

The Project for the Seawall Construction in Male' Island (Phase II)



Project Site Male' Island

1. Background of Project

The rise in the sea level brought about by global warming was a serious issue concerning survival for a state such as the Maldives which has an average elevation of 1.6 meters. When high tides flooded the capital city of Male' in 1987 and 1988, more than half of the area of Male' flooded, an outbreak of cholera occurred, and almost six million dollars' worth of damage was caused. Against this background, Japan carried out a Development Study on the "disaster prevention plan of the coast of Male' island" between 1991 and 1992, in response to the request by the Government of Maldives. Then, in order to follow up on recommendations in the study, the Government of the Maldives requested Grant Aid from Japan for seawall construction on Male' island.

2. Project Overview

(1) Period of Cooperation

FY1995-FY1997

(2) Type of Cooperation

Grant Aid

(3) Partner Country's Implementing Organization

Ministry of Construction and Public Works

(4) Narrative Summary

- 1) Overall Goal
Stable living, administration in the capital and economic activities are secured for the people of Male'.
- 2) Project Purpose
Submergence of the coast on the east side of Male' island is prevented.
- 3) Outputs

Seawall facilities about 1,266 meters long are constructed on the eastern coast of Male' island.

4) Inputs

Japanese Side

Grant	Total 1.18 billion yen (E/N amount)
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Maldivian Side

Local cost

3. Members of Evaluation Team

Investigation of Facilities:

Goro SAKAI, Deputy Director Project Monitoring and Coordination Division, Grant Aid Management Department, JICA

Investigation of Management:

Yasuhiro MORIMOTO, Deputy Director, Follow-up Division, Grant Aid Management Department, JICA

4. Period of Evaluation

29 June 1999-7 July 1999

5. Results of Evaluation

(1) Efficiency

No serious problems occurred during the implementation of the project, and procurement and execution were carried out as planned.

(2) Effectiveness

A permanent concrete seawall including wave control structures were constructed as part of the project. Therefore, the shore was protected from high seas and waves and the seawall was expected to prevent disaster.

As such, effectiveness of this project was considered to be high.

(3) Impact

The protection of basic living and public facilities in the eastern area of Male' island was attempted through the construction of the seawall. Also, the artificial beach installed in response to the request of the Government of Maldives, was used for swimming, jogging and other sport activities including that of enjoying the cool evening breeze. In addition, the seawall facilities had the additional effect of preventing sediment discharge which would result from the high tides in the reclaimed land area where the Government of Maldives implemented reclamation work as a measure to address congestion. Furthermore, since the seawall facilities were durable, repair costs would be negligible, which would save the Government of Maldives the large costs conventionally needed for restoration of existing seawalls including those constructed during phase I of the project of Seawall Construction on Male' Island.

(4) Relevance

This project was implemented based on the Disaster Prevention Plan of the Seawall in Male' Island formulated by JICA's Development Study. Although there were some opinions that the type of seawalls, i.e. wave control structures, spoiled the scenery, the plan itself was highly evaluated as it took into consideration the specificities of the condition of the urban areas and lifestyle on Male' island. The town had quite a large population (64,000 people) although it was frequently damaged by waves, in contrast to other local islands and resort islands. Seawall facilities constructed by the project had the primary role of coastal protection without damaging the scenery, and the seashore areas built provided a place for recreation and relaxation where people could enjoy walking and exercising.

As these results showed, the project was considered to be relevant to the needs of the Maldives.

(5) Sustainability

At the time of this evaluation study, problems such as distortion, damage, sinking, erosion, and breakdown, which would affect the seawall's function, were not realized. Cracks were found at the part of the augmented concrete wall that is hit continually by waves, but certain measures and repair work were already completed.

In terms of other aspects, restoration would not be needed for a while since the seawall facilities were



Male' Island



Seawall

durable, as mentioned above.

6. Lessons Learned and Recommendations

(1) Lessons Learned

The site of this project, Male' island, was overpopulated and easily affected by floods. The design and methods of execution of similar shore protection projects must also consider the specific conditions of partner countries in order to produce the desired effects.

(2) Recommendations

It was considered that this project did not need Follow-up cooperation at present.