

Internal Ex-Post Evaluation for Grant Aid Project

conducted by Solomon Islands office, Papua New Guinea office: March, 2013

Country Name	The Project for the Reconstruction of Bridges in East Guadalcanal
Solomon Islands	

I. Project Outline

Project Cost	E/N Grant Limit: 913 million yen	Contract Amount: 913 million yen
E/N Date	August 2006	
Completion Date	April 2008	
Implementing Agency	Department of Infrastructure and Development, Ministry of Infrastructure and Development	
Related Studies	Basic Design Study: November 2005 – July 2006	
Contracted Agencies	Consultant(s)	Construction Project Consultants, Inc.
	Contractor(s)	Kitano Construction Corp.
	Supplier(s)	—
Related Projects (if any)	<p>[Japan's cooperation]</p> <ul style="list-style-type: none"> Project for reconstructing the Lunga bridge (1990) (Grant Aid) Project for Construction of Bridges in Guadalcanal Island (1993-1996) (Gant Aid) <p>[Other donors' cooperation]</p> <ul style="list-style-type: none"> Post Conflict Emergency Rehabilitation Project (PCERP) (2005-2008) (Loan, ADB) Transport Sector Development Project (2010-2015) (Technical Assistance, ADB) Transport Sector Development Fund (Grand Aid, AusAID and Government of Solomon Islands) Transport Sector Development Program (Technical Assistance, AusAID) 	
Background	<p>In Solomon Islands, transport infrastructures such as roads and bridges and the country's key industries such as palm oil plantation and gold mining were seriously damaged by the outbreak of ethnic conflict during the period between 1998 and 2003. Since Guadalcanal Island was the economic center of the country, more than 90% of the country's total transport volume was concentrated in Guadalcanal Island. The trunk road which stretched east and west from Honiara, the capital city, was the only land transport route and it played an extremely important role in the national economy. Many bridges on the trunk road connecting East Guadalcanal and Honiara in the project target area were deteriorated even after the post-conflict period. Since rehabilitation of the damaged roads and bridges were urgent need not only for improvement of transport convenience but also for restoration of national industries and reconstruction of national economy, the Government of Solomon Islands requested the Japan's Grant Aid for bridge reconstruction.</p>	
Project Objectives	<p>Outcome</p> <p>To reconstruct the three damaged and aged bridges on the trunk road connecting East Guadalcanal and Honiara city and port in order to improve transport capacity through securement of smooth transport flow and enhancement of bearing capacity of each bridge.</p>	
	<p>Outputs(s)</p> <p>Japanese Side</p> <ul style="list-style-type: none"> Reconstruction of the existing three bridges: (1) Tenaru 1 Bridge (length: 55.0m, type: 3-span continuous non-composite girder, carriage way: 4.0m, footway: 1.2m), (2) Tenaru 2 Bridge (length: 25.0m, type: composite girder, carriage way: 4.0m, footway: 1.2m), (3) Ngalmibiu Bridge (length: 120.0m, type: 3-span continuous non-composite girder, carriage way: 4.0m, footway: 1.2m) <p>Solomon Side</p> <ul style="list-style-type: none"> Removal of Ngalmibiu Bridge, repair and removal of existing bridge. Research and removal of unexploded bombs within the targeted sites prior to construction and issuance of a safety certificate. 	

II. Result of the Evaluation

Summary of the Evaluation
<p>The trunk road connecting East Guadalcanal and Honiara city was seriously damaged by the outbreak of ethnic conflict, and many bridges were in dangerous situations due to corrosion of steel grinders and crack of concrete after 20-50 years of its construction. The above deteriorated road and bridge condition was a bottleneck for the land transport and economic activities in the country.</p> <p>This project has largely achieved its objectives of the increase in bearing capacity and traffic volume, securement of smooth transport flow, and decrease in traffic accidents. Also the project has contributed to restoration of key industries in the project target area such as plantation and mining, employment creation for the local people, and improvement of accessibility to social services such as medical, educational, and market services.</p> <p>As for sustainability, some problems have been observed in term financial aspect and current status of operation and maintenance, because (i) the MID budget heavily relies on the financial assistance of foreign donors and (ii) damages at a part of guardrails and drainage facilities identified by the defect investigation and the post observation study have not been repaired yet, although there are no critical damage and malfunction of the project facilities.</p> <p>For relevance, the project has been highly relevant with Solomon Islands' development policy, development needs, as</p>

well as Japan's ODA policy at the time of both ex-ante and ex-post evaluation. For efficiency, the project period slightly exceeded the plan.

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

1 Relevance

This project has been highly relevant with Solomon Islands' development policy ("restoration of the productive sector and the rebuilding of supporting infrastructure" in the National Economic Recovery, Reform and Development Plan in 2003 and "infrastructure development and its effective utilization for securement of accessibility to social services and markets" in the National Development Strategy 2011-20), development needs ("road transport infrastructure development between East Guadalcanal and Honiara"), as well as Japan's ODA policy "the Japan's Country Assistance Strategy to Solomon Islands: the Fourth Japan-Pacific Islands Forum Summit Meeting 2006" with priority area of transport infrastructure development for economic growth at the time of both ex-ante and ex-post evaluation. Therefore, relevance of this project is high.

2 Effectiveness/Impact

While this project reconstructed the three bridges on the eastern trunk road in Guadalcanal Island, the other damaged bridges and roads were reconstructed and rehabilitated by the financial assistance of Asian Development Bank (ADB). Eventually the entire stretch of the eastern trunk road in Guadalcanal Island was restored.

