Philippines

Maritime Communication Project, Phase I

Report Date: November 2002
Field Survey: June 2001

1. Project Profile and Japan's ODA loan

Project Site | Operation Center | Transmitting Tower | Transmitter

1.1 Background

The Philippines is a country of more than 7,100 scattered islands, reaching 1,100 km from east to west and 1,600 from north to south. Its main cities are located in the coastal area of the islands, and marine transportation plays an important role in the economic and social development of the country. Maritime communications between ports and vessels is indispensable for the safe and smooth passage of ships, and for stable maritime activities in general. There are three types of maritime communication services in the Philippines: Public Coast Stations, through which private enterprises, approved by the government, manage public communications facilities; Private Coast Stations, which ship owners and shipping companies uses for their own business; and Governmental Coast Stations that are used for public services such as cruise observation, rescue and related activities. However, most of the Public Coast Stations were small and old, and since they operated independently, there was no common network. As a result, they were quite inconvenient for users and could not meet the increasing demand for coordinated maritime communication. In order to cope with the situation, the government of the Philippines devised a long-term plan to form a maritime communication network with the support and cooperation of the Japanese government, and engaged an engineering service to construct the Manila Central Coast Station under the 13th Yen Loan Package.

1.2 Objectives

The objective of the Maritime Communication Project (MCP) is to ensure efficient and reliable maritime communication services by constructing coastal radio stations, consisting of public coast stations and port stations, in order to improve the safety of vessels at sea and to minimize property losses.

1.3 Project Scope

The project consists of:

1) Construction of a Manila Central Coast Station (public coast station) consisting of a Transmitting Station, Receiving Station and Operation Center, and a Manila Port Station
2) Procurement and installation of maritime radio communication equipment for the following:
   - Manila Central Coast Station (Transmitting Station, Receiving Station and Operation Center)

- Manila Port Station
- Training equipment for the Telecommunications Training Institute (TTI)
- UHF link from the Operation Center to Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA) and the Philippines Port Authority (PPA)

3) Training services for operation and maintenance
4) Consulting service

1.4 Borrower/Executing Agency

The Government of Republic of the Philippines / Department of Transportation and Communications (DOTC)

1.5 Outline of Loan Agreement

Loan Amount	2,633 million yen
Loan Disbursed Amount	1,954 million yen
Exchange of Notes	December 1988
Loan Agreement	May 1989
Terms and Conditions	
Interest Rate	2.7 %
Repayment Period (Grace Period)	30 years (10 years)
Procurement	General Untied (Partially Untied for Consulting Services)
Final Disbursement Date	September 1996

2. Results and Evaluation

2.1 Relevance

2.1.1 Relevance at the time of appraisal

This project plan was considered to be relevant at the time of appraisal since it was designed to meet the following needs:

i) Need to decrease the number of marine accidents

At the time of the appraisal, the Philippines had between 100 and 200 accidents per year, and the frequency of accidents was increasing. Given these figures, it is clear that the country had a need for a highly reliable maritime communications system to help prevent marine accidents.

ii) Need to adapt to heavier call traffic associated with the increase of marine transportation

According to estimates stated in the feasibility study for the project, there were 20,366 vessels registered in the Philippines as of 1986, and this figure was projected to grow to 34,740 by 2005. Furthermore, call traffic volume in 2005 was predicted to be 821,580 domestic calls and 59,760 international calls.

iii) Need to fulfill Philippines law and international treaties

a) Philippines law

Act. 3396 of the Republic of the Philippines requires that radio equipment be installed on any cargo boat, passenger boat or other craft of more than 350 gross tons. In order to improve maritime safety, to minimize property losses and to ensure the security of navigation, it was necessary to improve ground radio equipment in order to accommodate the increasing number of vessels.

b) International treaties

Improvements to communications equipment were required in line with the following international treaties:

