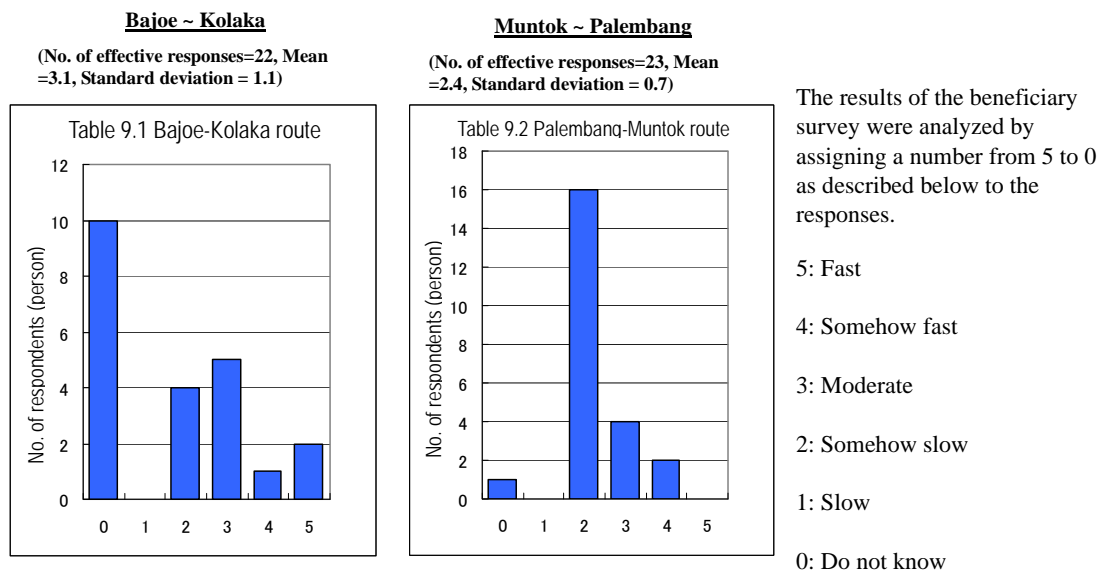
Responses show that the ferry fare is “Somehow high” and the travel time is “Somehow slow.”

Table 8: Ferry fares



Note: Statistics such as mean are computed based on the response excluding “Do not know.”

Table 9: Travel time to the destination



Note: The statistics such as mean are computed based on the responses excluding “Do not know.”

2.4 Impact

2.4.1 Benefits to the target areas and persons

The ferry terminals which have been developed under the project are faced with the problem of a fewer passengers and vehicles in comparison to the initial plan. However, they are used as local routes for daily necessities that connect Makassar with local cities or connect among local cities via Palembang and at the same time are positioned in the transportation routes to carry commercial crops to markets. It is evaluated that these routes have played an important role in the development of economies in the related regions.

(1) Bajoe-Kolaka route

At the time of appraisal, the Bajoe Ferry Terminal, with the city of Makassar and Bone Regency in the hinterland, was used as the base of transporting daily necessities to Kolaka. On the other hand, commercial crops (for instance, cashew nuts and cacao) were transported from the Kolaka Ferry Terminal to Bajoe. The findings of the field survey carried out at the time of ex-post evaluation indicated also that the Bajoe- Kolaka route was used as a transportation route of goods in South Sulawesi, particularly between Makassar and Southeast Sulawesi. Interviews with truck drivers demonstrated that basic daily necessities (sugar, salt and etc.) and industrial products (household electric appliances and construction materials, etc.) were transported from Bajoe to Kolaka. On the other hand, from Kolaka mainly primary products and their processed products (pepper, cacao, coconut, cashew nut and lumber, etc.) were transported to Bajoe. The places of departure and the destinations of cargoes were within the provinces of South Sulawesi and Southeast Sulawesi.

