Ex-Ante Evaluation Paper (for Japanese ODA Loan)
Central America and the Caribbean Division,
Latin America and the Caribbean Department, JICA

1. Name of the Project

(1) Country: Republic of El Salvador
(2) Project Site/Target Area: San Miguel Department
(3) Project Name: San Miguel Bypass Construction Project (II)
(4) L/A signing date: August 22, 2022

2. Background and Necessity of the Project

(1) Current Status and Issues of the Road Sector Development in El Salvador

The Republic of El Salvador (hereinafter "El Salvador") is the smallest country in the Central American region, with an area of about 21,000 square kilometers. Its main means of transportation is land transportation by road.

The most important arterial road in the country is the Pan American Highway (National Highway 1, hereinafter "CA-1") which crosses the center of the country from east to west. CA-1 is the most important distribution network in the Central American region that connects not only major cities in the country including the capital San Salvador but runs all the way from Mexico to Panama.

In addition, while recent economic development in the country has increased the demand for city road transportation in urban areas, arterial roads passing through many city centers in the country also play a role in local transportation. This eventually results in serious traffic congestion on these roads. This trend is especially conspicuous for the city of San Miguel, which has an estimated population of about 225,000 (in 2021) and is located in the center of the eastern region that was severely damaged by the civil war and remains less developed.

The Funes administration, which took office in June 2009, had identified "economic revitalization" as one of the five priority issues in its five-year national development plan (2010-2014), and economic infrastructure improvement, including road and bridge development, was a major part of this plan. In addition, the yen loan "San Miguel City Bypass Construction Project" (hereinafter referred to as "the Project") was deemed to be a priority project in the National Land Development Plan formulated in 2004. The L/A for the Project was signed in August 2014 with this background taken into consideration (total project cost: ¥16,377 million, with ¥12,595 million to be covered by a yen loan). The Project is also consistent with some actions in the country's five-year national land development plan (2014 to 2019), such as vitalization of CA-1 and construction of bypasses near major cities. Subsequently, the Bukele administration took office in June

2019, and its Plan Cuscatlan, a collection of commitments of the administration, declared that "infrastructure is a pillar of human development" and, with regard to road infrastructure, prioritized development of CA-1 and National Highway 2 as corridors connecting the Central American region and reinforcement of domestic road networks. The implementation of the Project is clearly stated in the National Freight Logistics Plan PNLOG El Salvador 2018-2032, which was developed together with the Inter-American Development Bank (IDB). Thus, the Project remains a high priority, consistent with the policies of the Government of El Salvador.

After the signing of the L/A, specification changes occurred at the detailed design stage in consideration of road users and local residents. These changes along with exchange rate fluctuations resulted in an increase in the total project cost. As a result, the El Salvadoran government asked the Japanese government to provide additional loans in February 2020.

(2) Japan and JICA's Cooperation Policy and Operations in the Road Sector

Both the Republic of El Salvador's Country Development Cooperation Policy (February 2017) and the JICA Country Analysis Paper (JCAP) for El Salvador (March 2014) define economic vitalization and job growth as a priority area, and the JICA Global Agenda for Transportation also includes improvement of connectivity as a priority area. The Project is in line with these priority areas. The support provided to the road sector in the past includes a yen loan "Road Improvement Project" (amount agreed: ¥10,332 million in 1994). The Grant Aid "Project for Construction of the Japan-Central America Friendship Bridge" (¥1,300 million: 2007) contributed to the improvement of CA-1 traffic by constructing bridges connecting the borders of Honduras and El Salvador, and the Project is similarly positioned to contribute to facilitating Central American distribution.

(3) Other Donors' Activities

Focusing on transportation infrastructure in the northern region, the U.S. has implemented various projects including the North Cross Island Road Upgrading Project (agreed amount: US$255.3 million, 2007-2012) and the Coast Highway Widening Project (project cost: US$68 million, 2018-2021) through the Millennium Challenge Account (MCA). Citing the transportation field as a priority genre for cooperation, the IDB has been supporting regional road development in El Salvador since 2010. The Central American Bank for Economic Integration (CABEI) identifies production infrastructure including roads as a strategic priority area and is also supporting the

construction of bypasses in the southern departments of Usulutan and La Libertad. These projects, together with the revitalization of the CA-1 supported by the Project, will contribute to improving the transportation capacity of the east-west transportation network in the northern and southern parts of the country.

