

Maritime Safety Improvement Project

Report Date: March 2000
Field Survey: July 1999

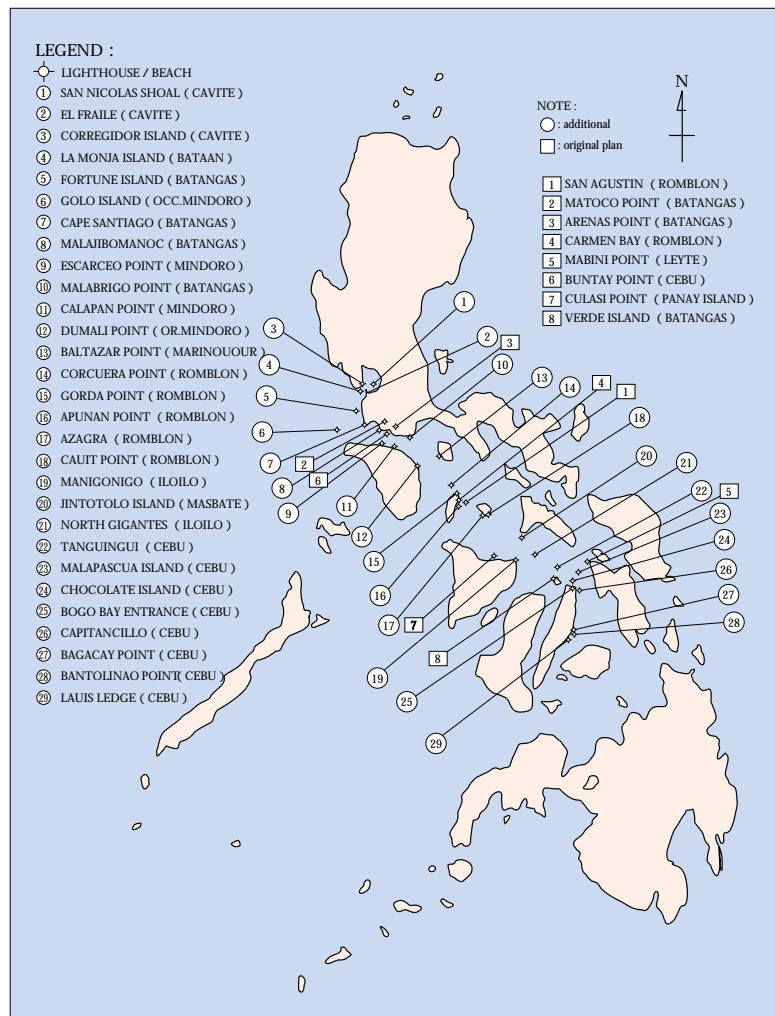
1 Project Summary and Japan's ODA Loan

This project aimed to perform training required for the emergency rehabilitation and the operation and maintenance of navigational aid facilities (37 lighthouses and light beacons) between Manila and Cebu Island, which is a major sea road, in order to strengthen maritime safety in Republic of the Philippines, which suffers major damages from maritime accidents. This project also includes the drafting of surveys and implementation programs related to a future maritime safety improvement plan as an engineering study. The ODA Loan covered the entire foreign currency portion of the project costs.

2 Analysis and Evaluation

(1) Project Scope

Thirty-nine lighthouses and light beacons have been constructed between Manila and Cebu Island. Out of these facilities, the emergency rehabilitation (strengthening of quantity of light, renovation of power supply facilities, rebuilding of navigational lights, etc.) of 28 lighthouses and light beacons judged to be of high importance at the time of appraisal formed the contents of the initial plan. An international competitive tender was performed for the emergency rehabilitation of a total of 29 lighthouses and light beacons, including one such facility added during the detailed design stage. Furthermore, the rehabilitation of 8 additional lighthouses and light beacons in high need of rehabilitation was also performed using part of the provided contingency, and thus, at last count, a total of 37 lighthouses and light beacons were rehabilitated. The changes in the project scope are judged to be adequate from the aspect of the efficient implementation of this project.



