INDONESIA

Equipment Supply for Maritime Telecommunication System (II) Project

Report Date: September 1998
Field Survey: Not implemented

1 Project Summary and JBIC's Cooperation

The Equipment Supply for Maritime Telecommunication System (II) Project, based on the JICA master plan "Long Term Development Plan of Maritime Communication System" completed in 1982, is to expand the maritime communications system in Indonesia to ensure safety and efficiency of maritime navigation. The ODA loan for this project, which is a continuation of the Equipment Supply for Maritime Telecommunication System (I) Project, is to cover foreign currency expenses for providing the wireless equipment and the training equipment for the training of coastal station staff required for strengthening the communications facilities at coastal stations, as well as foreign currency expenses related to consulting services.

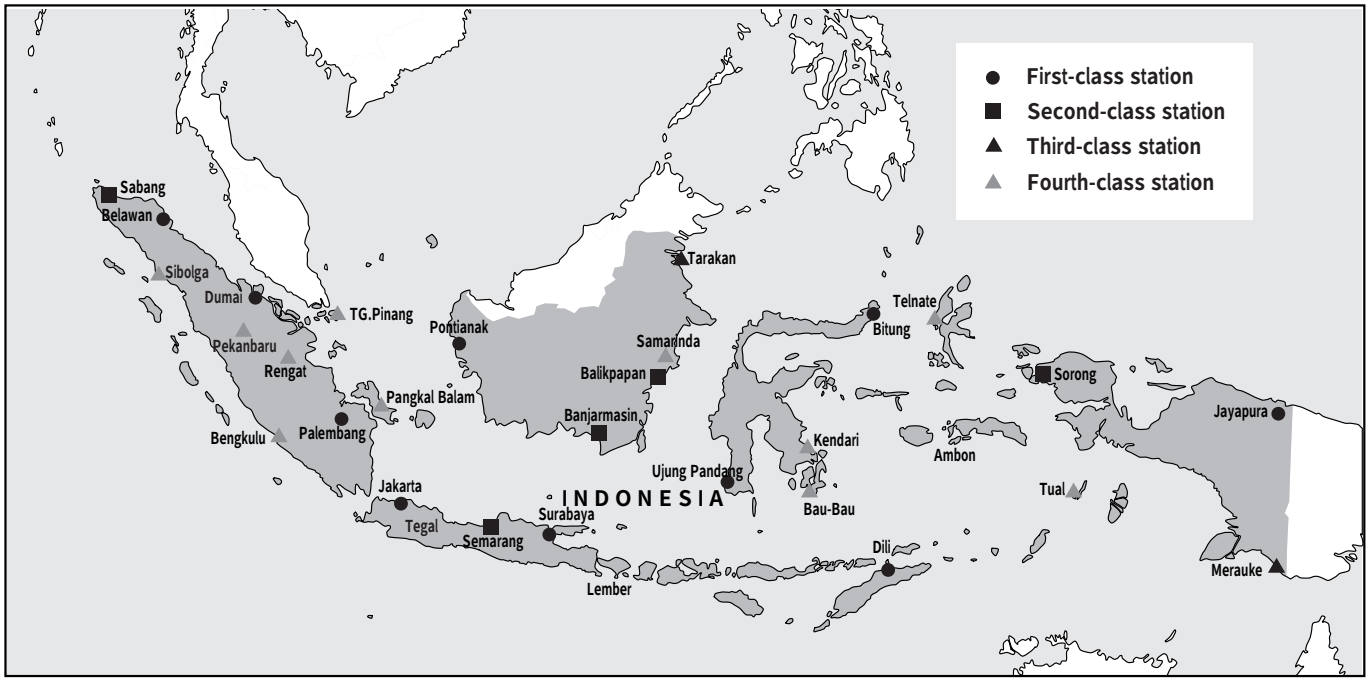
Borrower / Executing Agency	Government of the Republic of Indonesia / Directorate General of Sea Communications, Ministry of Communications
Exchange of Notes / Loan Agreement	July 1984 / February 1985
Loan Amount / Loan Disbursed Amount	· 3,600 million / · 3,596 million (excluding charge)
Loan Conditions	Interest: 3.5%, Repayment period: 30 years (10 years for grace period), Partial untied
Final Disbursement Date	February 1991

