

Country Name	The Project for Improvement of Funafuti Port
Tuvalu	

I. Project Outline

Project Cost	E/N Grant Limit: 932 million yen	Contract Amount: 930 million yen
E/N Date	July, 2007	
Completion Date	March, 2009	
Implementing Agency	The Department of Marine, the Ministry of Communication and Transport	
Related Studies	Basic Design Study: November 2006 – May 2007	
Contracted Agencies	Consultant	Fisheries Engineering Co, Ltd.
	Contractor	Dai Nippon Construction
	Supplier(s)	-
Related Projects	-	
Background	The deepwater wharf at Funafuti Port is Tuvalu's only jetty where large ships and inter-island vessels were able to approach and moor, and as the central base of inter-island transportation of people and cargo in the country, Funafuti Port played a significant role in supporting the foundation of the livelihood of the Tuvaluans. However, the deepwater wharf was rather decrepit and hence its load bearing capacity had been decreasing. As a result, the allowable weight of a container to be unloaded on the jetty was restricted. Furthermore, the efficiency of cargo handling at Funafuti Port had been undermined due to the lack of container transporting equipment together with the fact that the large-size forklift that can lift containers was superannuated and frequently broke down.	
Project Objective	Outcome To ensure safer and more efficient cargo handling activities at Funafuti Port by constructing a new jetty and improving existing facilities.	
	Outputs Japanese Side <ul style="list-style-type: none"> • Construction of a new jetty and a water tank • Repair of the warehouse • Development of the container yard • Procurement of cargo handling equipment Tuvalu Side <ul style="list-style-type: none"> • Appropriation of the project site, removal of existing structures, and preparation of the land • Securing a temporary site and an alternative yard during implementation 	

II. Result of the Evaluation

Summary of the Evaluation
<p>The government of Tuvalu prioritized infrastructure development as the foundation for economic growth in its national development strategy, and posted vitalization of economy and promotion of the outer islands through fisheries by constructing a new jetty as priority issues. In 2006, Funafuti Port played a significant role in supporting Tuvalu's logistics and economy, however, deterioration of the deepwater wharf made it difficult to ensure safe and efficient cargo handling activities. Furthermore, due to the restriction of the maximum weight of cargo in a container, Funafuti Port was not able to respond to the increasing cargo volumes.</p> <p>This project has largely achieved its objectives of securing safe and more efficient cargo handling activities at Funafuti Port by constructing a new jetty and others, in terms of (1) the restriction on the weight of 20-foot containers has been alleviated, (2) the time required to transport 20-foot containers from the jetty to the yard has been shortened, (3) the impediments brought by the mooring of Nivaga II has been solved, and (4) the water storage capacity has been expanded. However, currently, cargo handling is temporarily less efficient, due to some technical problem of the equipment procured by the project. As to impact, some impacts have been observed including stabilization of ship operation due to the improved capacity to supply freshwater to inter-island vessels. However, the project has limited contribution to the promotion of fisheries in outer islands, and transport cost reduction, partly because of external factors. As for sustainability, problems have been observed in terms of institutional, technical, financial aspects as well as the current status of operation and maintenance. The implementing agency does not have sufficient number of personnel, and lacks technical capacity. In addition, the budget for operation and maintenance is not fully secured, and some of the equipment are not in full operation.</p> <p>For relevance, the project has been highly relevant with Tuvalu's development policy, development needs, and Japan's ODA policy at the time of ex-ante evaluation and ex-post evaluation.</p> <p>For efficiency, the project period slightly exceeded the plan and a part of outputs by Tuvalu side has not been implemented.</p> <p>In the light of above, the project is evaluated to be partially satisfactory.</p>

1 Relevance

This project has been highly relevant with Tuvalu's development policy "development of high quality inter-island transportation infrastructure", under the national development strategy, and development needs (infrastructure development responding to increasing maritime transportation demand), as well as Japan's ODA policy at the time of both ex-ante and ex-post evaluation. Therefore, relevance of this project is high.

2 Effectiveness/Impact

This project has largely achieved its objectives: (1) the restriction on the weight of 20-foot containers has been alleviated, (2) the time required to transport 20-foot containers from the jetty to the yard has been shortened, (3) the impediments brought by the mooring of Nivaga II has been solved (the short mooring berth length causes the mooring line for Nivaga II's mooring to be an obstacle to the access of other vessels), (4) the water storage capacity has been expanded, and (5) safety of cargo handling activities was improved. Currently, cargo handling activities is temporarily less efficient. A 25-ton forklift procured by the project is not operational when it rains since it gets a hole due to air filter erosion. In addition, the time required to transport containers temporarily increases due to the breakdown of a tractor's hydraulic system. A maritime transportation company who is in charge of cargo handling is expected to respond to these technical problems shortly. On the other hand, removal of an existing workshop building, which was to be implemented by Tuvalu side, was actually not implemented, therefore a part of container yard has not been developed. As a result, it is difficult to improve the efficiency of cargo handling further. As to impact, although the project is expected to contribute to the promotion of fisheries in outer islands, and transport cost reduction, impact to those aspects is limited with the effects of external factors. However, according to the implementing agency, cargo handling costs of the Department of Marine has decreased due to the reduction in time for cargo handling, and the improved capacity to supply freshwater to inter-island vessels has contributed to the stabilization of ship operations. In addition, the volume of transportation increased after the project completion (2010) compared to the before the project implementation (2006): The volume of domestic freight increased from 6,073m³ to 6,328m³, and the number of passengers increased from 10,223 to 15,961. Furthermore, according to retail companies, retail businesses such as a cold storage business have been vitalized; the number of reefer containers¹ increased from five to 10. Together with the stable power supply by "The Project for the Upgrading of Electric Power Supply in Funafuti Atoll", another grant aid project which was implemented at the same time, the project contributed to this economic vitalization. According to the implementing agency, there is no negative impact on natural environment and no case of land acquisition and involuntary resettlement.

