

Country Name	The Project for Rehabilitation of the Betio Port
The Republic of Kiribati	

I. Project Outline

Project Cost	E/N Grant Limit: 834 million yen (1 st Phase 313 million yen, 2 nd Phase 521 million yen)	Contract Amount: 828 million yen (1 st Phase 311 million yen, 2 nd Phase 517 million yen)
E/N Date	1 st Phase: March 2005 / 2 nd Phase: July 2005	
Completion Date	January 2007	
Implementing Agency	Kiribati Port Authority (KPA)	
Related Studies	Basic Design Study: August 2004 – February 2005	
Contracted Agencies	Consultant(s)	Nippon Koei Co. Ltd.,
	Contractor(s)	Dai Nippon Construction
Related Projects (if any)	Development Study : The Study on Ports Development (1993~1994) Grant Aid : The Project for Improvement of Betio Port (1996~2000) . The Project for Integration of Fisheries Foundation (1999) The Project for Expansion of Betio Port (2011)	
Background	<p>The Republic of Kiribati (hereinafter referred to as "Kiribati") is an archipelagic country composed of 33 atolls scattered near the equator and dateline in the Central Pacific Ocean. Kiribati has no land suitable for farming and its socioeconomic activities heavily rely on imported daily commodities including foodstuffs. Therefore, the marine facilities function as a lifeline for supporting the nation's socioeconomic activities. Betio Port, situated in the capital, functions as a gateway port for the country and plays an important role in providing a lifeline to carry passengers and for mass transportation of cargo.</p> <p>The marine facilities of the port were improved and the New Wharf was constructed under the Project for Improvement of Betio Port between 1996 and 2000 with Japanese Grant Aid assistance. However, 2.5 years after completion of this assistance, the revetment in the New Wharf was damaged by high tide level induced by a depression in November, 2002. This resulted in the access road behind the revetment becoming unusable. To prevent further loss in the port and to ensure safe and efficient port operations, there was a pressing need that all damaged facilities including those not currently damaged but may be affected in the future should also be rehabilitated.</p>	
Project Objectives	Outcome	
	To restore and maintain the function of Port of Betio by rehabilitating port facilities in the South Tawara of the Republic of Kiribati	
Project Objectives	Outputs(s)	
	<p>Japanese side:</p> <ul style="list-style-type: none"> ● Restoration of New Wharf Revetment ● Restoration of Fishery Jetty Revetment ● Restoration of East Mole Revetment ● Procurement of Spare Parts for 80t Truck Crane procured by Japan's Grant aid in 1997. <p>Kiribati side:</p> <ul style="list-style-type: none"> ● To secure the land for a temporary construction yard. ● To provide one flat barge with associated tug boat owned by KPA free of charge 	

II. Result of the Evaluation

Summary of the Evaluation

Betio Port, located in Tarawa, the capital of the Kiribati, was renovated with the assistance of Japanese Grant Aid from 1996 and 2000. However, 2.5 years after the completion of this assistance, the revetment of its New Wharf was damaged by high tide level induced by a depression in November 2002. It was decided that to ensure the durability of the damaged facilities in the future, the renovation/rehabilitation should be carried out not as provisional repairs but for the permanent rehabilitation and to procure the spare parts of the 80t Truck Crane as well. The 80t truck crane was originally donated by the previous assistance in 2000, but had been shutdown for a long time because of unavailability of spare parts.

The project has largely achieved its objectives to restore and maintain the function of Port of Betio by rehabilitating port facilities. After the completion of the project, there has been no damage by the overtopping waves to revetments and other marine facilities. Access roads have become usable and there has been no restriction in handling cargoes. As a result, working hours of handling cargoes has been minimized and the cost of maintenance and repair of revetments has been drastically reduced.

As for the sustainability, the implementing agency has achieved the primary balance surplus, thus the sufficient budget for maintenance has been secured. There is no problem observed in the technical aspect, however, in terms of structural, current status of operation and maintenance, the implementing agency has some problems with that the rules and regulations of port management under the bad weather condition has not been well organized, and the maintenance records of equipment such as the 80t crane truck has not been effectively prepared.

For relevance, the project has been highly relevant with Kiribati's development policy, development needs and Japan's

ODA policy at the time of ex-ante evaluation and ex-post evaluation. For efficiency, both the project cost and the project period were within the plan.

In light of the above, this project is evaluated to be highly satisfactory.

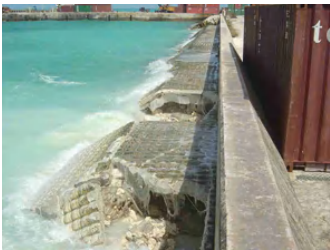
1 Relevance

This project has been highly consistent with Kiribati's development policy, such as "improvement of social infrastructure to achieve economic development" specified under the National Development Strategies (2008-2011) and (2012-2015), and development needs to rehabilitate the marine facilities in the Betio Port serving as a center of the traffic and transportation of the country, as well as Japan's ODA policy toward Pacific Islanders including the Republic of Kiribati, endorsed at the Pacific Islander's Meeting at the time of both ex-ante and ex-post evaluation. Therefore, relevance of this project is high.