3. Project Description

(1) Project Outline

1) Purpose of Project

The Project intends to enhance the transportation capacity of the city of San Miguel through the construction of arterial roads in the vicinity of the city, thereby contributing to the economic development of the country.

2) Project Components

a) Civil engineering works (international competitive bidding)

1 Widening of the existing CA-1 (from one lane to two lanes per direction): about 3.5 km from Moncagua to El Obrajuelo

2 Bypass construction (2 lanes in each direction): about 8.4 km from El Obrajuelo to Hato Nuevo

3 Bypass construction (one lane in each direction): about 7.2 km from Hato Nuevo to El Papalón

4 Construction of bridges at two major river-crossing points: 110 m long and 23 m wide bridge over Rio Grande de San Miguel (with a 845 m long approach road) and 105 m long and 16 m wide bridge over Rio Taisihuat (with a 485 m long approach road)

b) Consulting services (short list method)

Detailed design, bidding assistance, construction supervision, supervision of environmental and social considerations, etc.

3) Project Beneficiaries (Target Group)

- Citizens and logistics operators who will be users of the roads
- Local residents to benefit from reduced traffic congestion
- Consumers of goods and services provided using the roads

(2) Estimated Project Cost

The total project cost is US$206.89 million (including US$51.37 million to be covered by the loan, which is equivalent to ¥5,650 million).

(3) Project Schedule (Cooperation Period)

The planned schedule is from August 2014 to August 2024 (120 months in total). Project completion is defined as the start of facility service (August 2024).

(4) Project Implementation Structure

1) Borrower: the Government of the Republic of El Salvador

2) Guarantor: None

3) Executing Agency: Ministry of Public Works and Transportation

4) Operation and Maintenance System: The roads to be developed by the Project will be maintained and managed by the Road Conservation Fund after completion of construction.

(5) Collaboration and Sharing of Roles with Other Schemes or Donors

1) Japan's assistance activities

There are no assistance activities specifically linked to the Project.

2) Other donors' assistance activities

There are no assistance activities specifically linked to the Project.

(6) Environmental and social considerations

1) Environmental and social considerations

(i) Category: A

(ii) Reasons for Categorization: The Project falls under the definition of a large-scale undertaking among those of the road sector listed in the JICA Guidelines for Environmental and Social Considerations (promulgated in April 2010).

(iii) Environmental Permit: The Environmental Impact Assessment (EIA) report for the Project was approved by the Ministry of Environment and Natural Resources (MARN) in December 2012.

(iv) Anti-Pollution Measures: Measures will be taken for control of dust, noise, and water pollution during construction, including periodic water sprinkling, installation of noise barrier walls, and wastewater and waste management. Noise barrier walls will be installed near the residential area as a noise reduction measure after the roads are put into service.

(v) Natural Environment: The Project area is not located in or near a sensitive area such as a national park. Although there are endangered trees in and around the Project site, they will be avoided as much as possible, and if they cannot be avoided, necessary measures such as planting the same species or relocating them will be taken. The presence of tree cutting locations, the number of trees that need to be cut

associated with design change and the existence of endangered trees were checked at the time of the examination, and it was confirmed that the number of trees cut has been reduced and that restoration measures and monitoring will be implemented according to the environmental management plan and monitoring plan.

(vi) Social and Environmental Aspects: The Project involves the acquisition of a total area of 97.3 ha of land and the resettlement of a total of 5 houses. Site acquisition is being carried out according to the basic resettlement plan prepared in line with the JICA Guidelines for Environmental and Social Considerations (April 2010), but there are some delays. Specifically, 0.25% of the sites in Package 1, 4.2% in Package 2, and 0.63% in Package 3 are yet to be acquired. However, construction permits were already obtained for all sections of the Project, including the land subject to acquisition. The individual resettlement master plans prepared based on the EIA and the detailed design reflecting the design changes have already been explained to the residents affected by the Project, and no objections to the Project or the compensation policy have been confirmed.