- International Convention for the Safety of Life at Sea (SOLAS) of the International Maritime Organization (IMO)
- Radio Regulations of the International Telecommunication Union (ITU)
- International Convention on Maritime Search and Rescue (SAR) of IMO
- International conventions for prevention and surveillance of ocean contamination, and protection of ocean resources such as International Convention for the Prevention of Pollution from Ship (MARPOL), International Convention on Oil Pollution Preparedness, response and Co-operation (OPRC), etc. by IMO

2.1.2 Relevance at the time of evaluation

Communication systems for the provision of maritime distress and safety information were geared towards GMDSS (Global Maritime Distress and Safety System) in accordance with SOLAS (International Convention for Safety Life at Sea). In line with this, the ownership of this project was transferred from the Telecommunications Office (TELOF) under the DOTC to the Philippine Coast Guard (PCG) in February 2002. Vessels above a certain level are now required to equip the GMDSS, and the Philippines government's policy is to promote other vessels to equip the GMDSS as well. However, it is taking time for vessels to equip the GMDSS, which seems to be one of the reason why the project is not achieving its full expected benefits, as discussed later in this report.

Furthermore, the National Telecommunications Commission (NTC) of the DOTC, which has the authority to allocate frequencies in the Philippines, decided to allocate the UHF 2.0 GHz band for mobile telephone service. This was in response to the rapid growth of mobile telephone service subscribers, and the need for additional frequencies to cope with the increasing demand. Mobile telephone service have shown remarkable growth worldwide, and their use in the Philippines is no exception: the subscriber base increased seventeen times over 5 years, from 102,000 subscribers in 1993 to 1,734,000 subscribers in 1998. As a result, the 2.0 GHz band UHF intersite links established under this project are not functioning fully due to frequency interferences, as discussed later in this report. It was not possible to foresee this frequency allocation policy change at the time of appraisal.

The project objective to improve the safety of the vessels at sea and to minimize property losses is still relevant as of today, although the project is not achieving its full expected benefits.

2.2 Efficiency

2.2.1 Project Scope

The radio system for UHF intersite links was planned utilizing the 900 MHz band. However, an upgrade to the 2.0 GHz UHF band was required because of routine interference with radio signals coming from various sources, both regulated and unregulated. For that reason, new communications equipment designed for the 2.0 GHz band was introduced.

2.2.2 Implementation Schedule

The schedule initially called for the project to be implemented in the 15 months between January 1991 and March 1992, the project was actually completed in March 1996, representing a delay of 48 months.

The reasons for these delays were as follows:

a) Addition of Construction of a new Operation Center Building

In the original plan, the old building was to be repaired and used as an operation center.

[1] Data taken from "World Telecom Visual Data Book 2001" The ITU Association of Japan, Inc., 2001

However, the building was 28 years old, and structural defects were found, making construction of a new building necessary.

b) Delay in the construction works of the Receiving Station Building and of the Transmitting Station Building

The delay in right of way pushed back the completion of Receiving Station Building renovations by 11 months, and the construction of the Transmitting Station Building by 24 months.

The impact that b) had on the implementation schedule was greater than that of a).

2.2.3 Project Cost

The total project cost exceeded the budgeted cost by 67 million yen (planned project cost, 2,907 million yen; actual project cost, 2,974 million yen. The cost overrun was caused mainly by the following modifications:

a) An upgrading of the UHF intersite link from the 900 MHz to the 2.0 GHz UHF band, which was required because of constant interference from radio signals, from various sources, both regulated and unregulated, that were monitored during pre-testing of the newly installed UHF equipment.
b) Additional construction work at the Transmitting Station, needed to prevent settlement of soil, and thereby enhance the structural stability of the building; to close the perimeter fence on the west side of the lot; and to solve other structural problems.
c) Additional construction work at the Receiving Station, to provide access for future maintenance and servicing work and to repair cracks on the walls and existing floor slab, which caved in during the renovation process.
d) After 28 years of service, the existing TELOF building, intended as the Operation Center building, was found to be structurally defective and beyond repair or rehabilitation. Additional construction work was needed.
e) Actual sub-surface soil investigation, to meet the requirements of a detailed design analysis.