2 Effectiveness/Impact

The effectiveness/impact of this project was mainly examined by the qualitative data and information obtained through the field study. This is because that appropriate and measurable indicators were not set out for the evaluation of this project at the time of ex-ante evaluation. Moreover, it was difficult to establish new proxy indicators to examine the secular change over the years, considering its particularities of the project implemented as emergency measures for damages caused by natural disaster. Due to the disaster, access road behind the revetment of the New Wharf of the Betio Port had become unusable. It was anticipated that the damages would expand in the future to the facilities currently not affected because amplified damages were identified even at the container yard, and refrigeration building and fish processing building were affected by both flooding and inundation of overtopping waves.

This project has largely achieved its objectives to restore the function of revetment, such that there has been no damage by the overtopping waves in the port facilities, no distresses identified in the revetment as well. As a result, the access roads have become usable and there has been no restriction in handling cargoes. Since the project completion (2008) till the ex-post evaluation (2012), no erosion damages were reported in the New Wharf Revetment, Fishery Jetty Revetment and East Mole Revetment renovated by the project. The overtopping wave by the cyclone was reported once in 2011, but there were no damages reported. Photos below, taken at the New Wharfs, demonstrates the current conditions improved by the project.



Status of the New Wharf (North) before the project



Current status of the New Wharf (North) after the project



Current status of Fishery Jetty Revetment



80t Truck Crane Truck in operation

The 80t Truck Crane has been in operation as planned. It operates for about 60 hours per month (approximately 2 or 3 days over 3 times a month.) Due to the decrepit condition, it has malfunctioned in every 2 months for about 3 hours each. However, it has still operated with proper repair using the spare parts donated by the project or procured on their own. (The implementing agency independently procured other crane truck to cope with the increasing volume of cargoes this year. Both crane trucks will be evenly used for the operation.)

Furthermore, a number of ripple effects have been observed. They are the drastic cost mitigation of maintenance and repair of revetments, elimination of damages to revetments and vessels, and reduced working hours for handling cargoes. This is because there is no need to go out of the way to a side road. No negative impact was observed in terms of the natural environment. Also, there was no resident relocation/land acquisition.

Therefore, effectiveness/impact of this project is high.

3 Efficiency

The outputs of the project were produced as planned, and both the project cost and the project period were within the plan (ratio against the plan: 99%, 99%).

Therefore, efficiency of this project is high.

4 Sustainability

The facilities/equipments provided by the project are maintained by KPA, the implementing agency. The role and structure of implementing agency is sustained with sufficient staff and maintained as planned. However, the implementing agency has some problems to maintain the effect of the project, such that the rules and regulations of port management under the bad weather condition has not been well developed. As for the financial aspect, the implementing agency has achieved the primary balance surplus, with the self-help efforts to cut down the expenses and to secure the sufficient amount of maintenance cost.

As for the technical aspect, the implementing agency has no problem in dealing with the daily operation and maintenance of port facilities and a 80t truck crane. Training of staff has been carried out as an OJT among others and they all have

sufficient knowledge and skills for maintenance. There is no problem in the current status of operation and maintenance of implementing agency except preparation and management of the maintenance records. Consolidation and management of information is the future challenge for the implementing agency in order to cope with the possible increase of maintenance cost. Overall, as for the sustainability, the implementing agency has minor problems in the structural aspect and the current status of operation and maintenance management.

Therefore, the sustainability of this project is fair.

III. Recommendations & Lessons Learned

Recommendations for Implementing agency:

It is recommended that the implementing agency should properly keep track of the record of equipment maintenance as pointed out at the warranty inspection study (2008).

Currently, the maintenance record has been prepared off and on, and the record may not include all necessary items. By properly keeping track of maintenance records, it would become easier to anticipate the possible troubles, thus to make a proper prediction of necessary spare parts for procurement. Moreover, such record as, the hours spent for handling cargo, the content of cargo, etc., will help to estimate the timing to renew the equipment as well as to upper limit of cargo volume per vessel, etc. In summary, proper consolidation and management of information will eventually contribute to the overall management of port facilities.

Lessons learned for JICA:

In case that there are some difficulties to obtain quantitative data, partly due to the ineffective information management system of the implementing agency, it is important to help them understand the significance of proper information consolidation and management, by dialogue as well as working with them in the process of data collection, through setting up appropriate indicators or proxy indicators.

Moreover, technical cooperation, trainings in particular, that assists identifying the appropriate statistical information that needs to be prepared and utilizing it with analysis would eventually contribute to strengthening the soft skills for operation and maintenance of the implementing agency.