2 Evaluation Results

(1) Project Implementation

(i) Project Scope

Besides the additional procurements by using the contingency of the Loan Agreement, there were no major changes. The additional procurements consisted of equipment and materials as well as spare parts for assuring the continuity of coastal



wireless operations. These additional procurements were also deemed necessary from the viewpoint of guaranteeing maritime transport safety based on the difficult financial position of Indonesia at the time.

(ii) Implementation Schedule

With regard to the original project scope excluding the additional procurements, there was an overall delay in the implementation schedule of approximately one year. The main reasons for this delay were slowness in the contract procedures for consultants, as well as delays in civil engineering works resulting from budget constraints reflecting tighter local money conditions.

(iii) Project Cost

The ODA loan covered only the foreign currency portion of the project costs, the local currency portion of the project costs being footed by the Indonesian government. With regard to the original project scope, the foreign currency portion of the project costs was the subject of a cost underrun of approximately 85% of Loan Amount, due to a reduction in the M/M cost of consultants (Planned: 97.5 M/M → Actual: 65 M/M, initial project scope) and unused contingency. This reduction in M/M resulted from the use of local consultants instead of foreign consultants for auxiliary tasks. On the other hand, with regard to the local currency portion, the national development budget had to be curtailed due to the drop in Indonesia's revenues because of falling oil prices and tight money conditions. As a result, the local currency budget required for installation and civil engineering work was considerably reduced. The budget shortage was filled with the separate local currency loans provided by the JBIC (in fiscal 1987 and fiscal 1988), and the project thus reached completion.

The additional procurements were performed within the balance of the contingency, but in the end, the additional procurement amount exceeded the contingency balance due to exchange rate fluctuations. However, the overrun was borne by the Indonesian government, so that the additional procurements did not result in any particular delays and the project could be completed as planned.

Comparison of Original Plan and Actual

(1) Project Scope	Plan	Actual
(i) Transmitter-receiver	6 places, 16 types, 124 units	10 places, 16 types, 124 units
(ii) Equipment of various kinds	10 places, 12 types, 76 units	12 places, 12 types, 95 units
(iii) Training equipment	1 place, 12 types, 14 units	1 place, 12 types, 17 units
(iv) Additional procurement	—	10 places, 10 types, 81 units
(v) Consulting Service	Procurement support, execution and monitoring, personnel training (Foreigners 97.5M/M, Local 47.5M/M)	Same as left (Foreigners 70.5M/M, Local 86 M/M)
(2) Implementation Schedule		
Loan agreement signing ~ Contract of consultant	November 1984 ~ November 1985	February 1985 ~ July 1986
Field survey/detailed design ~ Bid/contract	December 1985 ~ February 1987	June 1986 ~ June 1987
Installation, civil works	March 1987 ~ July 1988	July 1987 ~ June 1989
Additional procurement	—	May 1988 ~ August 1990
Training period	February 1988 ~ January 1989	(i) Japan: October ~ December 1987 (ii) Local: August 1989~ January 1990
(3) Project Cost		
Foreign currency	· 3,600 million	· 3,596 million (including additionally procured portion)
Local currency	Rp. 3,816 million	Rp. 1,244 million
Total project cost	· 4,504 million	· 3,831 million
Exchange rate	Rp. 1 = · 0.2367	Rp. 1 = · 0.1965 (Additionally procured portion is Rp.1 = · 0.0750)

(2) Organization of the Executing Agency (implementation and operation/maintenance after completion)

(i) Implementation Scheme

Regarding the implementing capacity of the executing agency, it cannot be denied that it was unable to avoid delays in the project, but no particular problems were detected in its overall performance. The consultants and contractors received high evaluations from the executing agency and their performance can be judged as satisfactory.