2.3 Effectiveness

This project aimed to provide a highly efficient, reliable maritime communication service by establishing coastal radio stations. However, actual effectiveness has been lower than expected since the facilities installed under the project were operated for only 4 years, from 1997 to 2000. Operations were shortened because of a change in the allocation of frequency bands inside the country and because the completion of the project was delayed significantly.

2.3.1 Call Traffic Volume

The number of calls that were handled in this project between 1995 and 2000 is shown in Table 1. The volume of both domestic and international calls was substantially lower than estimated. It is conceivable that the reason for the decreasing volume of calls, despite the increasing number of vessels, is the transition to newer technologies, such as digital and satellite communications.

Table 1. Domestic and International Call Traffic Volume

Year		1995	1996	1997	1998	1999	2000
No. of Vessels		202,174	229,410	267,960	273,730	144,233	n.a.
Domestic Call Traffic [1] (Unit: calls)	Estimate	43,560	53,060	64,150	77,000	92,290	112,310
	Actual	-	-	5,637	4,253	469	226
International Call Traffic [1] (Unit: calls)	Estimate	1,960	1,940	1,930	1,910	1,900	1,880
	Actual	-	-	1,341	602	117	14

Source: TELOF
National Statistical Coordination Board (NSCB)

Note: [1] Actual traffic through MCP Network but does not include the transmission of daily meteorological message to ships and distress alarm signals.

2.3.2 Service Area

The service area covered by this project was implemented as planned -- for MF Telegram: radius of 600 km, MF Telephone: radius of 300 km, HF Telegram and Telephone: from the west coast of the United States to the east coast of Africa, and VHF telephone: radius of 100 km.

2.3.3 Annual Revenue Generated by the Project

The project was originally planned to cross-subsidize loss from handling distress calls by profit from communication. The change in annual revenue, as a direct consequence of this project, is shown in Table 2. Revenue increased from 1997 to 1998 due to the good quality of the service provided by the new equipment, and to the charging system, under which users paid after each call. However, revenue started declining in 1999. It is estimated that revenue for 2000 and 2001 will decrease further, as UHF intersite links stopped operations after the change of frequency allocation in 2000.

Table 2. Annual Revenue Generated by the Project (Unit: peso)

	1997	1998	1999
Annual Revenue Generated by the Project	228,042	804,337	150,948

Source: TELOF

2.4 Impact

2.4.1 Social and Economic Impact

i) Maritime Accidents and Casualties

The number of maritime accidents and casualties in the project area is shown in the Table 3 and Figure 1. The number of maritime accidents reported all involved more than twenty deaths and occurred between 1990 and 2000. The increase in the number of casualties in 1993 was due to a collision that occurred in Manila Bay between the international cargo ship and the domestic passenger boat. Although there was a declining trend in maritime accidents through 1997, the number of incidents rose again in 1998 and 1999. The low figure in 1997 may be attributed to the fact that in that year the Philippine Coast Guard (PCG) was transferred from the Department of National Defense (Philippine Navy) to the Department of Transportation and Communications (DOTC), and, due to this organizational change, PCG was able to reinforce its administrative system and funding for maritime safety, environmental protection and search and rescue. However, due to the improvement of PCG's reporting system, the number of accidents reported to PCG consequently rose in 1998 onwards. Also, in 1998, there was a major accident that raised the number of maritime accidents and casualties for that year. The cargo vessel Princess of the Orient sank, with an estimated 150 persons dead or missing in stormy weather.

This project contributed significantly to the decrease in the number of maritime accidents by establishing a maritime radio communications system. Other contributing factors include the

acquisition of 2 search and rescue boats (SAR) with GDMSS from Australia, the participation of other coast guard organizations using the existing network, the reinforcement of PCG's maritime security activities, the creation of a regional system for issuing warnings about disasters at sea and the ejection of illegal unregistered ships.

