

Country Name	The Project for Reconstruction of Guaymon Bridge
Honduras	

**I. Project Outline**

Background	<p>In Honduras, it was essential to secure and develop the distribution network of agricultural products and others in order to reactivate the production and consumption of such merchandise. The road network was especially important to this end, as 65% of the movement of goods in the country depend on the road transportation.</p> <p>The Guaymon Bridge is located on a trunk road CA13 on the "Rehabilitation Plan Logistics Corridor", a plan developed by the Government of Honduras aiming at strengthening economic competitiveness of Central America by improving the road network in the region. CA13 is located in a region with large plantations of bananas, palm oil, coffee, and others. CA13 was considered a most significant road in Honduras as it is not only the route used to transport these agricultural products to La Ceiba which is a commercial area of the region, but also to the San Pedro Sula, the largest commercial area in the north of the country, and Cortes which has the country's largest port; Port Cortés which handles 80% of the export to Honduras (2005).</p> <p>The Guaymon Bridge collapsed after hurricanes hit the region in 2005. A Bailey type provisional bridge was installed which could facilitate the two lane passage. However, the state of the bridge was extremely unstable and there was a high risk of collapsing again if flooding occurs. In addition, the bridge was forced to restrict load weight and maximum speed, in spite of the fact that 34% of the traffic volume was heavy goods vehicles such as buses, trucks and others.</p>		
Objectives of the Project	To improve the function of the Guyamon Bridge on the national road C13 (in El Progreso, Yoro) and ensure inland transport of people and principal products fully and effectively by reconstructing the Guyamon Bridge		
Outputs of the Project	<ol style="list-style-type: none"> <li>1. Project site: El Progreso, Yoro</li> <li>2. Japanese side <ul style="list-style-type: none"> <li>- Removal of existing Guyamon Bridge and constructing a new bridge (160m)</li> <li>- Renovation of the approach road</li> <li>- Bank protection</li> </ul> </li> <li>3. Honduran side <ul style="list-style-type: none"> <li>Preparation of land required to work, moving electric poles, power lines, water pipes etc., allocating traffic controllers and security guards for a detour, and works for riparian structures</li> </ul> </li> </ol>		
E/N Date	May 23, 2007	Completion Date	September 2, 2009
Project Cost	E/N Grant Limit: 950 million yen      Contract Amount : 946 million yen		
Implementing Agency	General Directorate of Highways (GDC) of the Ministry of Public Works, Transport and Housing (SOPTRAVI)		
Contracted Agencies	Katahira & Engineers Inc., Hazama Ando Corporation		
Related Studies	Basic Design Study: June – December, 2006		
Related Projects (If any)	-		

**II. Result of the Evaluation**

1 Relevance
<p>This project has been highly consistent with Honduran development policies, such as “poverty reduction through economic growth and stability, completion of logistics corridor and development of tourism related important roads” as set in the Poverty Reduction Strategy Paper (2001), and National Development Plan 2010-2014, and development needs to facilitate transport of goods and trade through development of trunk road network to commercial areas and ports, as well as Japan's ODA policy (transport network development program and social economic development program 2006) for facilitating equitable and sustainable economic growth and development rural industries including agriculture at the time of both ex-ante and ex-post evaluation.</p> <p>Therefore, relevance of this project is high</p>
2 Effectiveness/Impact
<p>This project has largely achieved its objectives, “to improve the function of the Guyamon Bridge and ensure inland transport of people and principal products fully and effectively”. The load weight limit has been mitigated as planned, and the maximum speed limit has been mitigated to the level of 10km/h above the target. According to the mayor and the residents nearby, when the provisional bridge was used, there was traffic congestion of 1.5 hours at maximum for crossing the bridge, however, there has been no traffic congestion and the travel speed has significantly improved after the construction of the Guyamon Bridge. The traffic volume has increased by 150% of the volume before the project, and therefore, the stable transport of people and goods was ensured. The mayor, residents, and the implementing agency said the traffic safety has improved as a result of the</p>

widening of the road. In addition, there was a concern of the possibility of collapse of the provisional bridge, however, after the construction of the Guaymon Bridge, there has been no restriction of a bridge use even under the floods and earthquakes, and thus the vulnerability to natural disasters has improved.