Therefore, effectiveness/impact of this project is high.

Quantitative effects

	2007 Actual (BD) Before the project	Planned (After 2009) After the project	Actual (2009)	Actual (2012)
Indicator 1: The restriction on the weight of 20-foot containers will be alleviated	Across-the-board threshold of 18 tons	By-container norms with a total combined maximum weight of between 20 and 30 tons.	Same as on the left	Same as on the left
Indicator 2*: The time required to transport 20-foot containers from the jetty to the yard will be shortened	15 minutes	12 minutes	n.a.	Approximately 10 minutes
Indicator 3: The impediments brought by the mooring of Nivaga II will be solved.	9.1 days/month	0 days/month	0 days/month	0 days/month
Indicator 4: The water storage capacity will be expanded	150m ³	750m ³	750m ³	750m ³

(Source) The Department of Marine, the Ministry of Communication and Transport

* Ex-ante evaluation sheet describes the actual figure before the project and target as 2.5 minutes/container and 1.5 minutes/container respectively, however, it is not clear how those figures were calculated. In addition, there are other figures in BD as listed above. Therefore, taking those figures into consideration and based on the interview with the implementing agency, the above figures are used for ex-post evaluation.

¹ A type of container which is capable of maintaining the temperature of frozen, chilled or warm cargo with adiabators on the wall. A refrigeration unit is built onto the nose of the container.



A jetty: Cargo handling by a trailer has become easy because of the sufficient width.



The number of reefer containers has increased.

3 Efficiency

Although the project cost was within the plan (ratio against the plan: 99%), the project period was slightly exceeded the plan (ratio against the plan: 101%), due to the delay in construction because the ground was harder than expected. Although the outputs by the Japanese side were produced as planned, Tuvalu side has not carried out removal of the existing workshop building) due to lack of funds. Therefore, efficiency of this project is fair.

4 Sustainability

The facilities and equipment provided by the project are maintained by the Department of Marine of the Ministry of Communication and Transport with the cooperation of Public Works Division (PWD) under the same ministry. Although the institutional structure is sustained what it was considered desirable, there are some problems for continuity of project effectiveness, since PWD are not able to allocate sufficient number of staff and time for O&M activities of the Department of Marine due to the limited number of staff themselves. The implementing agency has some problems in the technical aspect, since there is insufficient training plan for their personnel. The implementing agency also faces some problems in the financial aspect. The implementing agency secures budget of only half of the amount needed for O&M, partly because of lack of funds, and partly because of mismanagement of budget implementation. In addition, there are problems in current status of operation and maintenance. Due to inappropriate O&M plan and implementation and lack of budget for purchase of spare parts because of the insufficient capacity of spare parts procurement planning, the equipment procured by the project including the 25ton forklift and the tractor are not in fully operational. Furthermore, although the jetty and the warehouse are currently fully functional, more attention should be paid for the maintenance since a fender of the jetty has begun to deteriorate. Although not included in the scope of the project, the road in front of the warehouse has not been paved, which might shorten the life of a hydraulic system of the forklift which carries heavy containers. Therefore, sustainability of the project effect is low.

III. Recommendations & Lessons Learned

Recommendations for Implementing agency

1. The road in front of the warehouse needs to be paved, since the current rough road might shorten the life of a hydraulic system of the forklift which carries heavy containers.
2. Ministry of Communication and Transport needs to allocate sufficient funds for O&M for the facility and equipment constructed/procured by the project, and needs to manage proper budget implementation.
3. Delay in procuring spare parts for the equipment procured by the project have somewhat hampered the achievement of the outcome and might shorten the life of the equipment. Therefore, in order to maintain the current function of the equipment, in addition to securing budget for O&M, measures for prompt procurement of spare parts should be taken under the condition that it takes time to procure spare parts in Tuvalu.

Lessons learned for JICA

1. Although main output of the project is construction of a jetty, proper operation of cargo handling equipment including the forklift was the key for the achievement of the project outcome. Therefore, more attention should have been paid for the efficient operation and maintenance of the cargo handling equipment. Although the recipient country's own effort of building O&M capacity and securing budget is important, assistance for a small island nation like Tuvalu may need to include measures for improving utilization of the equipment procured by a project (e.g. Procurement of additional equipment as a backup or including procurement of spare parts to the project scope).
2. The pavement the road in front of the warehouse and removal of existing workshop building were not included in the scope of the project due to budget constraint, however, that excluded scope might have caused the breakdown of the equipment procured by the project. Such kind of possibility should be taken into consideration for procurement planning.
3. Aligning development of related infrastructure projects has synergetic effects on economy vitalization. In the case of this project, another grant aid project for stable power supply was implemented at the same time, which contributes to the retail business vitalization, i.e. increase of reefer containers.
4. Calculation method for one of the indicators for quantitative effect on the ex-ante evaluation sheet was not clear and therefore it was impossible to use the indicator at the time of ex-post evaluation. In order to measure the effect precisely, not only the target but also calculation methods and standards should be presented at the time of ex-ante evaluation.