Table 3. Number of Maritime Accidents and Casualties (Unit: cases)

	1990	1991	1992	1993	1994	1995	1996 Completion	1997	1998	1999	2000
Sunk	117	28	51	45	35	37	35	16	37	37	10
Capsized	87	39	44	41	37	33	32	11	88	109	15
Collision	27	5	13	12	13	17	5	6	5	5	3
Missing	50	17	16	11	13	0	0	0	12	0	1
Aground	104	27	26	26	23	58	19	5	42	44	6
Caught Fire	10	10	16	11	18	23	6	8	9	11	2
Drifted	61	29	30	27	24	13	9	9	8	0	4
Total	456	155	196	173	163	181	106	55	201	206	41
Reported Casualties	49	33	37	313	36	121	82	48	161	223	168

Source: Philippine Coast Guard

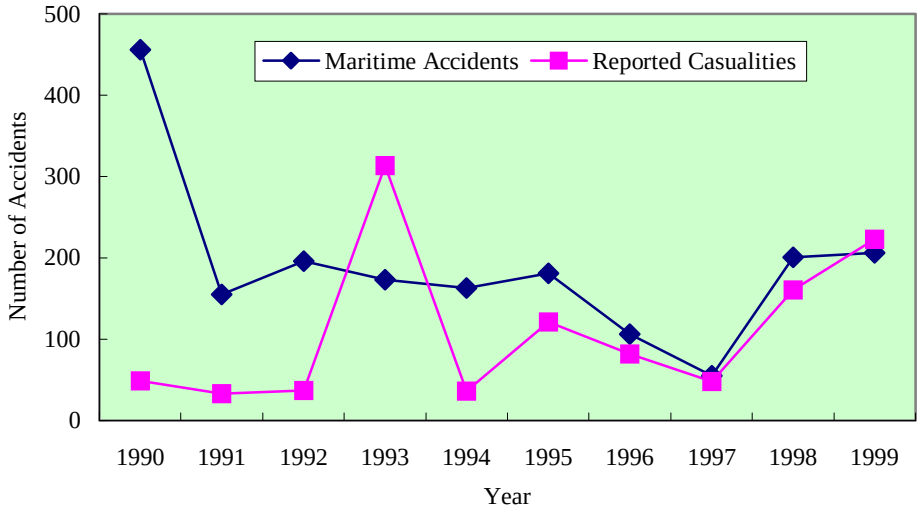

Figure 1. Number of Maritime Accidents and Casualties

ii) Number of Freight Dealings

The amount of freight handled in Philippine ports from 1992 to 2000 is shown in Table 4 and in Figure 2. The numbers show a tendency to increase up to 1997 and to decreases thereafter. The Asian economic crisis is thought to be the reason for that decline. Although the number of maritime accidents does not always influence the number of freight dealings, improvement in maritime security is crucial for the development of maritime business. In this respect, this project has contributed to maritime safety.

Table 4. Amount of Freight Dealings (Unit: metric tons)

	1992	1993	1994	1995	1996	1997	1998	1999	2000
Domestic Cargo	61,845,505	65,072,550	71,108,392	68,100,654	71,955,594	76,150,041	74,928,058	76,547,739	76,920,601
International Cargo	48,989,653	50,524,336	52,699,124	59,075,861	67,516,800	68,337,147	62,288,145	65,468,303	72,164,629
Transit Cargo	230,863	267,785	232,839	133,617	662,961	650,822	687,369	898,431	750,926
Total	111,066,021	115,864,671	124,040,355	127,310,132	140,135,355	145,138,010	137,903,572	142,914,473	149,836,156

Source: Philippine Port Authority (PPA)

