

## Ex-Ante Evaluation (for Japanese ODA Loan)

Central America and the Caribbean Division  
Latin America and the Caribbean Department  
Japan International Cooperation Agency

### 1. Name of the Project

- ( 1 ) Country: Republic of Honduras
- ( 2 ) Project: The Project for Construction of the Bridge on the National Road No.6
- ( 3 ) Project Site / Target Area: Francisco Morazán (Population: Approximately 1.7 million people)  
Grant Agreement: January 11, 2024

### 2. Background and Necessity of the Project

( 1 ) Current State and Issues of the Transportation Sector and the Priority of the Project in the Republic of Honduras

In the Republic of Honduras (hereinafter referred to as “the Country”), where distribution of goods is predominantly road-based, the majority of land freight is transported by vehicles. The Country has established a government plan (Plan del Gobierno) (2022-2026), which sets the “development of quality road infrastructure” as a priority task, and enhancement of resilience against disasters as a goal. Particularly, National Road No.6, which has an average traffic volume of about 8,000 vehicles per day, is a key artery in the logistics network that connects the Central American region from north to south, and is one of the two main roads that support the distribution of goods between the capital city of Tegucigalpa and the Republic of Nicaragua. It also includes part of C2, one of the 11 economic corridors stipulated in the master plan for mobility and logistics adopted by the Council of Central American Transport Ministers in May 2023. C2 is a 2,405-km route connecting El Ceibo, a Guatemalan border city with Mexico, and Chiriquí in Panama. This route supports the economic activities and international logistics of the region, including Tegucigalpa, serving as a substitute for C1, which is a Pacific coastal route traversing Central America longitudinally. In the Country, where an increase in traffic volume is expected in the future, National Road No.6 is one of the most important arterial highways forming its logistics network and is extremely high in priority.

National Road No.6, which runs through a mountainous region, is at risk for traffic

closures caused by natural disasters, such as rainfall, sediment disasters, and landslides, and resulting wide-scale detours (about 50 km). Under these circumstances, JICA implemented the “Project for Landslide Prevention in National Road No.6 (2017-2019),” a grant aid project that built protection against landslides at 14.7-km, 22.0-km, and 63.0-km points to reduce vulnerability to natural disasters and ensure safer and smoother traffic flow.

The Country’s national government carried out countermeasures against landslides also at the 16.3-km point, financed by the World Bank, through steel pipe piling and drainage improvement works (2014-2015). However, landslides have expanded since 2016, with deformations detected in certain areas of the constructed sites, resulting in level differences and cracks in paved surfaces, and making driving conditions extremely poor. If these sections were to collapse, it could lead not only to tragic accidents, but also to National Road No.6 closing down due to traffic, causing the Country’s logistics network, mainly in the Tegucigalpa metropolitan area, to stop functioning. This would result in significant economic losses, not only in provincial regions, but in other areas as well. Therefore, countermeasures against landslides alone cannot ensure safety. This is the reason that the Secretariat of Infrastructure and Transport of Honduras (Secretaría de Estado en el Despacho de Infraestructura y Transporte) planned the construction of a detour bridge with an asphalt overlay that would bypass the 16.3-km point, where it would be unaffected by landslides, and asked Japan to implement the Project for Construction of the Bridge on the National Road No.6 (hereinafter referred to as “the Project”). Realizing that designing a bridge to be constructed in an area that is susceptible to landslides requires experienced engineers, the Country is expecting Japan to provide not only financial assistance, but also technologically reliable consultation, starting at the research and design stages, through this grant aid project.

## ( 2 ) Japan’s and JICA’s Cooperation Policy and Operations in the Transportation Sector

Japan’s Development Assistance Policy for the Republic of Honduras (June 2021) includes an assistance program entitled “Program for Building a Disaster-Resilient Society” in the priority area “Measures Against Disasters and Environmental/Climate Changes.” The JICA Country Analysis Paper for the Republic of Honduras (March 2020) also identifies “prevention of natural

disasters” as a subject for development. Furthermore, the Project will also contribute to achieving SDG 9 (Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation) and SDG 11 (Make cities and human settlements inclusive, safe, resilient and sustainable), as well as the JICA Global Agenda No.2, “The world where all people and goods move safely and freely” in the ‘transportation’ section. The Project is in accordance with the above policies and analyses.

