

Ex-Ante Evaluation

1. Name of the Project

Country: The Republic of the Union of Myanmar

Project: Communication Network Improvement Project

Loan Agreement: March 26, 2015

Loan Amount: 10,500 million yen

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

2. Background and Necessity of the Project

(1) Current State and Issues of Communication Sector in Myanmar

The telecommunication infrastructure has lagged in Myanmar due to many years of restrictions on imports and insufficient financial resources. Until now, Myanma Posts and Telecommunications (MPT) under the Ministry of Communications and Information Technology (MCIT) has substantially monopolized the provision of domestic fixed telephones, mobile phones, and the Internet. Insufficient network capacity and a high usage fee, etc. keep the prevalence of communication tools low, as evidenced by a fixed telephone penetration rate of only 1.00% (534,000 subscribers), a mobile phone penetration rate of 12.83% (6,832,000 subscribers), and an Internet penetration rate of 1.20% as of 2013. Such prevalence is the lowest among ASEAN members. In particular, the penetration rate of popular mobile phones exceeds 100% in other countries, while remaining extremely low in Myanmar.

After establishment of Thein Sein administration in March 2011, communication usage fee is significantly lowered. Since then, the number of communication service users has steadily grown. The Myanmar government called for bids on new telecommunication licenses, which previously had been monopolized, based on the new Telecommunication Act. In June 2013, Telenor of Norway and Qatar Ooredoo were selected. Both companies were granted telecommunication licenses by the end of January 2014, and started full-scale service in fiscal 2014.

Communications infrastructure serves as the basis of all economic activities and the daily lives of citizens. The homogeneous development of the country including areas with minority ethnic groups requires improvement of the nationwide communication network. Thilawa area, a suburban Yangon, is being developed by Japan and Myanmar as a special economic zone (SEZ) via public/private sector cooperation. The district will attract foreign companies, and thus substantially increase communication with foreign countries. The international communication that supports this development should also be improved. Subsequent economic growth in the future will result in an increasingly heavier volume of communication that could further deteriorate the communication environment. Therefore, the Myanmar government should urgently tackle the improvement of communications infrastructure.

(2) Development policies for Communication Sector in Myanmar and Priority of the Project

The Myanmar government is preparing a first national development five-year plan (2011 - 2015) that covers [1] reforms (politics, economy, public administration, private sector development), [2] citizen-centered development, and [3] ten prioritized areas of development (industrialization, energy, electric power, information and communications, transportation, basic health, education improvement, social security, clean water, and rural development/poverty reduction). This project covers [2] citizen-centered development and information and communications under the [3] ten prioritized areas of development.

The Myanmar government sets the following goals for economic development and improvement of citizens' lives: [1] increasing the communication penetration rate (teledensity), [2] creating an environment that ensures affordable communication service in both cities and farming villages, and [3] providing options for citizens and companies concerning communication service and service providers.

(3) Japan and JICA's Policy and Operation concerning the Communication Sector

The economic cooperation policy towards Myanmar established in April 2012 focuses on "support for establishing the infrastructure and framework necessary for sustainable economic growth" as one of the key areas. This project aims to promote improvement of the communication environment in major cities and contribute to sustainable economic growth, and thus is consistent with said policy. JICA had previously signed a grant aid agreement for the "The Project for Urgent Improvement of Communication Networks (grant aid cooperation, March 2013 - February 2014)" in order to establish a communication network urgently needed by Myanmar, which was experiencing rapid democratization and undergoing economic reform, and later dispatched experts in the field of communication (November 2013 - June 2015).

(4) Other Donors' Activity

The World Bank offered technical cooperation (totaling approx. 50 million yen) to support communication sector reform, and is now proceeding with the "The Communication Sector Reform Project" (with an IDA loan totaling approx. 3.15 billion yen). The Asian Development Bank has also offered technical cooperation since 2014 for formulating an electronic government master plan.

(5) Necessity of the Project

As stated above, this project is consistent with Myanmar's development agenda and development policy, as well as the key aid policies of Japan and JICA. Accordingly, both the need and relevance for JICA's support in implementing this project are high.

3. Project Description

(1) Project Objectives: This project aims to increase communication capacity by improving communication network, thereby contributing to economic development in Myanmar.

