

Internal Ex-Post Evaluation for Grant-Aid Project

conducted by Pacific Department (Palau Representative Office): October, 2011

Country	The Project for Improvement of Interisland Access Road
Palau	

I. Project Outline

Project Cost	E/N Grant Limit: 771 million yen	Contract Amount: 748 million yen
E/N Date	1 st Phase: June 2004, 2 nd Phase: June 2005	
Completion Date	1 st Phase: December 2005, 2 nd Phase: November 2006	
Implementing Agency	Ministry of Resources and Development (Bureau of Public Works is in charge of the maintenance)	
Related Studies	Basic Design Study: October 2003 to March 2004	
Contracted Agencies	Consultant(s)	Joint-venture of the Nippon Koei Co., Ltd., and the Oriental Consultants Co., Ltd.
	Contractor(s)	Nishimatsu Construction Co., Ltd.
	Supplier(s)	N/A
Related Projects (if any)	Other donors' cooperations: Taiwan(Grant-Aid - Road Rehabilitation / Pavement), U.S.A.(Grant-Aid - Road Construction)	
Background	<p>The Republic of Palau with a population of 19,129 (according to the 2000's national census) consists of several small islands. Four causeways which connect four islands of metropolitan area of Palau have been dilapidated. (More than 60 years have passed after the construction) With the increased volume of traffic, the highway capacity has become insufficient causing frequent occurrence of traffic accidents. There were blockades due to the deteriorated road surface and water-covered road during heavy rain, so that the limited road safety facilities were becoming an issue. Technical barriers and the budgetary limitations had made it difficult for the government of Palau to implement the large-scale project to remedy such situations. Therefore, the government of Palau requested the government of Japan for grant aid to renovate these causeways. The preliminary study conducted by JICA in March 2003 has led to the conclusion that it is urgently needed to extend and renovate the causeways considering the magnitude of benefits to local communities.</p>	
Project Objectives	<p>Outcome</p> <p>To decrease the transportation deficiency and to ensure the smooth operation of transportation by the extension and renovation of four causeways (including Minato Bridge) which connect four islands of metropolitan area of Palau</p>	
	<p>Outputs</p> <p>Japanese side</p> <ul style="list-style-type: none"> - Extension and renovation of Meyungs Causeway (for the length of 0.67km) - Extension and renovation of Airai Causeway (for the length of 0.73km) - Extension and renovation of Malakal Causeway (for the length of 0.51km) - Extension and renovation of interisland access roads of Malakal Island (for the length of 1.63km) - Renovation of Minato Bridge (for the length of 0.075km) <p>Palau side</p> <ul style="list-style-type: none"> - To conduct the EIA (Environmental Impact Assessment) and necessary administrative proceedings - To secure the land for construction - To connect the electric power line to the temporary facilities - To relocate the underground telecommunication lines 	

II. Result of the Evaluation

Summary of the Evaluation

The State of Koror, which commands 70% of total population of Republic of Palau, where the governmental organizations and business districts are concentrated, is consisted of Koror island, and some part of Malakal Island, Ngerekebesang Island and Babeldaob Island. Four causeways, which connect four islands of metropolitan area of Palau, were constructed in 1930's, and have been dilapidated. Technical barriers and the budgetary limitations had made it difficult for the government of Palau to implement the large-scale project to remedy such situations. However, in order to deal with the increasing volume of traffics and to secure the safety transportation, it is urgently needed to extend and renovate those causeways.

This project has largely achieved its objectives, in ensuring the smooth operation of transportation by the extension and renovation of four causeways. After the project, even though the volume of traffics has continuously been increasing, the number of cases for the damages on the roads has been decreased. With the widening of the roads and better pavement condition, the traffic jams have been alleviated, and segregation of sidewalk from roadways has increased the safety for pedestrians. As for sustainability, there are some minor problems such that the medium scope of renovation has been delayed due to the budgetary constraints and the inadequate maintenance skills of engineers of some roads. For relevance, the project has been highly relevant with Palau's development policy, development needs as well as Japan's ODA policy at the time of both ex-ante and ex-post evaluation. For efficiency, the project periods exceeded the plan.