### ( 3 ) Other Donors’ Activities

The World Bank funded the project for landslide prevention at the 16.3-km point on National Road No.6 (2014-2015), and the Inter-American Development Bank (IDB) financed a deformation survey conducted at the same location (2020-2021).

## **3. Project Description**

### ( 1 ) Project Description

#### ① Project Objective

The Project will entail asphalt overlay and bridge construction at the most landslide-prone point on National Road No.6, a major thoroughfare. This will decrease the Country’s vulnerability to natural disasters and enable safer and more effective maintenance of its logistics network, leading to more stable and flourishing economic activity in the Country.

#### ② Project Components

- I. Facility Description: Asphalt overlay (length: 380 m) and bridge (length: 140 m)
- II. Consulting Service/Soft Component Description: Detailed design, bidding assistance, construction management, and soft component-based technological guidance (overloading prevention measures, bridge maintenance methods, and emergency responses to landslides)

#### ③ Project Beneficiaries (Target Group)

Direct beneficiaries (2.3 million people using the road)

Final beneficiaries (8 million people receiving goods and services via the road)

( 2 ) Estimated Project Cost

Total Project Cost: 3,023 million Yen (2,863 million Yen from Japan and 160 million Yen from the Republic of Honduras)

( 3 ) Schedule

December 2023-June 2027 (43 months)

( 4 ) Project Implementation Structure

- 1 ) Executing Agency: Secretariat of Infrastructure and Transport of Honduras (SIT: Secretaría de Estado en el Despacho de Infraestructura y Transporte)
- 2 ) Operation and Maintenance System: Secretariat of Infrastructure and Transport of Honduras (SIT: Secretaría de Estado en el Despacho de Infraestructura y Transporte)

( 5 ) Collaboration and Sharing of Roles with Other Donors

The Municipal Emergency Committee of Tegucigalpa, a disaster prevention organization working to manage landslides and other disasters that has received Japanese assistance in the past, the Permanent Contingency Committee, the National Autonomous University of Honduras, and the Polytechnic University of Engineering will be invited to participate in soft component seminars to refresh their understanding of the characteristics of landslides in Honduras and learn more about appropriate inspections, observations, and emergency measures through lectures.

( 6 ) Environmental and Social Consideration

Category: B

- ① Reason for Categorization: The Project does not fall under the category of large-scale projects in the bridge sector in the JICA Guidelines for Environmental and Social Considerations (published in January 2022; hereinafter referred to as “the JICA Guidelines”) and is thus considered to be unlikely to have significant adverse impacts on the environment. At the same time, the sensitive characteristics and areas given in the JICA Guidelines also do not apply to the Project.
- ② Environmental Permit: The Project must obtain an environmental permit for bridge construction (the Country’s Environmental and Social Consideration Category 2) in the Tegucigalpa-Danlí section of National Road No.6.

③ Anti-Pollution Measures: Although effects on air quality, soil, water quality, noise, vibration, and waste pollution will likely occur while the construction work is underway, they are expected to be minimized through mitigation measures such as: spraying water, periodically inspecting heavy machinery and construction vehicles (to prevent oil leaks), installing grit chambers and wastewater treatment tanks in construction yards, setting up soundproof covers, and separating and treating waste in accordance with local regulations. No in-service adverse effects are projected.

④ Natural Environment: Since the target area for the Project does not fall under the category of sensitive areas, such as national parks, and is about 1 km away from the nearest wildlife sanctuary, Uyuca, any undesirable impacts on the natural environment will likely be minimal.

⑤ Social Environment: As there are no residential homes in the target area, the Project will entail no relocation of residents. The Project will involve the acquisition of land (approximately 14,100 m<sup>2</sup>), which will be implemented in accordance with the relevant local procedures and the JICA Guidelines.

⑥ Other/Monitoring: Payment of compensation after the land acquisition by SIT will be monitored. In addition, the construction contractor will monitor the environmental effects, namely air quality, soil, water quality, noise, and waste pollution, as well as social effects, including work environment and accidents, under the supervision of SIT.

( 7 ) Cross-Sectoral Issues: Since the Project is estimated to reduce CO<sub>2</sub> emissions by 171.9 tons on an annual basis by mitigating traffic congestion on National Road No.6, it is thought that it will contribute to curbing climate change. Furthermore, given that the Project can mitigate the impacts of possible floods and landslides caused by climate change in the future, it may also contribute to climate change adaptation.

