

**Ex-Ante Evaluation (for Japanese ODA Loan)**  
**Southeast Asia Division 4, Southeast Asia and Pacific Department,**  
**Japan International Cooperation Agency (JICA)**

**1. Basic Information**

Country: The Republic of the Union of Myanmar

Project: Regional Infrastructure Improvement Project

Loan Agreement: January 21, 2020

**2. Background and Necessity of the Project**

(1) Current State and Issues of the Regional Development Sector in Myanmar and the Positioning of the Project

Since the transition to civilian government in 2011, especially, under the administration led by the National League for Democracy (NLD) that took office in March 2016, the Government of the Republic of the Union of Myanmar ("Myanmar") has been promoting efforts for democratization, national reconciliation, and economic reform. The lifting of economic sanctions by Western countries and the expansion of trade and investment have encouraged economic activities in Myanmar. As a result, its GDP growth has been around 7% in recent years.

On the other hand, the socio-economic situation in Myanmar is still in a state of development. The Gross National Income (GNI) per capita announced by the United Nations' Department of Economic and Social Affairs in 2018 was 1,255 US dollars, and Myanmar is positioned as a "Least Developed Country (LDC)" as of July 2018. In addition, the poverty rate (ratio of the poor population) was 32.1% as of 2015, which is extremely high among other Mekong countries. Therefore, improving people's lives is an important issue for the current administration. In particular, the development of basic infrastructure in Myanmar, including roads, electricity, and water supply services, is lagging far behind other Mekong countries. The national average of the water supply rate is 23% (WHO/UNICEF 2017) (39% on average in the Mekong countries), the road pavement rate is 35% (ASEAN 2018) (ibid. 62%), and the electrification rate is 59% (IEA 2017) (ibid. 82%), which means that basic infrastructure needs to be improved across the country.

Under such circumstances, in order to achieve balanced national development, the Myanmar government has formulated the "National Comprehensive Development Plan (NCDP)" (2014). The goals of the NCDP are to maximize the economic potential of each region/state to establish a sustainable and diversified market economy, and achieve comprehensive development and growth. In the Plan, the "Economic Corridor

Development Project" is positioned as the center of economic policy, and the policy is to promote economic development. Also, in the economic policy announced by the Myanmar Government in July 2016, among other things, balanced economic development across states and regions has been set as an important goal, and therefore, regional development and poverty reduction that support national reconciliation are considered as key challenges for the country. In August 2018, the Myanmar government published the Myanmar Sustainable Development Plan (MSDP) (2018-2030), which advocates promoting equitable and conflict-sensitive socio-economic development throughout all states and regions.

Among these, the poverty rate in Myanmar is the first and second highest in Chin and Rakhine States: the infrastructure development rate in Chin State is 15.4%, the infrastructure development rate and the water supply rate in Rakhine State are 12.8% and 4.9% respectively (the 2014 Myanmar Population and Housing Census). Thus, infrastructure development is a challenge for the economic development in states with high poverty rates. As mentioned above, the "Economic Corridor Development Project" is positioned as the center of Myanmar's economic policy, and at the same time, the 8th Ayeyarwady-Chao Phraya-Mekong Economic Cooperation Strategy (ACMECS) Summit held in Thailand in June 2018 announced that the East-West Economic Corridor and the Southern Economic Corridor connecting Thailand and Myanmar will be promoted as priority projects. Given these circumstances, it is considered effective to develop basic infrastructure in Mon and Kayah States and Tanintharyi Region, where both corridors are located to achievement of economic development.

(2) Japan and JICA's Cooperation Policy, etc. in the Regional Development Sector and the Positioning of the Project

In the "Japan's economic cooperation to the Republic of the Union of Myanmar" established in April 2012, "assistance to improve people's livelihoods" and "assistance for developing infrastructure and related systems necessary for sustainable economic growth" are positioned as priority fields, which include the Project contributing to stable socio-economic development in rural areas through basic infrastructure development. Also, the "Japan-Myanmar Cooperation Program" agreed upon between the Japanese and Myanmar Governments in November 2016 focuses on balanced development between urban and rural areas based on the cooperation pillars: "development of rural agriculture and infrastructure" and "transportation infrastructure connecting rural and urban areas," and the Project is consistent with these cooperation policies.

Also, since the Project is considered to help achievement of Sustainable Development Goals 1—ending poverty in all its forms, everywhere—and Goal 10—reducing

inequalities within and among countries—by contributing to balanced economic development between rural and urban areas, JICA's assistance for the Project is highly necessary.

### (3) Other Donors' Activities

The World Bank (WB) has been implementing "community driven development project" (loan aid: 2012–2019 and grant aid: 2015–2021). In the power supply field, the WB has helped to formulate the "National Electrification Plan" and carried out the "National Electrification Project" nationwide since 2015. The Asian Development Bank (ADB) is supporting the road improvement project in Ayahwadi Region since 2014. Also, the ADB has been implementing the "power Distribution Improvement Project" (2014–2018) in Yangon, Mandalay, Magway and Sagaing regions. In the water supply sector, ADB supports the water supply system improvement project (2018–2025) in Kayin and Mon States, but there is no overlap in the targets between these projects and the Project.

