Japanese ODA Loan

EX-ante Evaluation

1. Name of the Project

Country:	Republic of El Salvador
Project:	San Miguel Bypass Construction Project
Loan Agreement:	August 20, 2014
Loan Amount:	125.95 million yen
Borrower:	The Government of the Republic of El Salvador

2. Background and Necessity of the Project

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

With an area of 21,000 square kilometers, the Republic of El Salvador (El Salvador) is the smallest nation in Central America. The main means of travelling and transportation is by land using the road infrastructure. The most important highway in El Salvador is the Pan-American Highway (Central American Highway 1: CA-1), which stretches from east to west through the center of the country. The CA-1, which connects not only San Salvador and other major cities in El Salvador but also Mexico and Panama, serves as the most important distribution network in Central America. For El Salvador, it is important to ensure smooth transportation on the CA-1. Along with the recent economic growth in El Salvador, the demand for road transportation in urban areas has been increasing. However, many cities are faced with serious traffic congestion because the highway passing through the center of each city is used as a local means of transportation. The situation is considerably serious in San Miguel, which is El Salvador's fourth largest city with approximately 220,000 people and located in the center of the eastern region, as it has lagged behind in development due to severe damage caused by conflicts. The urbanization of the city is increasing the amount of traffic to the CA-1 passing through the center of San Miguel. This causes the CA-1 traffic congestion, which in turn is greatly deteriorating both local and inter-city traffic situations.

(2) Development Policies for the Road Sector in El Salvador and Priority of the Project

The Funes Administration took office in June 2009. Under its key policies, namely the stimulation of the nation's economy and the promotion of integration with Central America, the government adopted "economic revitalization" as one of its five priority areas defined in the Five-Year National Development Plan (2010-2014). The establishment of an economic infrastructure such as road and bridge constructions was included as a specific initiative in this priority area. Furthermore, the National Land-Use and Development Plan formulated in 2004 defined this project as a priority project. It involves two plans: the construction of a route bypassing the central area of San Miguel and the widening of the existing CA-1 in the eastern area of the city. Mr. Salvador Sánchez Cerén, the current President of El Salvador who took office in June 2014, raised "investment in public works for development" as one of the 10 priority areas in the commitment he made during the presidential election campaign. Specific investment initiatives in this priority area include this project.

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

In Japan's Country Assistance Policies for El Salvador (April 2012), the stimulation of the economy and employment expansion are identified as priority areas for the rolling plan for El Salvador, and this project is in line with this area. Assistance projects that were implemented in the past for the road sector of El Salvador include an ODA loan project "Road Improvement Project" (loan amount: 10,332 million yen; in 1994). Taking into account that El Salvador is a hurricane-prone country, Japan's viewpoint on disaster prevention including slope protection was reflected in the Road Improvement Project, which contributed to maximizing the impact of the

project. Japan has a policy of including disaster prevention measures in various aspects of development initiatives in order to help developing countries build disaster-resistant societies. In accordance with the policy, this project adopts the viewpoint of “mainstreaming disaster risk reduction.”

(4) Other Donors’ Activities

With an emphasis on the transportation infrastructure in the northern region of El Salvador, the United States has provided financial support of approximately 2.34 million dollars to the Northern Transnational Highway Project through the Millennium Challenge Account (MCA). The Inter-American Development Bank (IDB), which focuses on El Salvador’s transportation sector as a priority area for cooperation, has been providing support to rural roads infrastructure initiatives since 2010. The Central American Bank for Economic Integration (CABEI) adopted the productive infrastructure including roads as its strategic priority area and thus has provided support to the bypass construction project in Usulután, a city located in the southern region of El Salvador.

(5) Necessity of the Project

This project aims to help El Salvador improve its transportation capability through the bypass construction work in the periphery of San Miguel, thereby contributing to the economic growth of El Salvador. This project is in line with the development goals and plans of the El Salvador government as well as Japan’s and JICA’s assistance policies for this country. In light of these points, it is highly necessary and relevant for JICA to support the implementation of this project.

3. Project Description

(1) Project Objective(s)

This project aims to reduce traffic congestion in San Miguel and increase the transportation capability of the CA-1 through bypass construction in the periphery of the city, thereby contributing to the economic growth of San Miguel, which in turn will lead to the economic growth of the entire country.

(2) Project Site/Target Area

San Miguel, Quelepa, and Moncagua in San Miguel Region

(3) Project Components

1) Widening of the existing CA-1 (from the current dual single-lane (asphalt-paved) to dual 2-lanes):

   Between Moncagua and El Obrajuelo

2) Construction of a bypass (a new road: dual 2-lanes, asphalt-paved):

   Between El Obrajuelo and Hato Nuevo

3) Construction of a bypass (a new road: dual single-lane, asphalt-paved):

   Between Hato Nuevo and El Papalon

4) Construction of two bridges: One to cross the Rio Grande de San Miguel in the section specified in the above 2); and the other to cross the Taisihuat River in the section specified in the above 3)

5) Provision of consulting services (detailed design (D/D), tender assistance, supervision of construction works, monitoring related to environmental and social considerations, support for preventing road disasters (close examination of the vulnerability assessment method, reflection in the existing inventories and proposal for design standards) and support to the project implementation units)

(4) Estimated Project Cost (Loan Amount)

16,377 million yen (including the amount covered by ODA loan: 12,595 million yen)

(5) Schedule

August 2014–December 2019 (64 months in total): The project will be completed on the day when the constructed infrastructure facilities become available.