( 8 ) Gender Category: Gender Informed (Significant) (Gender Activity Integration Project)

<Description of Activities/Reason for Classification> Low workforce participation of women is a gender-related issue in the transportation sector. To address this challenge, the Project is designed to promote female workforce participation by offering training opportunities for women in the areas of plastering, piling, paving, and other road construction-related work skills in partnership with a vocational

school, while monitoring progress in this regard through the number of women employed at the construction sites.

( 9 ) Other Important Issues

The existing road will be taken out of service as a result of the bridge construction during the Project.

**4 . Targeted Outcomes**

( 1 ) Quantitative Effects

Indicator	Baseline (Actual value in 2023)	Target (2030) [3 years after project completion]
Annual average daily traffic (vehicles/day)	9,183	13,012
Number of passengers (1,000 people/year)	8,517	11,339
Amount of freight (1,000/year)	5,909	8,105
Average annual mileage (km/h)* <sup>1</sup>	20.5	44.4
Benefit of eliminating losses resulting from impeded traffic flow caused by landslides (USD/year)	0	671,000
Benefit of eliminating losses resulting from detours caused by landslides (USD/year)	0	992,000

\*<sup>1</sup> Actual measured average vehicular speeds and calculated speeds under normal conditions

( 2 ) Qualitative Effects

To enhance the safety of the road against landslides, increase the flatness and transport efficiency of the road by improving the pavement surface, reinforce the international logistics function through improved access to the Nicaraguan border, stimulate the local economy, and reduce vulnerability to natural disasters.

**5 . External Factors and Risk Control**

( 1 ) Preconditions: None in particular

( 2 ) External Factors: None in particular

## **6 . Lessons Learned from Past Projects**

In the Ex-Post Evaluation of Japanese Grant Aid Project “The Project for Construction of the Santa Fe Bridge in the Republic of Nicaragua” (FY2017 evaluation), control of overloaded vehicles was recommended as a lesson learned from the project, since many vehicles had been seen carrying loads over the maximum capacity, resulting in major damage to the road surface and structure. As overloaded vehicles were also observed when surveying the starting and ending points of the target area of the Project, lectures will be provided on the necessity and impacts of preventing overloading as a soft component program. SIT will also enforce tighter controls on overloaded vehicles in cooperation with the Honduran Institute of Land Transport (hereinafter referred to as “IHTT”) and the police.

## **7 . Evaluation Results**

The Project is consistent with the development issues and policies of the Country, as well as the assistance policies and analyses of the Government of Japan and JICA. Targeting the landslide-prone areas on National Road No.6, a major thoroughfare in the Country, the Project is meant to: ① make an emergency response in order to prevent the expansion and recurrence of damage caused by natural disasters (urgency/swiftness) and ② address natural disasters and other threats to the lives and livelihoods of individuals from the perspective of human security (humanitarian needs). At the same time, by constructing the bridge on an arterial highway that makes up the Country’s logistics network as a Japanese aid project to eliminate concerns about disasters, the Project can help stimulate the Country’s economy, thereby contributing to the achievement of SDG 9 (Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation) and SDG 11 (Make cities and human settlements inclusive, safe, resilient and sustainable). Therefore, there is a strong need to support implementation of the Project as a grant aid project.

## **8 . Plan for Future Evaluation**

### ( 1 ) Indicators to Be Used

As indicated in Section 4.

### ( 2 ) Future Evaluation Schedule

Ex-post evaluation: Three years after the project completion

END

Annex: Map of the Project for Construction of the Bridge on the National Road No.6 in Honduras



# Map of the Project for Construction of the Bridge on the National Road No.6 in Honduras



Source: [The Project for Landslide Prevention in National Road No.6 | ODA Visualization Website \(in Japanese\) \(jica.go.jp\)](http://jica.go.jp/visualization/landslide-prevention-national-road-no-6/)



Note: The bridge construction site is planned to be shifted to the mountain side,

so that the bridge foundation will be built outside the landslide-prone area.

Source: (Left) Report on a Landform Deformation Survey at the 16-km Point of the National Road CA6 (Tegucigalpa-Danlí) by the Inter-American Development Bank, (upper right) National Geospatial Information Authority, (lower right) Google Maps