Borrower	Republic of the Philippines
Executing Agency	Maritime Industry Authority (MIA)
Loan Amount	¥3,516 million
Loan Disbursed Amount	¥3,487 million
Date of Exchange of Notes	March 1991
Date of Loan Agreement	July 1991
Loan Conditions	
Interest Rate	2.7 %
Repayment Period (Grace Period)	30 years (10 years)
Procurement	General Untied
Final Disbursement Date	October 1996

(2) Implementation Schedule

As 9 lighthouses and light beacons were added as targets for emergency rehabilitation, completion of the project was delayed by approximately 1 year compared to the initial expected completion date. It is judged that the project would have been completed within the initially planned time had these additions not be made, and this extension of the implementation schedule is considered to have been unavoidable.

(3) Project Cost

Both local currency and foreign currency costs were kept within the amounts estimated at the appraisal stage. One part of the contingency was used for the rehabilitation of 8 additional lighthouses, but this is considered to have contributed to the fuller creation of navigational aid facilities and is believed to have expanded the effect of this project, and thus this partial use of the contingency is judged to have been appropriate.

Comparison of Original Plan and Actual

Item	Plan	Actual
1. Project Scope		
i) No. of rehabilitated lighthouses	28	37
ii) Consulting services		
• Bidding assistance / Construction supervision	96M/M	158M/M
• Preparation of future plan	278M/M	162M/M
2. Implementation Schedule		
i) Selection of consultant	Jul. 1991 to May 1992	Nov. 1991 to Apr. 1992
ii) Consulting services	May 1992 to Nov. 1994	May 1992 to Jan. 1996
iii) Bidding of construction / Contract	May 1992 to Oct. 1993	May 1992 to Sep. 1993
iv) Rehabilitation works	Oct. 1993 to Nov. 1994	Sep. 1993 to Nov. 1995
3. Project Cost		
Foreign currency	3,516 million yen	3,483 million yen
Local currency	140,826 thousand peso	6,453 thousand peso
Total	4,474 million yen	3,507 million yen
Exchange Rate	1 peso = 6.8 yen (July 1990)	1 peso = 3.7 yen (average in 1996)

(4) Project Implementation Scheme

The executing agency of this project was Maritime Industry Authority (MARINA). The Steering Committee consisting of the Department of Transportation and Communications and the Philippine Coast Guard (PCG) in addition to MARINA was established, and coordination related to project implementation was performed by this committee. The maritime administration duties were divided among these 3 organizations at the time, so that the establishment of the Steering Committee consisting of representatives of these 3 organizations is considered to be a measure contributing to effective project implementation.

(5) Operations and Maintenance

The operation of lighthouses and light beacons was performed by PCG under the supervision of DOTC Transportation Center Division. On the other hand, the Headquarters on Aids to Navigation Control (HANC), which is located in PCG, controls maintenance. Currently, HANC has only one dedicated maintenance ship, so that it is unable to satisfactorily implement periodic inspections that have been planned. However, the 37 lighthouses and light beacons that have been rehabilitated by this project are operating without problem except for one. The problematic facility is not operating at the rated capacity because of insufficient power distribution capacity from the power company it gets its power from, but it has been decided to shift to solar cells, and this transition is now being concretely studied.

The number of dedicated maintenance ships is planned to increase to 3 ships (one of which has already been supplied) in the near future through an ODA loan, and a periodic maintenance system will be set up. Further consideration in the future of increasing the maintenance budget and strengthening the maintenance system to enable the satisfactory implementation of periodic maintenance is desired. Furthermore, it is also judged necessary to implement measures for the lighthouse that is not currently being operated at the rated capacity.

(6) Project Effects and Impacts

After 1995, when the project was completed, the number of maritime accidents in the Philippines has continuously declined for 2 years, as shown in the following table. Although this decline in the number of maritime accidents does not only depend

on the rehabilitation status of navigational aid facilities, interviews of the major sea transport associations in the Philippines and sailors actually navigating the Manila-Cebu Island route have shown that sea road safety has remarkably improved.

Year	1993	1994	1995	1996	1997
Number of maritime (number of stranding accidents)	173 (26)	163 (23)	181 (58)	119 (21)	59 (5)

As a result of the engineering study performed as part of this project, plans for strengthening maritime safety, such as linking with Domestic Shipping Modernization Program and Maritime Safety Improvement Project (II) have been drafted in a short period of time and gone into implementation. While this is an indirect effect, this project can be said to have contributed to improving the safety of the maritime sector.



CORREGIDOR Light House



BAGACAY Light House



Light Beacon between Manila and Cebu Island