## **3. Project Description**

### (1) Project Objective

The objective of the Project is to improve the living standard in regional areas, through construction, rehabilitation, and installation of basic infrastructure such as roads, bridges, power and water supply facilities, thereby contributing to stable socio-economic development in regional areas.

### (2) Project Site/Target Area

Nationwide: Rakhine, Kayin, Mon and Chin State and Taninthary region are identified as Priority Target Area

### (3) Project Components

Sub-projects of the Project are determined in the implementation stage from the following sectors. Specifically, sub-projects will be selected based on the compatibility with the development plan, urgency, necessity, economic benefits, feasibility, and other factors through discussions with the central and local governments.

- 1) Road and bridge sub-projects: Development of roads and bridges in rural areas
- 2) Electricity supply sub-projects: Construction and rehabilitation of low voltage (66 kV or less) power transmission/distribution grids (including the construction and installation of substations and transformers)
- 3) Water supply sub-projects  
Development/expansion of water distribution and supply facilities in regional cities (including the development of water purification facilities)
- 4) Consulting services

Support for detailed design review, bidding assistance, construction supervision, project management, and environmental and social considerations etc.

(4) Estimated Project Cost

42,356 million yen (including ODA loan of 38,642 million yen)

(5) Project Implementation Schedule

From January 2020 to October 2025 (70 months in total) provided that the project is considered to be completed when all the facilities under sub-projects are placed in service in October 2024.

(6) Project Implementation Structure

1) Borrower: The Government of the Republic of the Union of Myanmar

2) Guarantor: None

3) Executing Agencies:

Under the coordination of the Foreign Economic Relations Department (Ministry of Investment and Foreign Economic Relations), the Department of Highways (Ministry of Construction) serves as the executing agency for road sub-projects; the Department of Bridge (Ministry of Construction) for bridge sub-projects, the Department of Rural Road Development (Ministry of Construction) for small rural road and bridge sub-projects, the Electricity Supply Enterprise (Ministry of Electricity and Energy) for electricity supply sub-projects, and the Department of Rural Development (Ministry of Agriculture, Livestock and Irrigation) for water supply sub-projects.

4) Operation/Maintenance and Management Agency

For the road, bridge, and electric power sectors, operation and maintenance is performed by state/regional offices or district/township offices of each executing agency. For the water supply sector, operation and maintenance is performed by the township development committees under the advice and supervision of the regional/state government development committees.

(7) Collaboration and Division of Roles with Other Projects and Donors

1) Japan's Assistance Activities

To assist infrastructure development in rural areas, the "Regional Development Project for Poverty Reduction (Phase 1)" (17,000 million yen, signed in 2013) and the "Regional Development Project for Poverty Reduction (Phase 2)" (23,979 million yen, signed in 2017) have been implemented as loan-aid projects.

2) Other Donors' Assistance Activities

The WB has been implementing community-driven development projects (loan aid: 2012–2019 and grant aid: 2015–2021). This project targets the development of

community infrastructure, such as village roads and village water supplies, that is smaller in scale than the infrastructure targeted by the Project. Also, the ADB has been implementing the water supply system improvement project (2018–2025) in Kayin and Mon States, but there is no overlap in the targets between these projects and the Project.

(8) Environmental and Social Considerations/Cross-Cutting Issues/Gender Classification

1) Environmental and social considerations

i. Category: B

ii. Reason for Categorization: The Project does not fall under a large-scale road and bridge sector project as per the "JICA Guidelines for Environmental and Social Considerations" (effective as of April 2010), so its potential adverse impacts on the environment are deemed negligible. The project does not have any sensitive characteristics nor is it located in any sensitive area that might be impacted by influences cited in the Guidelines.

iii. Environmental Permit: Because Myanmar's domestic laws will require the preparation of an Initial Environmental Examination (IEE) report for some sub-projects, the executing agencies will formulate the IEE report by February 2020 based on the environmental impact assessment framework, to obtain approval from the Environmental Conservation Department (ECD) by June 2020.

iv. Anti-Pollution Measures: In the environmental impact assessment framework, mitigation measures, such as use of low-exhaust gas equipment, water sprinkling, installation of sedimentation basins, and use of low-noise heavy equipment, are proposed for air pollution, water pollution, noise, vibration, etc. during construction work, and mitigation measures, such as promotion of recycling and disposal at designated disposal sites, are proposed for waste and other materials generated after the start of service. After sub-projects have been determined, mitigation measures will be implemented in accordance with the environmental management plan established based on the environmental impact assessment framework.

v. Natural Environment: Since the project sites are not in or near sensitive areas, such as national parks, the Project is considered to have minimal adverse impacts.

vi. Social Environment: If the Project involves land acquisition or resident resettlement after sub-projects are determined, such acquisition will be

implemented according to the resettlement plan prepared based on the environmental impact assessment framework.

vii. Other/Monitoring: For road, bridge, electricity, and water supply sub-projects, the relevant executing agencies and contractors will conduct monitoring activities for air quality, water pollution, noise, vibration, etc. during construction work according to monitoring plans.