(vii) Other/Monitoring: The contractor hired for the Project is monitoring air quality, noise, water pollution, etc. during construction and air quality, noise, etc. after the roads are put into service, and no particular problems have arisen nor have complaints been confirmed at this time.

(7) Cross-Cutting Items

1) Climate change-related projects

Reduction of the impact of disasters or adaptation to climate changes may be expected by dealing with hurricanes and other natural disasters from the viewpoint of mainstreaming disaster prevention such as slope protection.

2) AIDS/HIV and other infectious disease control

Basic infection control measures, such as wearing masks and ensuring social distance, will be implemented to prevent the spread of COVID-19 and other infectious diseases.

(8) Gender Category:

[N/A] ■ GI (Gender Mainstreaming Needs Study/Analysis Project)

[Activities/Classification Rationale]

The examination investigated gender mainstreaming needs, but did not go so far as to plan specific initiatives that would contribute to gender equality and women’s empowerment.

(9) Other Important Issues

None in particular

4. Target Outcomes

(1) Quantitative Effects

1) Outcomes (Operational and Effect Indicators)

Indicator		Baseline (2011) (Actual value)	Target (2023) (at the last examination)	Target (2026) [2 years after project completion] (this Project)
Average speed in the city (km/h)		8	14	50 *2
Time required to pass through the city during peak hours (minutes) *1		58	27	25
Average annual daily traffic (vehicles per day)	(1) Widened portion of the existing CA-1	22,524	30,911	35,263
	(2) Bypass construction (2 lanes in each direction)	N/A	13,132	10,298*3
	(3) Bypass construction (one lane in each direction)	N/A	2,064	3,672

*1: Measurement to be made in the section from Moncagua Intersection to El Obrajuelo, Hato Nuevo, and El Papalón

*2: Average speed when the bypass is used

*3: The values were based on the data that allowed for the La Unión port project at the time of the 2013 examination, but they were corrected for the current examination.

(2) Qualitative Effects

Support and promotion of urban or regional economic development (improvement of distribution and promotion of industrial and tourist development), ensuring of smooth traffic of the CA-1 (coordination involving the Central American region), and promotion of climate change adaptation measures

(3) Internal Rate of Return

Based on the following assumptions, the economic internal rate of return (EIRR) for the Project is 13.2%. Since this Project is not a toll road and does not collect tolls, the financial internal rate of return (FIRR) is not calculated.

[EIRR]

Cost: Project costs, operation and maintenance costs (both excluding taxes)

Benefit: Decrease in time cost and running cost of vehicles, and others

Project life: 20 years

5. Preconditions and External Conditions

(1) Preconditions

Site acquisition must have been completed.

(2) External conditions

No major natural disasters will occur in the area subject to construction.

6. Lessons Learned from Past Projects and Application to the Project

(1) Evaluation results of similar projects

In ex-post evaluation of the yen loan for El Salvador "Road Development Project" (evaluation year: 2006), the following conditions were pointed out to be important:(i) the environmental technology used in the Project has helped protect the slope and reduce the impact of future erosion; and (ii) since the influence of abnormal weather conditions has elongated the construction period, if the rainy season or other factors greatly affect the construction period, the construction period of the Project should be appropriately determined by considering these impacts, and support should be provided to ensure steady project progress during the period in which work can be done.

(2) Lessons Learned for the Project

Disaster prevention works, such as slope protection, which are not considered as sufficiently as they should be in El Salvador, should be adopted. In addition, since the rainy season has a significant impact on the construction period of the Project, the construction period should be set in consideration of the reduced rate of construction progress due to the rainy season from May to November, and indirect support should be provided through training opportunities and close supervision of the Project.

7. Evaluation Results

The Project is in line with the country’s development issues and policies, as well as the cooperation policy and analysis of Japan and JICA, and will contribute to the development of the country’s economy by enhancing transportation capacity through the construction of arterial roads around San Miguel City. The Project is thus expected to contribute to SDG Goal 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation. Therefore, the necessity to support the implementation of the Project is very high.

8. Plan for Future Evaluation

(1) Indicators to be used

As described in 4.

(2) Future evaluation schedule

Ex-post evaluation: two years after project completion

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