Table 10: Goods transported by the Bajoe-Kolaka route
Destinations of cargoes replied by drivers

Local cities in South Sulawesi	Local cities in Southeast Sulawesi
Makassar	Kendari
Bajoe	Kolaka
Soppeng	Lamboya
Pare-Pare	Wolo
Sidrap	Bombana

Findings of the beneficiary survey on truck drivers at the Bajoe Ferry Terminal

Bound for	Main cargoes	Point of departure	Destination
Cargoes from Bajoe to Kolaka	Noodle, electronic products, iron materials, zinc, snacks, spoons, forks, vehicles, tiles, sugar and sponges, etc.	Makassar (industrial estate) in South Sulawesi Province	Kolaka, Kendari and Bombana in Southeast Sulawesi Province
Cargo from Kolaka to Bajoe (Planned) ^{Note}	Lumber, primary products and vehicles	Kolaka and Kendari in Southeast Sulawesi Province	Makassar (industrial estate) in South Sulawesi Province

Note: The above table is based on the findings of the interviews carried out at the Bajoe Ferry Terminal. It is understood that the cargoes of the return trip from Kolaka to Bajoe are planned or counted based on their experiences. The same is applied to other ferry terminals listed below.

Findings of the beneficiary survey on truck drivers at the Kolaka Ferry Terminal

Bound for	Main cargoes	Point of departure	Destination
Cargoes from Kolaka to Bajoe	Pepper, cacao, rice bran (for animal feed), cashew nuts, copra, rattan, timber and clothes, etc.	Kolaka, Kendari, Lamboya and Wolo in Southeast Sulawesi Province	Makassar, Soppeng and Pare-Pare in South Sulawesi Province

Cargoes from Bajoe to Kolaka (Planned)	Construction materials, noodles, eggs, electronic products, biscuits, sugar, nine basic goods ^{note} , cement, and iron materials, etc.	Makassar and Sidrap in South Sulawesi Province	Kendari, Kolaka and Bombana in Southeast Sulawesi Province
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Note: The nine basic goods include rice, wheat, egg, sugar, salt, flour, corn, salted fish and palm oil.

(2) Palembang ~ Muntok route

At the time of appraisal, Palembang was the main city located in the hinterland of the Palembang Ferry Terminal and transported daily necessities and construction materials to Bangka Island. In the hinterland on Bangka Island, there existed the cities of Pangkal Pinang, Sungailiat and Belinyu which were producing farm products and also developing a tourist industry. The findings of the interviews we had during this field survey confirmed that vegetables, eggs, fruits, cattle, seedlings (rubber trees, etc.) and electronic products were transported from the Palembang Ferry Terminal to Muntok.²¹ On the other hand, the former data reported that most of the trucks boarding ferryboats bound for Palembang from Muntok had been empty. However, the interview survey indicated that some drivers were transporting iron scraps. The points of departure for the truck drivers with whom interviews had been conducted at the Palembang Ferry Terminal were not limited only to the South Sumatra Province but also included other provinces in Sumatra and Java. That is, Bangka Island is connected with other local cities via Palembang. The following tables show the findings of the interview survey to truck drivers based on the questionnaire.

Table 11: Cargoes of the Palembang-Muntok route

Findings of the beneficiary survey to truck drivers at the Palembang Ferry Terminal

Bound for	Main cargoes	Point of departure	Destination
Cargoes from Palembang to Muntok	Onion, egg, orange, water melon, fruit, vegetable, cattle, chair, ceramics, cupboard, and iron scraps	Brebes, Semarang in Central Java Province, Lampung Province, Medan in North Sumatra Province, and Palembang in South Sumatra Province, etc.	Pangkal Pinang, Muntok and Sungailiat in Bangka-Belitung Province
Cargoes from Muntok to Palembang (planned)	None		

Findings of the beneficiary survey to truck drivers at the Muntok Ferry Terminal

Bound for	Main cargoes	Point of departure	Destination
Cargoes from Muntok to Palembang ^(Note 1)	Iron scraps	Pangkal Pinang in Bangka-Belitung province	Palembang in South Sumatra Province
Cargoes from Palembang to Muntok (Planned)	Mango, egg, iron scraps, fruit, vegetable, orange, cosmetics, shampoo, soap, seed, sandalwood and rubber ^(Note 2)	Cirebon and Bandung in West Java Province, Lampung province, and Palembang and Langkan in South Sulawesi Province, etc.	Pangkal Pinang in Bangka-Belitung Province

Note 1) Cargoes from Muntok to Palembang are nearly zero. That is, trucks were empty.