This project has largely achieved its objectives of the increase in bearing capacity and traffic volume, securement of smooth transport flow, and improvement of transport capacity as planned. Also the decrease in number of traffic accidents was observed. The bearing capacity was increased from 20 tons/vehicle in 2005 to 66 tons/vehicle in 2008 ^(Note 1), the traffic volume was doubled from 450 per 12 hours in 2005 to 554 per 6 hours in 2012 despite a difference in period to time ^(Note 2).

According to the interview survey with the local residents in the project target area, plantation firms and bus drivers, it was recognized that a separation of carriage way and footway made safer and smoother traffic flow on the target bridges after the project implementation. In addition, thanks to increase in bearing capacity of bridges, the frequency of truck traffic was increased and number of passengers, volume of cargo, and transportation speed were dramatically increased. Although no statistical data was available, the result of interview survey revealed that the number of traffic accidents on Tenaru 2 Bridge was decreased because the visibility of drivers became clearer and wider than before by removal of bush along the approach roads to the bridge and the expansion of road width.

The project has positive impacts on increase of production and shipping volume of plantation and gold mining firms in the project target area coupled with the outcome of other donor's contribution on improvement of physical distribution on the target road. It is considered that the above positive impact further contributed to restoration of key industries of the country. At the same time, the expansion of production activities of key industries brought about a spillover effect on employment creation for the local people. Furthermore, the improvement of transport accessibility contributed to improvement of accessibility to social services such as medical, educational, and market services. It is reasonable that the above mentioned positive impacts are produced not only by this project but also the other donors' interventions including the ADB project.

No negative environmental impact was observed and the land acquisition was properly implemented according to the related guidelines and regulations. Also the resettlement of the people which was initially planned was not implemented because the area of construction site did not invade the residential area.

Therefore, the effectiveness of the project is high.

Quantitative Indicators

	baseline value (2005)	target value (2008)	actual value (2008)	actual value (2012)
Indicator 1 Increased bearing capacity (tons/vehicle)	20	66	66	66
Indicator 2 Traffic volume (no. of vehicle)	450 (in 12 hours)	increase	N.A.	554 (in 6 hours)

Source: Ministry of Infrastructure Development and the sampling traffic volume survey conducted during the ex-post evaluation.

Note1: It is assumed that bearing capacity of 66 tons/vehicle means a single bridge can accommodate a trailer with 66 tons weight at one time.

Note 2: The actual traffic volume in 2005 (baseline value) was collected by the traffic volume survey conducted at 6:00-18:00 on December 3, 2005.

Note 3: The actual traffic volume in 2012 (at ex-post evaluation) was collected by the sampling traffic volume survey conducted at 7:00-13:00 on June 27, 2012.

3 Efficiency

Although the project cost was within the plan (100%), the project period slightly exceeded the plan (112%) because some local residents who were not satisfied with the compensation for crops blocked the construction works despite its compensation process was implemented according to the related guidelines and regulations. Outputs were produced as planned. Therefore, efficiency of this project is fair.

4 Sustainability

The facilities/equipment provided by the project are maintained by the Ministry of Infrastructure Development (MID), which is responsible for contract management and monitoring for outsourced maintenance works and technical assistance to the private contractors. While the actual maintenance works at field level are conducted by the private contractors including the local community group based upon subcontracting. Regarding the institutional aspect, no problem is observed since MID

plans to increase its staff number including technical staff and to develop their capacity in the next five years through an on-going major organizational reform started from 2011. Regarding the technical aspect, no problem is observed since MID has conducted the operation and maintenance based upon the manuals and the specification documents. Although the current technical capacity of the private contractors for maintenance works done not fully meet the sufficient level, this issue is expected to be improved in the near future because MID has been promoting the capacity development of the private contractors by provision of technical training for road maintenance with the assistance of ADB, as well as the entry of foreign contractors into this market. Regarding the financial aspect, some problem is observed because the Solomon government heavily depends for the operation and maintenance budget on the foreign donors such as the Australian government (AusAID), as only less than 1% of the total MID budget is funded by the Solomon government. Regarding the current status of operation and maintenance, some problem is observed since (i) damages at a part of guardrails and drainage facilities caused by cars and floating objects at rise of water in the river, which were identified by the defect investigation and the post observation study, have not been repaired yet due to delay in allocation of maintenance budget, and (ii) the proper maintenance works were not fully implemented due to the lack of capacity of the contractors. However, the critical damage and malfunction of the project facilities are not observed so far.

Therefore, sustainability of this project is fair.

III. Recommendations & Lessons Learned

Recommendation for Implementing agency

- The defect investigation and the post observation study identified damages at a part of guardrails and drainage facilities of the target bridges, however MID has not taken any necessary actions for repair due to delay in allocation of maintenance budget. The Department of Infrastructure Development, MID, which is an implementing agency of the project, is requested to secure the necessary maintenance budget for the above identified damaged in consideration with its urgency and priority.

Recommendation for JICA

- JICA must request to MID to secure the necessary maintenance budget for the implementation of the recommendations made by the defect investigation through the negotiation between MID and Ministry of Finance.

Lessons learned for JICA

- Since this project was formulated in line with the national policy of Solomon Islands, and collaborated with other development partners, the project brought about a synergistic effect with the private sector development such as plantation and mining industries. It is important that the national policy and priority of the recipient countries must be paid attention in the project formulation.
- Since the majority of land is a customary land in Solomon Islands and the ownership of land is not clearly identified, it is easy to produce a problem during the land acquisition process. If the project requires any land acquisition in a customary land, a special consideration is required such as the government support for mediation and consultation with the land owners and monitoring of the land acquisition process.



Public transport for the local residents



Mobile banking service supports the local industries