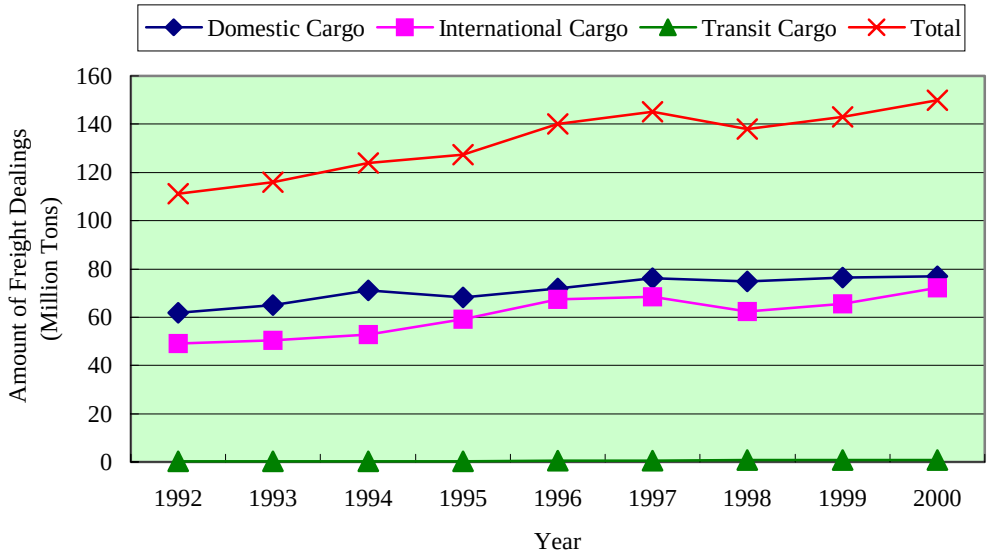

Figure 2. Amount of Freight Dealings

2.4.2 Impacts on Natural Environment

According to TELOF, no negative impacts on the natural environment were reported.

2.4.3 Impact on Local Residents

Right of way for the construction sites for the Receiving Station Building and the Transmitting Station Building caused claims of land ownership by farmers group and invited illegal squatters. The land for the Receiving Station Building was finally obtained with the assistance of the Department of the Agrarian Reform (DAR), which balanced the allocation of land to DOTC and to farmers. However, in the case of the Antenna site of the Transmitting Station Building, the land was acquired in accordance with the law of Philippines. According to TELOF, the land for the Antenna site of the Transmitting Station was national property originally. At present, the site is surrounded by a fence, and most of the squatters have been moved off the site.

2.4.4 Impact of Training Public Coast Station Staff

Staff of the public coast station, which includes the Transmitting Station, the Receiving Station and the Operation Center, are trained regularly in the Telecommunication Training Center (TTI). This contributed to the operation and maintenance of the project.

2.5 Sustainability

2.5.1 Operation and Maintenance

Operation and maintenance of this project has been carried out by the Telecommunications Office (TELOF), which is part of the office of the Department of Transportation and Communications (DOTC). For this project, there is a staff of 20 in the Operation Centers, 9 in the Transmitting Stations, and 8 in the Receiving Stations.

2.5.2 Technical Capacity

As mentioned in "2.4.4 Impact of Training Public Coast Station Staff", there is no problem with the operator's technological level, because training at the TTI is adequate in relation to the operation of telephone and telegraph services between vessels and public coast stations. However, the training needed for the engineers to competently conduct repair and maintenance of radio communication equipment is reported as insufficient.

2.5.3 Condition of Equipment

For this evaluation, the mission inspected equipment in the receiving station in Balagtas, the transmitting station in Taguig, the TTI in Valenzuela, the operation center in Mandaluyong and the PPA in the port area. Though most equipment was in reasonably good condition,[2] the UHF links between sites do not work because of the frequency allocation problem. As such, the systems are working. They malfunction when the new frequency allocation for mobile telephone interferes with the UHF link between each site. The frequency bands that interfere with the UHF link frequency between sites are shown in Table 5.