(2) Project Site/Target Area: Three major cities in Myanmar—Yangon (including Thilawa area), Nay Pyi Taw, and Mandalay

(3) Project Description

- 1) Improving the communication network entails [1] enhancing the backbone network among the three cities, [2] expanding the Yangon Metro network, [3] enhancing national gateway, [4] Upgrade ISP Services and Introduce IPv6 in Yangon and [5] expanding the Thilawa area communication network.
- 2) Consulting Services

(4) Estimated Project Cost

12,655 million yen (Loan Amount 10,500 million yen)

(5) Schedule

From March 2015 to August 2020 (a total of 66 months). Project completion is defined as when the facility is officially provided.

(6) Project Implementation Structure

- 1) Borrower: The Government of the Republic of the Union of Myanmar
- 2) Guarantor: None
- 3) Executing agency: Ministry of Communications and Information Technology, Myanma Posts and Telecommunications
- 4) Operation/maintenance/management system: same as the above

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

1) Environmental and social consideration

(i) Category: B

(ii) Reason for categorization: This project has no sectors or characteristics that have impact as listed in the JICA Guidelines for Environmental and Social Consideration (issued in April 2010), includes no areas susceptible to impact, and thus is judged to have minimum undesired impact on the environment.

(iii) Environmental permission and authorization: Myanmar's domestic laws do not require the preparation of an environmental impact assessment (EIA) report concerning the project.

(iv) Measures against pollution: Taking such measures against poor air quality, noise, etc. during construction work can minimize negative impact and thus satisfy international environmental standards (e.g. use of low-noise/oscillation construction machines).

(v) Natural environmental consideration: The project does not include any national parks or other areas susceptible to impact, and is expected to have minimum undesired impact on the natural environment.

(vi) Socio-environmental consideration: The project uses land owned by MPT, and does not need to acquire land or relocate residents.

(vii) Other/monitoring: In this project, the implementing body will monitor the air quality and noise during the work.

2) Promotion of poverty reduction: None

3) Promotion of social development: None

- (8) Collaboration with Other Schemes and Donors: Aiming at enhancing the implementing body’s organizational capacity and supporting the formulation of an appropriate plan for improving the information communication network, “Advisor for Improvement of Telecommunication Infrastructure” (individual experts assigned from November 2013 - June 2015) are dispatched to give advice concerning policy and technology to MCIT and MPT. This project aims to further expand the communication network that was urgently established by the grant aid cooperation signed in December 2012.

4. Targeted Outcomes

- (1) Quantitative Effects
 1) Indicators for operation/effect

| Indicator | Baseline (Result in 2014) | | Target (2021) [2 years after completion of the project] | |
|--|------------------------------|------|---|-----|
| Improvement of backbone network communication speed (Gbps) | 30 | | 500 | |
| Improvement of Yangon metro network communication speed (Gbps) | 10 | | 300 | |
| Improvement of national gateway communication speed (Gbps) | Yangon: | 13.9 | Yangon: | 100 |
| | Nay Pyi Taw: | 10.0 | Nay Pyi Taw: | 100 |
| Improvement of Thilawa area communication speed (Gbps) | None | | 10 | |

- 2) Internal rate of return: The usage fee will be decided after new operators enter the market. As numerical benefits remain unclear at this time point, EIRR and FIRR will not be calculated.
- (2) Qualitative Effects: The highly reliable information communication network will energize economic activities, improve convenience for the lives of citizens, and improve investment environment of Thilawa area by improving communication network.

5. External Factors and Risk Control

- The communication penetration rate may slow down if Myanmar’s economy suddenly deteriorates.
- Significant change in policies concerning information and communications

6. Lessons Learned from Past Projects

- (1) Evaluation of Similar Projects: Among the lessons learned from the Post-Project Evaluation on the “Coastal Communication system project in Southern Part of VN” of Vietnam is the importance of combining the building of infrastructure with training for new technology and systems, in order to enjoy the effects of the project and promote sustainability.
- (2) Lessons Learned from Past Projects: Learning from the lessons above, “Advisor for Improvement of Telecommunication Infrastructure” are dispatched in this project to support

enhancing the knowledge of designing and operating the information communication network for employees at the implementing body. Based on suggestions from the advisers, further cooperation will also be considered as needed.

7. Plan for Future Evaluation

- (1) Indicators to be Used in Future Evaluations: Improvement of basic backbone network communication speed; Improvement of Yangon metro network communication speed; Improvement of national gateway communication speed; Improvement of Thilawa area communication speed
- (2) Timing for Next Evaluation
Two years after completion of the project