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

1 Relevance

The project is highly relevant with Palau's development plan to upgrade the main trunk roads of metropolitan area to promote the economic growth, development needs in renovating the four causeways (including Minato Bridge) which connect four islands of metropolitan area of Palau, as well as Japan's ODA policy at the time of both ex-ante and ex-post evaluation. Therefore, its relevance is high.

2 Efficiency

The project cost was within the plan (ratio against the plan 97%); however the project periods exceeded the plan (ratio against the plan 120%). One of the reasons of this extension of project period is that it took time to construct the retaining wall of inverted T-section as the construction work was only possible in the limited period of tidal range. Therefore, the efficiency of the project is fair.

3 Effectiveness/Impact

This project has largely contributed to its objectives in ensuring the smooth operation of transportation. Due to the unavailability of data, it was not possible to quantitatively verify the increased safety by the actual number of traffic accidents. However, with the interview of those concerned at the Bureau of Public Works and the Bureau of Public Safety, and with the site visits, it is considered that the project has achieved its objectives. After the project, even though the volume of traffics has continuously been increasing, the number of cases for the damages on the roads has been decreased. With the widening of the roads and better pavement condition, the traffic jams have been alleviated, and segregation of sidewalk from roadways has increased the safety for pedestrians. Furthermore, the project has also contributed to the tourism, the one of the major industries of Palau, by improving the accessibility to the resort areas. Therefore, the effectiveness/impact of the project is high.



Full view of Meyungs Causeway

Quantitative Effects

Indicators	Baseline value (2003:Basic Design year)	Target value (2008:Target year)	Actual value (2008:Target year)	Actual value (2011:Ex-post evaluati year)
(1) Improvement of robustness evaluation (The causeway will be renovated after the expected durable life of 50 years)	No indicator set as baseline value	Proxy indicator Actual performance of road renovation	Between the year 2006~2011 Meyungs Causeway : 0 time Malakal Causeway : 1 time (pipe explosion) Airai Causeway : 2 times (Sagging roads due to the washout of riprap revetment)	
(2) Improvement of safety (The number of traffic accident occurred outside of drive way)	Number of traffic accidents in the metropolitan area of Koror State. (annual average for the past 7 years) 183 cases/year		Number of traffic accidents in the metropolitan area of Koror state. (No records in 2008) Year Number of case 2006 58 2007 128 2009 97 2010 127	Number of traffic accidents in the metropolitan area of Koror state. Year 2011 147 cases (from January to August)

(Data Source : Questionnaire and Interviews with the Bureau of Public Works and Palau National Police Agency)

Reference:

①Number of vehicles registered to
Police Department

year	2007	2008
number	6040	6306

(Data Source: Palau National Police
Agency)

②Number of tourists to Palau by year (Unit: number of population)

Year	2003	2004	2005	2006	2007	2008	2009	2010
Number	63,328	89,161	80,578	82,239	88,175	79,25	71,887	85,593

(Data Source: Palau Visitors Authority)

4 Sustainability

Four causeways, the road and bridge renovated by this project have been mostly well-maintained since its completion on November 2006. According to the interviews with those at the Bureau of Public Works, Division of Facilities and Maintenance, some minor problems has been identified, such that the surface asperity of the renovated road and some delays of renovation work on Malakal Causeway. These are mainly due to the inadequate maintenance skills, lack of qualified engineers of asphalt concrete (mixing and application), and the budgetary constraint. There are no other problems in institutional aspect. Therefore, the sustainability of the project is fair.



Malakal Causeway (After the
renovation of pipe explosion)

III. Recommendations & Lessons Learned

Recommendations for Implementing agency:

It is necessary to enhance the training program especially for engineers in order to improve their maintenance skills.

Lessons learned for JICA:

In order to increase the sustainability of the project, much focus should be given to the soft components, such as the trainings of those engineers at the project site.