## 2) Cross-Cutting Issues

- i. Climate Change-related Projects: Water supply sub-projects of the Project are expected to contribute to climate change mitigation (adaptation) measures.
- ii. Poverty Reduction and Considerations: The Project falls under poverty reduction measures because poverty rates in Chin and Rakhine States and Tanintharyi Region targeted by the Project are 73.8%, 43.5%, and 32.6%, respectively, which are higher than the national average (25.6%) (Integrated Housing Living Conditions Survey in Myanmar 2011).

## 3) Gender Classification:

[Not applicable] GI (Gender Informed)

<Description of activities and reason for classification> Although the possibility of incorporating a gender perspective is examined for each individual sub-project in the implementation stage of the Project, specific efforts that would contribute to gender equality and women's empowerment will not be implemented at present.

(9) Other Important Issues: None in particular

#### 4. Targeted Outcomes

##### (1) Quantitative Effects

1) Outcomes (Operation and Effect Indicators): To be specified when sub-projects are determined.

Indicator	Baseline (Actual value in 2018)	Target (2026) (2 years after project completion)
<p>(a) Road and bridge sub-projects</p> <p>&lt;Rural highways&gt;</p> <ul style="list-style-type: none"> <li>▪ Annual daily average traffic volume (cars) (PCU/day)</li> <li>▪ Annual daily average traffic volume (freight cars) (PCU/day)</li> <li>▪ Average speed (km/hour average)</li> </ul> <p>&lt;Rural highway bridges&gt;</p> <ul style="list-style-type: none"> <li>▪ Annual daily average traffic volume (cars) (PCU/day)</li> <li>▪ Annual daily average traffic volume (freight cars) (PCU/day)</li> <li>▪ Average velocity (km/hour average)</li> </ul> <p>&lt;Rural roads and bridges&gt;</p> <ul style="list-style-type: none"> <li>▪ Average running time (hour average)</li> <li>▪ Average running speed (km/hour average)</li> <li>▪ Number of impassable days (days/year)</li> </ul>	<p>Baseline and target values are to be specified when sub-projects are determined in the implementation stage.</p>	
<p>(b) Electricity supply sub-projects</p> <ul style="list-style-type: none"> <li>▪ Electrified Households by grid (Total)</li> <li>▪ Sales volume (MWh/month total)</li> <li>▪ Electrification rate (%)</li> </ul>		
<p>(c) Water supply sub-projects</p> <ul style="list-style-type: none"> <li>▪ Population Served (persons total)</li> <li>▪ Amount of Water supply (m<sup>3</sup>/day total)</li> </ul>		

2) Impacts: Stable socio-economic development in rural areas

(2) Qualitative Effects: Improvement of residents' living standard in regional areas

(3) The Project's internal rate of return is not calculated because sub-projects implemented cannot be identified in advance.

#### 5. Prerequisites and External Factors

(1) Prerequisites: None in particular

(2) External factors: None in particular

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

Based on the ex-post evaluation results of the yen-loan project "Rural Areas Infrastructure Development Project (3)," for the Republic of Indonesia, it has been pointed out that it is necessary to develop and operate a systematic management system, covering from the center to actual project sites, for supervising small-scale distributed projects.

Also, in the "Regional Development Project for Poverty Reduction (Phase 1)", the Ministry of Planning and Finance was expected to coordinate executing agencies and determine and manage policies for project implementation as an upper coordination agency in the project management unit (PMU). However, it was difficult for the Ministry of Planning and Finance, which has not been involved in local development and infrastructure development, to perform such a function.

Based on the above lessons, in the Project, the roles and responsibilities of the Ministry of Planning and Finance as the coordination agency and each executing agency are clarified, and a Project Management Unit (PMU) consisting of deputy directors or chief engineers of the relevant ministries is established to hold cross-sectional discussions, manage the progress of the overall project, and conduct monitoring. Furthermore, a Project Steering Committee (PSC) that is responsible for approval of discussions by the PMU, reporting of the Project status to state and regional governments involved in the Project, and exchanging opinions between the central and local governments is established to build a system that ensures seamless information sharing and collaboration at the central government (executing agency), state/regional government, and township levels.

Drawing on the lessons learned in the "Regional Development Project for Poverty Reduction (Phase 1)", in the Project, the Ministry of Planning and Finance will provide administrative support for PMU/PSC meetings and advice on cross-sectoral matters, and the Department of Highways (Ministry of Construction), as an executing agency, will take a leading role in coordinating executing agencies as well as project planning and operation management from the perspective of regional development.

## **7. Evaluation Results**

The Project conforms to the development issues and policies of Myanmar and the assistance policies and analysis of Japan and JICA, and contributes to balanced economic development of between rural and urban areas through regional infrastructure



development. Also, as it is deemed to contribute to Sustainable Development Goals 1—ending poverty in all its forms, everywhere—and Goal 10—reducing inequalities within and among countries—, it is highly necessary for JICA to provide support for the implementation of the Project

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

### (1) Indicators to be Used

As provided in 4. (1) to (3).

### (2) Next Evaluation Schedule

Ex-post evaluation: Two years after the project completion