

Ex-Ante Evaluation (for Japanese ODA Loan)**1. Name of the project**

Country: Republic of Rwanda

Project: Rusumo-Kayonza Road Improvement Project

Loan Agreement: July 13, 2016

Loan Amount: 6,889 million yen

Borrower: The Government of the Republic of Rwanda

2. Background and Necessity of the Project**(1) Current State and Issues in the Transportation Sector in Rwanda**

In Rwanda, the transportation sector plays an important role in the nation's economy, accounting for 15% of the service industry in terms of GDP (the service industry to GDP ratio was 49% as of 2015). Because Rwanda is a landlocked country located approximately 1,400 km away from the nearest international port, the Dar es Salaam Port in Tanzania, Rwanda faces high transportation costs, which account for approximately 40% of import and export prices. This proportion is much higher than that of its neighboring country, Kenya, with 12%. Such high transportation costs have caused a bottleneck in Rwanda's economic growth through private sector development.

Roads are the exclusive means of overland transportation in Rwanda, from which there are two overland routes to the ocean: (i) the Northern Corridor running to the Mombasa Port in Kenya through Gatuna on the border with Uganda and (ii) the Central Corridor running to the Dar es Salaam Port through Rusumo on the border with Tanzania. The road to be upgraded through the Rusumo-Kayonza Road Improvement Project (hereinafter referred to as "this Project") is part of the Central Corridor, which is an important transportation route for Rwanda. This corridor, as well as the Northern Corridor running from Rwanda through Uganda to Kenya, is considered as an important logistics route for Rwanda, which is landlocked. On the road to be improved through this Project, the traffic volume is 1,800 vehicles per day (as of 2014), and it is projected to exceed 3,000 vehicles per day by 2020.

Nevertheless, the target road of this Project has deteriorated significantly over time as it has been rehabilitated only once in the 1990s since it was constructed in 1978. Moreover, because the road was designed based on old standards, the width is too narrow for large trucks to travel safely.

The major bottleneck of high transportation costs in Rwanda can be relieved by making the Central Corridor more useful as it travels a shorter distance through fewer borders to the closest port than the Northern Corridor.

(2) Development Policies for the Transportation Sector in Rwanda, and the Priority of the Project

The Vision 2020, Rwanda's long-term development plan, indicates the importance of developing and improving roads to ensure safe and reliable transport services. Moreover, the Second Economic Development and Poverty Reduction Strategy (EDPRS-2) for 2013-2018, a medium-term development strategic plan formulated under the Vision 2020, aims to achieve "sustainable economic growth through private sector development." To this end, this strategic plan includes in its scope the development of domestic and international transportation infrastructure to promote regional integration and improve access to basic social services, and approximately 11% of the national budget for the strategic plan is to be allocated to the transportation sector. In addition, high priority is given to the removal of tariff barriers on the international corridors to promote export as well as the development of national roads to improve access to rural areas.

This Project is part of the Kibuye-Busega-Mpigi and Kagitumba-Kayonza-Rusumo Roads Project (the former road runs through Uganda) implemented by the African Development Bank (hereinafter referred to as the "AfDB"). Out of the project for the Rusumo-Kagitumba Road (with a length of 208km) in eastern Rwanda (hereinafter referred to as the "Overall Project"), this Project covers the Rusumo-Kayonza Road (with a length of 92km). The Overall Project, including this Project, is placed high on the priority list in the Government Seven Year Plan 2010-2017, a statement of the policies of the incumbent president.

The Overall Project, including this Project, is positioned to contribute to the development of major regional economic corridors aimed at in the Ten Year Investment Strategy for Priority Infrastructure Projects (2015-2025) of the East African Committee (hereinafter referred to as the "EAC").

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

Japan's Country Assistance Policy for the Republic of Rwanda (2012) identifies "economic infrastructure development" as one of the priority areas. Moreover, JICA's Country Analysis Paper for the Republic of Rwanda indicates that because Rwanda's goal of economic growth through private sector development cannot be achieved without promoting regional integration for sustainable economic development, it is important to provide support for the "development of region-wide economy and international corridors in the Eastern African region." In light of this analysis, JICA is working on the Program for Improvement of Economic Infrastructure with a purpose of supporting the development of infrastructure for economic growth so as to contribute to the economic integration of the EAC.