(6) Project Implementation Structure

1) Borrower: The Government of the Republic of El Salvador
2) Executing Agency: Ministerio de Obras Públicas, Transporte, Vivienda y Desarrollo Urbano (MOPTVDU)
3) Operation and maintenance system: Fondo de Conservación Vial (FOVIAL)

(7) Environmental and Social Considerations/Poverty Reduction/Social Development

1) Environmental and Social Considerations
   (i) Category: A
   (ii) Reason for Categorization: Based on JICA Guidelines for Environmental and Social Considerations (issued in April 2010), this project is included in the category “A” projects defined for the road sector which are likely to have significant adverse effects on the environment and society.
   (iii) Environmental Permit: Environmental impact assessment (EIA) reports related to this project have been approved by the Ministerio de Medio Ambiente y Recursos Naturales (MARN) in December 2012.
   (iv) Anti-Pollution Measures: Measures to be taken against dust and noise during construction works and to maintain the water quality will include spraying working areas regularly, building noise-blocking walls, and managing waste water and materials. As noise control measures after the infrastructure facilities become available, noise-blocking walls will be built in residential areas, and education will be provided in terms of traffic manners by the executing agency MOPTVDU including speed regulation and restriction on the use of horns.
   (v) Natural Environment: The construction area is neither a sensitive area specified in the guidelines including national parks nor its surrounding areas. As trees that are on the endangered species list are planted in the construction area and its surrounding areas, they will be left untouched as much as possible. If this is not possible, necessary actions will be taken such as planting of the same kind of trees or transplanting.
   (vi) Social Environment: This project requires the acquisition of land (124.6 ha) and the relocation of the residents of 57 households. The land acquisition will be carried out in accordance with the resettlement action plan formulated based on JICA Guidelines for Environmental and Social Considerations (issued in April 2010). In the residents meeting, there were no objections from local residents against this project or the compensation policy.
   (vii) Other/Monitoring: In this project, the contractor will monitor the air and water quality and noise levels during the construction works as well as the air quality and noise levels after the construction facilities become available.
2) Promotion of Poverty Reduction

   The implementation of this project will not only create jobs required for the construction works but also develop industries such as promotion of agricultural product distribution and tourism and provide easier access to educational and medical facilities, thereby contributing to poverty reduction.

3) Promotion of Social Development (e.g. Gender Perspectives, Measure for Infectious Diseases including HIV/AIDS, Participatory Development, Consideration for People with Disabilities, etc.)

There are 17 educational facilities (e.g. kindergarten and primary schools) in the construction area of this project. Children in this area cannot go to school in the rainy season because there are no roads; therefore, this project is expected to provide them with easier access to schools. This project also will implement environmental management measures including the installation of speed bumps, the building of pedestrian bridges and the provision of traffic education.

(8) Collaboration with Other Donors

None

(9) Other important issues

None

4. Target Outcomes

(1) Quantitative Effects

1) Performance Indicators (Operation and Effect Indicators)

Indicator	Baseline (Recorded in 2011)	Target (2023) (5 years after completion)
Annual average of traffic volume (No. of vehicles/day)		
Widening of the existing CA-1 (Between Moncagua and El Obrajuelo)	22,524	30,911
Construction of a bypass (Between El Obrajuelo and Hato Nuevo)	N.A.	13,132
Construction of a bypass (Between Hato Nuevo and El Papalon)	N.A.	2,064
Average travel speed in urban areas (km/h)	8.0	14.1
Time required for passing through the above section (min.)	58.3	26.9

2) Internal Rate of Return

Based on the conditions given below, the economic internal rate of return (EIRR) of this project is 13.94%. This project's financial internal rate of return (FIRR) is not calculated because this project does not involve income charge from tolls.

Expense: Project cost (excluding taxes), Operating and maintenance cost

Benefits: Reduction in driving costs

Project life: 20 years

(2) Qualitative Effects

Alleviation of traffic congestion in San Miguel, elimination of narrow paths to facilitate distribution in San Miguel and its surrounding areas, support for and promotion of economic development in urban/rural areas (improvement of distribution, promotion of industrial and tourism development), securing of smooth traffic on the Pan-American Highway (collaboration with regions in Central America) and promotion of measures for adaptation to climate change

5. External Factors and Risk Control

Natural disasters at the construction area

6. Lessons Learned from Past Projects

(1) Evaluation results of similar projects

According to the results of the evaluation carried out by MOPTVDU of the Road Improvement Project, an ODA loan project, unexpected natural disasters and abnormal weather, route changes after project planning and the delay of land acquisition due to such changes were the biggest factors that largely extended the project period and increased the project expenses. Lessons learned from the evaluation results were as follows; 1) a timetable should be set out with due consideration given to possible impacts of rainfall on the construction work period; and 2) it is desirable to carry out more detailed technical investigation and design in order to avoid design changes that may cause cost overruns as well as delays in construction working.

(2) Lessons to this project

In recognition of the above lessons, the implementation schedule for this project was set out with it borne in mind that natural disasters are highly likely to occur in the rainy season (in general, this is the period between May and November). Furthermore, the project schedule of the existing agency will be followed up while careful attention is paid to design changes that may cause delays to the implementation schedule and cost overruns.

7. Plan for Future Evaluation

(1) Indicators to be used

As specified in 1) Performance Indicators (Operation and Effect Indicators) of (1) Quantitative Effects in 4. Target Outcomes

(2) Timing of the next evaluation

Two years after project completion