²¹ In Palembang, trucks are classified into the following three categories depending upon a type of cargoes and the number of trucks that can board a ferryboat is set by the type of cargo. (A: Truck transporting vegetables, onions and animals, B: Trucks transporting fruits, eggs and plants, and C: Trucks transporting electronic equipment and general goods).

Note 2) It is assumed that they are seedlings of rubber trees.

The number of ferryboats that were in service was six or seven at the time of ex-post evaluation. It was reported that three or four ferryboats were in service prior to the completion of the project.²² After the opening of the new ferry terminal, the transporting capacity has been expanded despite fewer passengers. It is considered that the main reason lies in the intention to expand the transportation capacity to deal with an increasing volume of vehicle transport.



Note: Not all the destinations that were answered by drivers are shown on the map.

2.4.2 Impact on employment

Shops and restaurants are enjoying brisk business in the passenger terminals newly constructed at Bajoe and Muntok. The beneficiary survey revealed that there were many employees who used to be housewives and began to work for the shops or restaurants at the terminals. That is, the project has contributed to creating new jobs. It is also noted that there were many porters who were working at Muntok.

2.4.3. Impact on natural environment

In case of Palembang, the Office of Harbor Medical of the local government carries out monitoring of the hygienic environment every month. Inspections of clean water and garbage are conducted, but wastewater is not inspected. At other terminals than Palembang their hygienic environment is not inspected. According to PT. ASDP Indonesia Ferry, it plans to establish the Health, Safety and Environmental Division to control various issues related to the environment of the terminals.

In order to secure clean water for the operations of the terminals, at the terminals of Bajoe, Palembang and Muntok, water purification equipment was constructed and has been in operation,²³ whereas the Kolaka terminal receives water from the Local Public Water Company (PDAM). The local government collects

²² Based on interviews with the staff of the Palembang Ferry Terminal

²³ At Muntok, water is purified but is not potable.

garbage from the terminals. Wastewater treatment facilities are not equipped with the terminals.

2.4.4 Impact on land acquisition and resettlement

The area of Muntok where a new ferry terminal was constructed was inhabited by 18 households who used to depend upon fishing for living (but not land owners). As the project came to begin, they were relocated from the terminal site with monetary compensation paid by the local government and the offer of temporary land made by PT. Timah, a partially government-owned company. Compensation for relocation and buildings were paid in money, but their fishing rights were not compensated.²⁴

2.5 Sustainability (Rating: b)

In operation and maintenance, the issues of personnel shortage and technical capacity development need to be addressed. To varying degrees, each ferry terminal has been taking proactive measures in order to improve overall ferry services.

2.5.1 Executing agency and operation and maintenance organization

The project was implemented with DGLT as its executing agency. The operation and maintenance of the Palembang Ferry Terminal fall under the responsibility of the City Transportation Department of Palembang (Dinas Perhubungan) as of the time of ex-post evaluation (September 2008). At Bajoe and Kolaka, the Bajoe Branch Office of PT. ASDP (Angkutan Sungai, Danau dan Penyeberangan, i.e. Inland Waterways & Ferries State Owned Enterprise) Indonesia Ferry (Persero) assumes the responsibility of operation and maintenance of the terminals. At Muntok, the Tj. Kalian (Muntok) Branch Office is in charge of operation and maintenance of the terminal.