As to impact, according to the Chairperson of the Chamber of Commerce and Industry of El Progreso, after the construction of the Guaymon Bridge, the access between northern coastal cities and El Progreso has improved, and goods transport on C13 has increased, and thereby, investment in agriculture and agriculture production have increased. Moreover, access to public services for residents has increased. In addition, according to the residents, and Chamber of Commerce and Industry, before the construction of the Guaymon Bridge, there were many cases of car-break in which targeted the cars which were stuck in heavy traffic on the provisional bridge. However, as a result of elimination of the traffic congestion after the construction of the Guaymon Bridge, no such case has occurred and security has improved. There is no negative impact on the natural environment, and no land acquisition/resettlement occurred.

Therefore, effectiveness/impact is high.

#### Quantitative Effects

Indicator	2006 (Before the project) Actual Value	2009 (Target year) Target Value	2009 (Target Year) Actual Value	2012 (January - December) Actual Value
Indicator 1 load weight limit	32 tons/vehicle	40.9 tons/vehicle	N/A	40.9 tons/vehicle
Indicator 2 maximum speed limit	30km km/h	60 km/h	N/A	70km/h
Indicator 3 Traffic volume on the Guyamon Bridge	Approximately 3,900 vehicles/day (Bus and Truck account for 34%)	N/A	N/A	5,830 km/h (Bus and Truck account for 34.8%)

Source: DGC, SOPTRAVI

#### 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: 100%, 76%).

Therefore, efficiency of this project is high.

#### 4 Sustainability

The operation and maintenance of the facilities constructed by the project has been carried out by the implementing agency, GDC of SOPTRAVI for large scale repair, and Directorate Executive Road Fund (VF) for routine maintenance work and periodic inspection and maintenance. There is no change in the roles and responsibility and the number of personnel of DGC and VF. However, the number of the engineers at VF is insufficient to oversee the maintenance work of the national road network. Although the maintenance and inspection were supposed to be contracted out to private companies at the time of ex-ante evaluation, they only contract out those works when necessary, and no systemic institutional setup is made. There is no problem on technical aspect, as the private companies carry out the maintenance.

The budget for VF has increased since 2007. According to GDC, the budget for GDC has also increased for the past three years, however, no figures were presented and therefore, there is uncertainty for the future prospect.

Regarding the current status of operation and maintenance, the function of the facilities has been maintained. The bridge, bank protection and drainage facilities were observed to be properly maintained. Although no periodic maintenance has been implemented, maintenance activities are carried out when necessary. In addition, GDC said they would take appropriate measures when the large scale repair is needed in the future.

Thus, as there are minor problems in institutional and financial aspects, sustainability of the effects of this project is fair.

#### 5 Summary of the Evaluation

This project has largely achieved its objectives, "to improve the function of the Guyamon Bridge and ensure inland transport of people and principal products fully and effectively". The load weight limit and the maximum speed limit have been mitigated. Travel speed, traffic volume, and safety as well as the vulnerability to natural disasters have improved. In addition, impacts such as increase of goods transport to the major commercial areas and ports, increase of agricultural production, and improvement of access to public services are observed.

As for sustainability, there are minor problems in institutional and financial aspects, as a part of the institutional structure is not sustained what it was considered desirable at the time of ex-ante evaluation, and details of the budget are not disclosed. However, no problem is found in the function of the Guaymon Bridge.

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

### III. Recommendations & Lessons Learned.

#### Recommendations to implementing agency:

As the effects of the project such as regional economic vitalization, improvement of residents' access to public services, and improvement of security are observed, the implementing agency is recommended to carry out proper maintenance and secure budget in order to sustain the project effect.

#### Lessons learned for JICA:

In countries and regions where the crime rate is high, development of roads and bridges does not only produce effects of

smooth transportation, improvement of access to various services, and economic vitalization, but also mitigates incidence of crimes (robbery) as a result of the reduction in traffic congestion.



Superstructure: bridge support, bridge abutment (from El Progreso)



Superstructure(from the north)