In order to support the development of international corridors, JICA implemented the Project for Construction of Rusumo International Bridge and One Stop Border Post Facilities, which is a grant aid project to construct an international bridge and

One Stop Border Post (hereinafter referred to as “OSBP”) facilities on the Rwanda-Tanzania border at the end of the target road of this Project. In addition, JICA is cooperating with EAC members, including Rwanda, to carry out the Project on Capacity Development for International Trade Facilitation in the Eastern African Region (from December 2013 to December 2017), which is a technical cooperation project to develop the capacity to operate the Rusumo OSBP facilities built through the grant aid project. JICA is also assisting the EAC in promoting its regional integration, for example, by helping five EAC countries establish legal frameworks for the harmonization of axle load controls and provide support to develop an EAC OSBP bill.

Furthermore, the Yokohama Action Plan 2013-2017 adopted at the Fifth Tokyo International Conference on African Development (TICAD V) includes “region-wide transportation corridor development” as one of the pillars of the focus area of “backbone infrastructure development in both urban and rural areas” under “II. Accelerating Infrastructure and Capacity Development,” and this Project is positioned to contribute to the action plan.

(4) Other Donors’ Activity

Major development partners in the Rwandan transportation sector include the AfDB, the World Bank, the European Union (EU), China, and the Organization of the Petroleum Exporting Countries (OPEC) Fund for International Development. They are providing support for the development of international corridors and OSBP facilities.

(5) Necessity of the Project

On the Rusumo-Kayonza Road, a new bridge was constructed on the Rwanda-Tanzania border through Japan’s grant aid for the Project for Construction of Rusumo International Bridge and One Stop Border Post Facilities, since which the inflow of traffic from the Central Corridor has increased significantly. Traffic volume is projected to further increase because the OSBP facilities developed through the grant aid project was recently opened to the public. This Project is expected to contribute to economic development and poverty reduction in Rwanda by facilitating traffic safety and logistics via the Central Corridor. This Project is in line with the development issues and policies of Rwanda as well as the assistance policies of Japan and JICA; therefore, it is highly necessary for JICA to implement this Project.

3. Project Description

(1) Project Objectives

This project is to support repairs and widening of the Rusumo-Kayonza Road, which is located at a key logistics point for Rwanda, through co-financing by AfDB, thereby making overland transportation smoother and decreasing transportation costs to stimulate the transportation of goods in Rwanda and nearby countries.

(2) Project Site/Target Area

Eastern Provinces of the Republic of Rwanda (Rusumo-Kayonza)

(3) Project Components

The Overall Project, including this Project, consists of three components: (i) rehabilitation of the Rusumo-Kagitumba Road (to be divided into three sections); (ii) project management support; and (iii) support for the transportation sector.

Out of the three sections of the trunk road (with a total length of 208 km) mentioned above in (i), this Project is designed to repair the third section (the Rusumo-Kayonza Road with a length of 92 km), which is expected to provide a high internal rate of return. These engineering works will be co-financed by the AfDB in the framework of Accelerated Co-financing Facility for Africa (ACFA) under the joint initiative for Enhanced Private Sector Assistance for Africa (EPSA for Africa). The table below shows the contributions of development partners to the components of this Overall Project.

Components of Overall Project		Development partner	Financing scheme
(i) Rehabilitation of Rusumo-Kagitumba Road (208 km; divided into three sections) - First Section: Kagitumba-Gabiro Road (60 km) - Second Section: Gabiro-Kayonza Road (56 km) - Third Section: Rusumo-Kayonza Road (92 km)	Kagitumba-Bugaragara Road of the First Section (25 km)	EU	Parallel
	Bugaragara-Gabiro Road of the First Section (35 km)	AfDB	-
	Second Section	AfDB	-
	Third Section	JICA AfDB	Joint
(ii) Project management	Support for the Project Implementation Unit, economic impact assessment and monitoring, etc.	AfDB	-
(iii) Support for the transportation sector	Support for safety measures	AfDB	-

(4) Project Cost

11,364 million yen (Loan Amount: 6,889 million yen)

(5) Project Implementation Schedule: July 2016 to September 2020 (51 months in total). The project completion is defined at the time of work completion (September 2019).

(6) Project Implementation Structure

- 1) Borrower: The Government of the Republic of Rwanda
- 2) Guarantor: None

3) Executing Agency:

Rwanda Transport Development Agency (hereinafter referred to as “RTDA”)

4) Operation and Maintenance System

The RTDA is responsible for the maintenance of the road to be rehabilitated by this Project though actual road inspections and daily/routine maintenance activities will be outsourced to a private company. The RTDA is expected to successfully maintain the target road of this Project because it is maintaining other roads in the same way by outsourcing the work to private companies and because sufficient revenue can be generated every year from fuel and road toll taxes to cover road maintenance costs.

Environmental and Social Considerations/Poverty Reduction/Social Development

1) Environmental and Social Considerations

(i) Category: B

(ii) Reason for Categorization: This Project is classified as Category B because it does not correspond to a large-scale project of the road sector as set out in the JICA Guidelines for Environmental and Social Considerations (published in April 2010), and it is therefore judged that adverse impact on the environment will not be serious. In addition, the Project site is not located in a region which is likely to suffer such impact as set out in the abovementioned guidelines.