The land of the Palembang Ferry Terminal is owned by the city of Palembang, but the terminal's facilities were constructed under an ODA loan project. Hence, the central government has not transferred the ownership of the terminal facilities to the local government. As a result, although operation and maintenance expenses are borne by the city of Palembang, revenues from the terminal operation are transferred to the central government. This management structure does not give an incentive to the city of Palembang to actively carry out proper operation and maintenance. The city hopes that the ownership of the facilities will be transferred. As for the transfer, a survey team of DGLT carried out a survey in January 2008, but its official assessment results

²⁴ As regards similar impacts in addition to the above, there are records indicating that negotiations were carried out between the project implementing side and fishermen, etc. about securing a construction site. That is, the explanation materials (in December 2003) about the extension of the service period of consultants indicate the fact that when the existing road was constructed at Bajoe (a section of the causeway), the residents refused to leave the land and the project implementing side approved a limited use of the land in question.

were not available at the time of ex-post evaluation (as of October 2008).

2.5.2 Technical capacity of operation and maintenance

(1) Bajoe and Kolaka

The Bajoe Branch Office of PT. ASDP Indonesia Ferry has a staff of 44 persons including the office of Kolaka (as of September 23, 2008). As a result of prioritization ranking within the company, it is pointed out that the Bajoe Branch Office faces a shortage of personnel (in particular, at Kolaka). There are some example cases in which operation was not properly done due to the shortage of personnel. For instance, there is a time when no person keeps constant watch on the movable bridge; trucks are not parked properly in order in the parking lot; only one person, instead of two, is assigned to the ticket booth at the parking lot; and only one person is in charge of the truck scale where two should be assigned. In addition, the beneficiary survey has revealed that there are requests from users for improvements of toilet facilities and the parking lot for trucks.

(2) Palembang

The staff of Palembang currently consists of 29 persons, but it is considered that it needs 60 persons. The maintenance of backup power generators, water purification system, movable bridge and truck scale (measuring tool of the weight of trucks) requires technical capacity in the fields of electricity and machinery. It is pointed out that the technical capacity is low.

(3) Muntok

The Muntok Branch Office of PT. ASDP Indonesia Ferry has a staff of 28 persons, but a shortage of personnel (of 7 persons) has been pointed out. It is necessary to organize a two-shift work system in the section of operation. However, the number of persons enough only for one shift is assigned. It is necessary to strengthen the capacity of staff at the maintenance division, particularly in terms of technical knowledge.

2.5.3 Finances of operation and maintenance

The budget for operation and maintenance at the Palembang Ferry Terminal was Rp. 650 million in 2008. It is reported that the amount accounts for only 50% of the budget requested. As stated above, all the revenues are transferred to the central government, but the local government bears the operation and maintenance expense with its budget. The revenues of Bajoe and Kolaka terminals continuously increased from 2005 to 2007. The revenues of the Muntok terminal slightly decreased in 2007, but as of September 2008 the revenues have shown an increasing trend, already

exceeding the revenues recorded in the preceding year. However, depreciation expenses at these three terminals are large, thereby incurring a deficit on the profit and loss statement.

Table 12: Financial conditions of 2007 (Actual)

	Bajoe	Kolaka	Palembang	Muntok
Staff (in person)	35	9	29	28
Personnel expenses (in million Rp)	627	627	NA	NA
O&M expenses (in million Rp)	314	296	450	216
Other expenses (in million Rp)	4,398	1,864	NA	1,725
Total expenses (in million Rp)	5,339	2,789	NA	NA

Source: City Transportation Department of Palembang (Dinas) for Palembang; Bajoe Branch Office and Muntok Branch Office of PT.ASDP Indonesia Ferry

Note: The amounts of expenses are actual figures taken from 2007. Depreciation expenses account for the greatest portion of the “other expenses.” The city of Palembang bears personnel expenses (of which amount not known) and operation and maintenance expenses required for the operation of the Palembang Terminal. Detailed data on these expenses were not obtained.

The personnel expenses necessary for the operation of the Muntok Terminal was excluded from the table because it was not possible to separate it from the expenses of other operations. It is reported that the personnel expenses amounted to 2,843 million Rp for the whole branch office in 2007.