Table 5: Frequency bands that interfere in UHF link frequency between sites

Link	UHF link Frequency	Frequency Bands come into collision
Operation Center TX – Receiving Station RX	1720.5 MHz	1720-1730MHz, 1815-1825MHz [2)]
Receiving Station TX – Operation Center RX	1839.5 MHz	1742.5-1745MHz, 1837.5-1840MHz [4)]
PPA TX - PAGASA [1)] RX	1720.5 MHz	1720-1730MHz, 1815-1825MHz [2)]
PAGASA RX - PPA TX	1839.5 MHz	1742.5-1745MHz, 1837.5-1840MHz [4)]
Operation Center TX – Transmitting Station RX	1727.5 MHz	1720-1730MHz, 1815-1825MHz [2)]
Transmitting Station TX – Operation Center RX	1846.5 MHz	1750-1755MHz, 1845-1850MHz [5)]
Operation Center TX – PAGASA RX	1755.5 MHz	1750-1755MHz, 1845-1850MHz [5)]
PAGASA TX – Operation Center RX	1874.5 MHz	1870-1880MHz, 1950-1960MHz [3)]

Source: NTC

Note: [1)] Philippine Atmospheric, Geophysical and Astronomical Service Administration: PAGASA

[2)] New allocation of 1720-1730MHz, 1815-1825MHz for PMTS (Public Mobile Telephone Service) based on NTC Memorandum Circular 8-10-97

[3)] New allocation of 1870-1880MHz, 1950-1960MHz for PMTS (Public Mobile Telephone Service) based on NTC Memorandum Circular 8-10-97

[4)] New allocation of 1742.5-1745MHz, 1837.5-1840MHz for CMTS (Cellular Mobile Telephone Service) based on NTC Memorandum Circular 3-3-99

[5)] New allocation of 1750-1755MHz, 1845-1850MHz for CMTS (Cellular Mobile Telephone Service) based on NTC Memorandum Circular 9-3-2000

2.5.4 Financial Status

The financial information for TELOF for years 1999 and 2000 is shown in Table 6. TELOF's financial status is relatively stable, as the Ratio of Net Worth and the Ratio of Fixed Assets indicate. Also, although the Current Ratio is relatively low and TELOF's ability to meet short-term payment obligations is not certain, no particular problem has been found regarding its sustainability in the future.

[2] As spare parts for the power amplifier unit, arresters, and power supply of the UPS are not available, and the air conditioner is out of order, all 3 UPS and 3 air conditioners out of 8 are not operating.

Table 6: Data on the Financial Information of TELOF

	1999	2000
Current Assets	Php. 422,264,775.31	Php. 390,691,330.40
Fixed Assets	Php. 1,699,126,408.70	Php. 1,763,094,228.33
Total Assets	Php. 2,156,779,366.12	Php. 2,190,111,693.43
Current Liabilities	Php. 402,187,267.57	Php. 460,471,587.24
Stockholders' Equity	Php. 1,700,260,286.01	Php. 1,764,124,605.64
Ratio of Net Worth	78.83%	80.55%
Ratio of Fixed Assets	99.93%	99.94%
Current Ratio	104.99%	84.85%

Source: TELOF

2.5.5 Continuity and Future Development of the Project

No serious problem is found with the project in terms of the executing agency, staff technical capacity, the quality of equipment or the executing agency's financial condition. However, considering that the facilities installed in this project are not operating fully at present, continuity and future development of this project cannot be expected.

3. Lessons Learned

A series of changes affected the project. First came the technical upgrade of frequency from the UHF 900 MHz band to the 2.0 GHz band during implementation, and then came the policy change to allocate the UHF 2.0 GHz band for mobile telephone service after completion. The result was that the project not achieving its expected benefits, in particular the communication nearby the land where frequency interferences happen. In many cases, unforeseeable changes at the time of project appraisal must be incorporated during project implementation in order to achieve project outputs and/or expected benefits effectively. However, it is fair to say that such changes are made at the policy level and are quite out of reach of the executing agency. On the other hand, JBIC could have maintained better policy discussions with various levels of the recipient country to make effective recommendations from the viewpoint of the project objectives.