(iii) Environmental Permit: An Environmental and Social Impact Assessment (ESIA) report related to this project was approved by the Rwanda Development Board (RDB) in August 2015.

(iv) Anti-Pollution Measures: Construction noise will be controlled to meet the environmental standards of Rwanda by taking measures such as using and maintaining low-noise equipment. During the construction and after the commencement of services, air pollution will be minimized by taking measures such as sprinkling water, limiting the speed of vehicles, and planting trees. Moreover, the waste footprint of the construction works will be reduced by taking measures such as disposing of the construction waste soil at a designated site and recycling used concrete to pave roads. After the commencement of services, the air quality and noise level are likely to meet the environmental standards of Rwanda as mitigation measures, such as limiting the speed of vehicles and planting trees, will be taken near residential and school areas.

(v) Natural Environment: The project site is not located in or around sensitive areas such as national parks; therefore, this Project is likely to have a minimal adverse impact on the natural environment.

(vi) Social Environment: This Project will require land acquisition of 21,730 m² and involuntary resettlement of 12 households. The land acquisition and resident relocation will be implemented as per the Resettlement Action Plan to be

developed in accordance with the Rwandan procedures and the JICA Guidelines. At the meeting with local residents in January 2015, none of the affected residents in the project site expressed opposition against this Project.

(vii) Other/Monitoring: During the construction period, the contractor and the RTDA will monitor the quality of air and water and the level of noise. After the commencement of services, the RTDA and the contract maintenance company will monitor the quality of air and the level of noise. Moreover, the RTDA and other relevant organizations will monitor the resettlement process and its impact on the livelihood of local people before, during, and after the construction period.

2) Promotion of Poverty Reduction

This Project is expected to contribute to poverty reduction among local residents by securing the transportation of agricultural products and facilitating international trade.

3) Promotion of Social Development

Gender-integrated project (Reason for classification: the AfDB is planning to raise awareness of the importance of gender mainstreaming among local people in the target areas of the Overall Project, including this Project. This Project is also designed to carry out awareness-raising activities and expand job opportunities for women. Therefore, this Project is classified as a gender-integrated project.)

(7) Collaboration with Other Donors

This Project will be co-financed by the AfDB, which is to make an agreement with JICA for the management of this Project (e.g., procurement and disbursement) and finance the various components of the Overall Project, including this Project (e.g., road rehabilitation works, project management, support for the transportation sector), in accordance with the guidelines on the Accelerated Co-financing Facility for Africa (ACFA).

4. Targeted Outcomes

(1) Quantitative Effects

Outcomes (Operation and effect indicators)

Indicators	Baseline (Actual value in 2014)	Target (2021) [two years after project completion]
Annual average daily traffic on the Rusumo-Kayonza Road (vehicles/day)	1,848	3,070
Travel time between Rusumo and Kayonza (minutes)	120	90

(2) Qualitative Effects

This Project is expected to promote regional integration in the Eastern African region, improve the traffic environment in the region, boost trade with neighboring countries, and improve the living environment of local residents in the region.

(3) Internal Rate of Return (IRR)

Based on the conditions below, the economic internal rate of return (EIRR) of this project was calculated as 18.7%. Since this Project is to construct a road which do not collect road toll, the financial internal rate of return (FIRR) is not calculated.

【EIRR】

- Cost: Project cost (excluding tax) and road maintenance cost
- Benefit: Reduction of travel cost, travel time required, etc.
- Project Life: 20 years

5. External Risk Factors and Control

The projects financed by other development partners are implemented as planned.

6. Evaluation Results and Lessons Learned from Past Projects

(1) Results of Evaluation of Similar Past Projects

The ex-post evaluation of projects co-financed by other development partners, such as the Marrakech-Agadir Motorway Construction Project in the Kingdom of Morocco (L/A signed in March 2006), pointed out that when Japan offers an ODA loan to part of a project, it will be desirable for all development partners involved to set common indicators (baseline and target values) to assess the effects of the overall project so that they can be traced through joint monitoring.

(2) Lessons for the Project

At the preparation and appraisal stages of this Project, JICA had sufficient discussions with the RTDA and the AfDB to set indicators for the Overall Project and determine how to monitor them as well as set evaluation indicators that can be used to assess this Project alone.

7. Plan for Future Evaluation

(1) Indicators to be Used

- 1) Annual average daily traffic (vehicle/day)
- 2) Travel time (minutes)

(2) Timing

Two years after the completion of the project.