According to the interview survey at the Muntok Branch Office of PT. ASDP Indonesia Ferry, revenues tended to fluctuate until March 2008 when the terminal for high-speed craft was constructed. It seems that the Office expects an increase in revenues by the addition of the terminal for high-speed craft. It is expected that the number of passengers will increase on the high-speed craft, whereas cargo transportation will presumably remain sluggish.²⁵

2.5.4 Conditions of operation and maintenance

As regards the conditions of operation and maintenance of the installed equipment and facilities, some problems were found with the backup power generators to be used at the time of blackout at three terminals excluding Kolaka. It is necessary to introduce technology that can be locally dealt with. The ferry terminals where actual terminal operations take place are not well equipped with manuals and drawings. Thus, it is essential to make sure that a smooth transfer of the relevant software be made along with that of equipment and facilities.²⁶ Furthermore, it is important to transfer technologies by bearing in mind that the smooth technology transfer be facilitated within the O&M organization.

(1) Bajoe

²⁵ It is believed that cargo transportation will potentially increase when the Tj. Api Api port is opened. Thus, the Office needs to wait for the opening of the port towards increases in the volume of freight transportation.

²⁶ To improve the situation in which the terminals that are responsible for daily operation do not have drawings and manuals, it is considered that there are some issues that need to be remedied in the transfer process from the executing agency to the O&M organization and the transfer process within the O&M organization.

As for maintenance, the backup power generators have not been in usable condition due likely to a problem stemming from an automatic switching unit.²⁷ It is reported that a business agent was unable to repair them because their drawings were not available. Also, the capacity to supply water has declined due to corroded pipes, etc. At the time of this field survey, their repairs were planned. At the same time, it was pointed out that the manuals of the power generators and the drawings of the terminal had not been transferred yet.

(2) Kolaka

At Kolaka the backup power generator is in working condition. There is a problem, however, with water supply to the old terminal. At Kolaka as well, the manuals of the generator and drawings of some terminal facilities have not been transferred yet. Concern over how to address a situation when something went wrong was expressed.

(3) Palembang

Although the backup power generator can be operated, power distribution system has been down. Hence, they have never been put to use. There is also a trouble with a part of the water supply system, and it is pointed out that all the drawings of equipment and facilities have not been handed over to the terminal at the time of transfer. A narrow access road to the Palembang terminal has posed a problem. In order to alleviate its traffic jam, the local government is planning to construct a new road.

(4) Muntok

In the power generating equipment, the switch breaker that automatically makes a switchover at the time of power failure has not been working. However, it is possible to switch it over manually. The truck scale has not been used because it is out of order, which in fact causes no problems because trucks are empty.

There are some problems with the technical capacity of personnel and the operation and maintenance of equipment/facilities. Thus, this project's sustainability is evaluated to be moderate.

3. Feedback, lessons learned and recommendations

3.1 Conclusion

²⁷ The first unit of two backup power generators has not been in working condition since 2006 and the second unit has not been serviceable since March 2008.

The project was implemented during the Asian currency crisis, and the time of completion was greatly delayed. However, the project was completed nearly within the initial scope. Primarily because an alternative route and/or alternative mode of ferry transport was introduced, the transport volume of the target routes of this project is lower in terms of both passengers and vehicles than initially planned. However, it is evaluated that the ferry transport is contributing to building a transportation network and providing a safe mode of transport to the local people as well as facilitating smooth distribution of goods in the regions although it was not possible to grasp such effects quantitatively in this field survey.

3.2 Lessons Learned

The ferry terminal that has been listed as an alternative route of the target routes of this ODA loan project was, in fact, a part of the other ODA loan project's target for which L/A had been signed in the past. Therefore, at a stage of the preliminary study, it is necessary to look into the possibility of an alternative route or an alternative mode of transport in a more extensive geographic scope.