(ii) Operations and Maintenance Scheme

The materials and equipment that were supplied as part of this project are all operated and maintained by each of the coastal wireless stations. However, lower stations are suffering from acute staff shortage. The project also supplied training materials and equipment to regional training centers, which was expected to resolve the staff shortage. The training results are lower

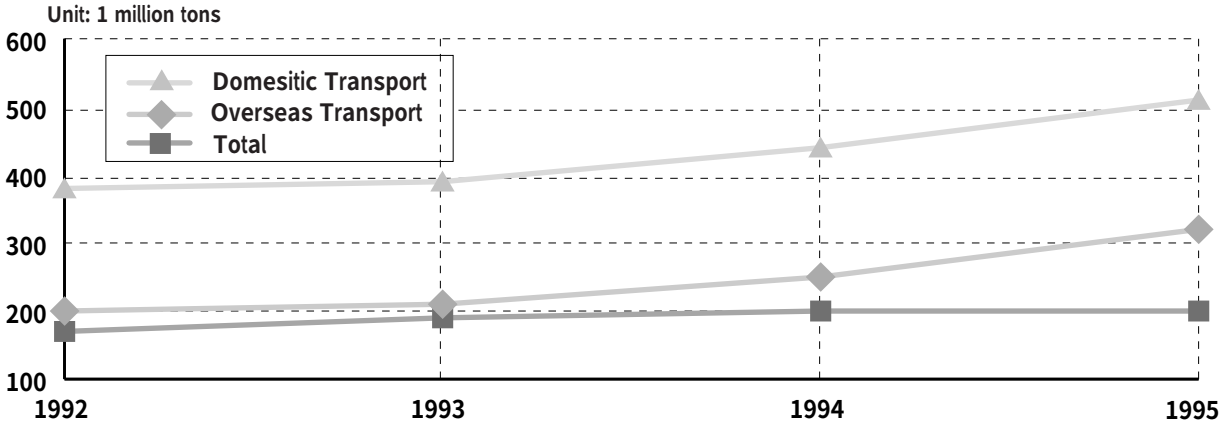
than initially planned, but according to reports from the executing agency, this is not having an adverse effect on the utilization of these materials and equipment.

(iii) Operations and Maintenance

According to Follow-up Survey of Completed Projects conducted by JBIC in 1993, the rate of operation of materials and equipment was 100%. As of March 1998, the operation and maintenance status was reported to be largely free of problems by the executing agency.

(3) Project Effects and Impacts

Movements in the Cargo Transaction Volume in Indonesia



(Source) Statistical Yearbook of Indonesia for each year.

Movements in the Number of Marine Accidents

	1989	1990	1991	1992	1993	1994	1995	1996
Number of accidents	263	237	222	198	182	133	155	131
Sinking	120	101	79	82	75	65	63	54
Loss of life	292	356	410	168	147	139	206	611*

(Source) Nippon Telecommunications Consulting Co., Ltd., Study Report on Strengthening Maritime Telecommunication System in the Republic of Indonesia, September 1997.

(Note) The sudden increase in loss of life in 1996 was largely due to the ferry sinking disaster which occurred at the north end of Sumatra in January 1996, with the loss of 338 lives.

3 Lessons Learned

In projects where the effects cannot be quantified in forms such as internal rates of return, several existing indicators should be set at the time of appraisal, and those indicators should be monitored continuously to make it possible to keep track of project impacts in a way that is, to some extent, quantitative.

Even if it is impossible to quantitatively measure the impact of a project, some established indicators that can be obtained in the field at the time of the appraisal should be set, and their movements monitored, to compare the situations before and after the implementation of the project. Number of accidents was set as an indicator for this project, and continuous monitoring of such indicators can illustrate project effects in a quantitative manner.

(Note: JBIC has begun to collate project impact indicators for each sector and apply them to the appraisal and implementation monitoring of projects).