Comparison of Original and Actual Scope

Item	Plan	Actual[3]
1. Project Scope		
1) Construction of Manila Central Coast Station		
- Transmitting Station	1 site	As planned
- Receiving Station	1 site	As planned
- Operation Center	1 site	As planned
2) Construction of Manila Port Station	1 site	As planned
3) Procurement and Installation of Maritime Radio Communication Equipment		
a) Manila Central Coast Station	- Transmitters	As planned
- Transmitting Station	- Supervisory Equipment	As planned
	- Remote Control Equipment	As planned
	- MF/HF Antenna System	As planned
	- 900MHz Band UHF Radio System	- 2.0GHz Band UHF Radio System
	- Power System	As planned
	- Measuring Equipment & tools, Spare Parts Installation Materials	As planned
- Receiving Station	- Receivers	As planned
	- Supervisory Equipment	As planned
	- Remote Control Equipment	As planned
	- Antenna System	As planned
	- 900MHz Band UHF Radio System	- 2.0GHz Band UHF Radio System
	- Power System	As planned
	- Measuring Equipment & tools, Spare Parts Installation Materials	As planned
- Operation Center	- Operation Console	As planned
	- Supervisory Equipment	As planned
	- Intercom Equipment	As planned
	- VHF Equipment	As planned
	- 900 MHz Band UHF Radio System	- 2.0GHz Band UHF Radio System
	- Power System	As planned
	- Measuring Equipment & tools, Spare Parts Installation Materials	- Additional Equipment - Personal Computer/Software and Printer
b) Manila Port Station	- VHF Equipment	As planned
	- VHF Antenna Systems	As planned
	- Intercom Equipment	As planned
	- Remote Terminal	As planned
	- Power System	As planned
	- Measuring Equipment & tools, Spare Parts Installation Materials	As planned
c) Telecommunications Training	- MF/HF Training Equipment for	As planned

[3] Data taken from Project Completion Report.

Institute (Training Equipment)	Maintenance	
	- VHF Training Equipment for Maintenance	As planned
	- Operator's Training Equipment	As planned
	- Maintenance Vehicles	As planned
4) UHF Radio System Intersite Link	- 900 MHz Band UHF Radio System Link between Operation Center and PAGASA	- 2.0GHz Band UHF Radio System
	- 900 MHz Band UHF Radio System Link between PAGASA and PPA Extension Office (PCG)	- 2.0GHz Band UHF Radio System
	- Voice Grade Aerial Cable Link between PPA Extension Office and Port Station	- 2.0GHz Band UHF Radio System
5) Training	- Training in Japan - Training in the Philippines (OJT)	- Training in Japan - Reduction in the number of Instructors from 3 to 1 - Reduction in the number of Trainees from 30 to 15 - Training in the Philippines (Preparatory Training)
6) Consultancy Service		
- Foreign	57M/M	59 M/M
- Local	115M/M	110.5 M/M
2. Implementation Schedule		
- Loan Agreement	December 1988	May 1989
- Concurrence of Contract for Consultancy	April 1989	August 1989
- P/Q Advertisement & Selection of P/Q Tenderer	July 1989 to October 1989	As planned
- Notice to P/Q Tenderer & Release of Tender Documents	October 1989	February 1990
- Tender Floating & Tender Evaluation	March 1990 to July 1990	As planned
- Selection of the Successful Tenderer	July 1990 to August 1990	As planned
- Contract Negotiation	August 1990 to August 1990	September 1990
- Contract Signing	August 1990	November 1990
- Main Equipment and Antenna Manufacturing	January 1991 to August 1991	As planned
- Factory Training & Inspection	August 1991 to September 1991	As planned
- Construction of Support Facilities	April 1991 to December 1991	April 1991 to January 1994
- Shipping/Inland Transportation Main Equipment Antenna System	September 1991 to October 1991	October 1991 to November 1991
- Installation Main Equipment	October 1991 to February 1992	to August 1992
- Installation Antenna System	August 1991 to February 1992	to April 1992
- Preparatory Training	April 1992 to July 1992	May 1992 to August 1992
- Adjustment and Testing of Main Equipment and Antenna System	February 1992 to March 1992	February 1996 to March 1996
- Preparation of As-Built Drawings	May 1996 to July 1996	As planned
- Operation and Maintenance Support Services	May 1996 to December 1996	As planned
3. Project Cost		
Foreign currency	2,633 million yen	1,954 million yen
Local currency	274 million yen (43 million pesos)	1,020 million yen (147 million pesos)