3.3 Recommendations

1. It is necessary to transfer the project smoothly from the executing agency to the O&M organization.

(1) Reflection of the user's needs

It is considered that it will be better to select an O&M organization at the stage of appraisal so as to reflect, at the detailed design stage, more proactively the ideas of the terminal operator who has a clearer understanding of the user's needs (this is to reflect the operator's ideas as to the layout of the terminal, access roads, etc. that take the user's convenience into consideration, rather than the technical aspect).

(2) Application of locally maintainable technology

It was found that power generators at two terminals of the four were not in operable condition due likely to a problem with the automatic switching unit to be used at a power failure or the power distribution system. While it is surmised that the problem derives from an inadequate technical capacity of the operator, the shortage of maintenance budgets and non-availability of the operation and maintenance manuals, it is recommended to introduce technology that can be handled locally.

(3) Transfer of the software components

It is important to make sure to transfer the software component such as drawings and manuals as well as the transfer of physical facilities. Furthermore, within the O&M organization, it is important to distribute drawings and manuals to

divisions that are actually involved in operation and maintenance.

(4) Training

Prior to transfer of equipment and facilities to O&M organization, it is important to provide training mainly to the O&M organization by bearing in mind that smooth technology transfer be facilitated within the O&M organization after the transfer.

(5) Clarification of organizations that are responsible for operation and maintenance

It is necessary to transfer rights such as ownership right and user right appropriately from the executing agency to the O&M organization and clearly define each organization's responsibilities.

2. It is considered that it will be essential to include environmental monitoring in the operation and maintenance of the terminal from now on.

3. It is further desired to coordinate with the local government in the project's implementation and in the operation and maintenance of facilities. In particular, the convenience of using a ferry will be enhanced further by connecting with other modes of transport after having got off the ferryboat. It will be also important to work in collaboration with the Regional Development Planning Agency (BAPPEDA) of the province in the light of its roles in regional development.

Comparison of Original and Actual Scope

Item	Original scope	Actual scope
(1) Output (a) Civil works	Project site: Bajoe, Kolaka, Palembang and Muntok <u>Water front facilities</u> Breasting dolphin Movable bridge Landing pier and access bridge Dredging works (only Bajoe) Breakwater (only Muntok) Navigation aids equipment <u>Ferry terminal</u> Reclamation works (excluding Palembang) Land preparation works (only Palembang) Revetment works Road and pavement works Passenger terminal construction Water supply and electric power supply	Project site: Bajoe, Kolaka, Palembang and Muntok <u>Water front facilities</u> Breasting dolphin Movable bridge Landing pier and access bridge Dredging works (only BajoE) Breakwater (only Muntok) Navigation aids equipment <u>Ferry terminal</u> Reclamation works (only BajoE) Land preparation works (only Palembang) Revetment works Road and pavement works Passenger terminal construction Water supply and electric power supply
(b) Consulting service	Total: 420 M/M a) Foreign: 92 M/M b) Local: 328 M/M	Total: 555 M/M a) Foreign: 156 M/M b) Local: 399 M/M
(2) Period Employment of consultant Consultant service Detailed design Tender assistance Civil works Maintenance	Sept. 1995 ~ Aug. 1996 Sept. 1996 ~ June 2000 Sept. 1996 ~ April 1997 Feb. 1997 ~ June 1998 July 1998 ~ June 2000 July 2000 ~ June 2001	June 1996 ~ July 1997 July 1997 ~ June 2005 July 1997 ~ June 1998 June 1998 ~ March 2002 Sept. 2001 ~ May 2005 April 2004 ~ May 2006
(3) Project cost Foreign currency Local currency Total Yen loan amount Exchange rate	2,117 million yen 1,564 million yen (34,756 million Rp) 3,681 million yen 3,129 million yen 1 Rp= ¥0.045 (As of 1995)	1,284 million yen 1,618 million yen (134,833 million Rp) 2,902 million yen 2,789 million yen 1 Rp= ¥0.012 (Weighted average from 1996 to 2005)