Total	2,907 million yen	2,974 million yen
ODA loan portion	2,633 million yen	1,954 million yen
Exchange Rate	1 peso = 6.33 yen (As of October 1988)	1 peso = 6.9525 yen (As of August 1996)

Independent Evaluator's Opinion on
Maritime Communication Project, Phase I

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The ultimate objectives of the maritime communication project of helping improve the safety of vessels at sea and to minimize property losses remain as critical concerns of the Philippine government. The country is prone to maritime accidents because of its archipelagic nature, the high frequency of weather disturbances especially typhoons, and the wide range of vessels plying Philippine seas in terms of age, size and seaworthiness.

However, as the Project Evaluation Report highlights, the maritime communication project as configured became obsolete within a few years after its start of operation because of the market shift to mobile telecommunication services. Thus, on the whole the project did not deliver as expected. From the point of view of the borrower—for the Philippines needs to eventually repay to loan despite its long maturity—the issue is whether the project was ultimately a bad investment. And if so, whether that could have been prevented.

JBIC Comment

Note that the purpose of this project is focused more on maritime distress and not on telecommunication services. In this sense, the evaluator should have provided comments on maritime distress in this paragraph.

The Project Evaluation Report states that the project "… contributed significantly to the decrease in the number of maritime accidents…" (p.6). This statement suggests that the project was on the whole beneficial to the country within the limited time frame of the project's implementation. The data presented in the Report does not support the above-mentioned statement at face value. Specifically, during the 1997-2000 period of the project, maritime accidents rose tremendously during 1998-1999. The Report attributes the sharp rise of accidents during those years to improved reporting. While this may be true, the statement requires buttressing. It is useful to examine more closely the data before we can confidently state that the project indeed contributed significantly to the decline in the number of maritime accidents in the country. An indication that the project was not as effective during 1997-2000 in contrast to what was indicated in the Report is that there is no concordance between the number of calls through the MCP Network and the number of maritime accidents during the period.

Thus, it seems to me that the strategy of the project to construct public coast stations largely failed because of technological revolution and of the unfavorable cost per call phone services relative to mobile communications.

I agree with the Report that the most important lesson from the project is that rapid technological development can drastically change the social benefit and cost profile of a project. The long process of project preparation, evaluation and implementation make projects for ODA funding vulnerable to technological obsolescence in sectors with fast technological developments (e.g. telecommunications).

In addition, it seems to me that another lesson from the maritime communication project is that pre-feasibility and feasibility studies have to be examined closely. There may be the possibility that the projected number of calls have been set unrealistically high to start with, and the "padding" or very optimistic estimates were used in order to satisfy the minimum internal rate of return requirement of the NEDA-ICC for ODA project funding. What I am highlighting here is that considering that the Philippines will have to repay ODA loans financing projects such as MCP, it is very important for the Philippine government to improve further its pre-implementation project evaluation process in order that ODA-funded projects are well-designed and realistic. In the process, investment allocation among projects is improved and the social returns from ODA loans increased.