

Ex-Ante Evaluation (for Japanese ODA Loan)

1. Name of the Project

Country: The Democratic Socialist Republic of Sri Lanka

Project: Digitalization of Terrestrial Television Broadcasting Project

Loan Agreement: September 23, 2014

Loan Amount: 13,717 million yen

Borrower: The Government of the Democratic Socialist Republic of Sri Lanka

2. Background and Necessity of the Project

(1) Current State and Issues of the Telecommunications and Broadcasting Sector in Sri Lanka

In Sri Lanka, 16 public and private stations are broadcasting 23 TV programs; about 4 million households own TV sets, accounting for approximately 80% (2010) of all households. TV programs serve as an important source of information for many residents of Sri Lanka. In recent years, in addition to a rapid increase in the number of TV programs (from 9 in 2006 to 23 in 2013), there has also been an increase in the number of radio programs (from 21 channels in 2006 to 54 channels in 2012). As a result of these increases as well as of the quick spread of the use of cellphones and other telecommunications devices, Sri Lanka currently faces the challenge of how to make effective use of these frequencies, which are shared national resources. Also, since Sinhalese and Tamil are both recognized as official languages in Sri Lanka, there is large potential demand in the TV broadcasting for close-captioned and multi-language broadcasting. Furthermore, in recent years Sri Lanka has frequently been struck by natural disasters, including the floods of 2009 and 2011. To cope with such disasters, it is necessary to provide disaster information via quick and simple means. Given these circumstances, the broadcasting sector faces the need to introduce terrestrial digital broadcasting, which compared to conventional analog broadcasting can greatly reduce the use of frequency bands by multiplexing programs and also provide a wider variety of information, including closed-captioned and multi-language broadcasting as well as broadcasting of data such as weather and disaster information.

(2) Development Policies for the Telecommunications and Broadcasting Sector in Sri Lanka and the Priority of the Project

Sri Lanka's national development plan, "Mahinda Chintana" (2010 to 2016), aims to introduce digital technologies for TV broadcasting. More specifically, this plan sets a goal of transitioning from analog to digital broadcasting by 2017 in accordance with a roadmap developed in cooperation with the International Telecommunication Union. Based on this policy, the Sri Lankan government made a cabinet decision in April 2014 to adopt ISDB-T for Digital Terrestrial Television Broadcasting (herein after

referred to as “DTTB”).

The Digitalization of Terrestrial Television Broadcasting Project (herein after referred to as the Project) aims to promote the effective use of frequency resources in Sri Lanka by developing terrestrial digital broadcasting networks using the ISDB-T standard as well as by supporting the formulation of frequency plans. At the same time, the Project also aims to develop telecommunications infrastructure that allows for access to diverse types of information. Thus, the Project is consistent with the development being carried out by the government of Sri Lanka.

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

Japan's Country Assistance Program for Sri Lanka (June 2012) highlights the “promotion of economic growth” and “mitigation of vulnerabilities” as priority goals. In addition, the analysis in the JICA Country Analysis Paper for Sri Lanka (October 2012) concludes that the development of economic infrastructure for growth, including facilities required for expansion of the private sector, and the development of social infrastructure to mitigate vulnerabilities to natural disasters, etc. are the highest priority issues in Sri Lanka. The Project is in line with this analysis and policy.

Japan has supported the construction of broadcasting station facilities and the development of broadcasting equipment for Sri Lanka Rupavahini Corporation (SLRC) through a number of grant aid projects: TV Broadcasting Station Establishment Projects (I) and (II) in 1979 and 1980 (3.7 billion yen in total); Education TV Studio Extension Project in 1984 (1.43 billion yen); Rupavahini National Broadcasting Improvement Project in 1996 (1.36 billion yen); and The Project for the Improvement of TV Production Equipment of Sri Lanka Rupavahini Corporation in 2010 (42 million yen).

(4) Other Donors' Activity

The 350-m tall Lotus Tower is currently being constructed in Colombo City with the financial support of the Export-Import Bank of China. The Lotus Tower is expected to serve as an electric wave tower in the Greater Colombo Area, transmitting electric waves not only for the terrestrial digital broadcasting to be introduced through the Project but also for radio broadcasting as well as microwave broadcasting. The tower is scheduled to be completed in June 2015.

(5) Necessity of the Project

The Project aims to support the introduction of DTTB in Sri Lanka using ISDB-T standard and is in line with the development policy of the Government of Sri Lanka as well as the cooperation policies of the Government of Japan and JICA. It is also consistent with Japan's Infrastructure System Export Strategy (June 3, 2014). For these reasons, JICA's support for the Project is highly necessary.

3. Project Description

(1) Project Objective

The objective of the project is to promote the effective utilization of frequency resources and to develop the information communication infrastructure for enhancing the accessibility to variety of information including disaster information, closed-caption broadcasting, multi-language broad casting etc. through the development of the digital terrestrial television broadcasting network, thereby contributing to development of ICT industry and the improvement of the information accessibility for the vulnerable people.

(2) Project Site/Target Area: Entire country of Sri Lanka

(3) Project Components (including the Procurement Method)

- 1) Development of a DTTB platform: transmitting stations (antennas, transmitters, pylons, etc.), equipment for the Network Operation Center (NOC), telecommunication line facilities for broadcasting stations, construction of office buildings, etc. (international competitive bidding)
- 2) Development of terrestrial digital broadcasting studios: construction of studios, equipment for studios, TV relay vehicles, etc. (international competitive bidding)
- 3) Consulting services: basic design, bidding assistance, supervision of construction work, project management training, technical support for the transition to DTTB (support for the formulation of frequency plans, support for promotion of transmission standards, etc.), etc. (short-list method)

(4) Estimated Project Cost (Loan Amount)

17,222 million yen (Loan Amount: 13,717 million yen)

(5) Schedule

The Project is scheduled to be carried out from August 2014 to June 2018 (a total of 47 months); the Project shall be deemed completed upon the start of facility use (June 2018).

(6) Project Implementation Structure

- 1) Borrower: The Government of the Democratic Socialist Republic of Sri Lanka
- 2) Executing Agency: Ministry of Mass Media and Information
- 3) Operation and Maintenance System: Digital Broadcasting Network Operator and Sri Lanka Rupavahini Corporation

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

1) Environmental and Social Consideration

- i) Category: C
- ii) Reason for Categorization: The Project is considered to have minimal negative effects on the environment under the JICA Guidelines for Environmental and Social Considerations (April 2010).

2) Promotion of Poverty Reduction: None in particular.

3) Promotion of Social Development (e.g., gender perspective, measures to prevent

infectious diseases including HIV/AIDS, participatory development, consideration for the disabled, etc.): None in particular.

(8) Collaboration with Other Schemes and Donors: The following technical cooperation projects are expected to be implemented during the Project's implementation stage:

- i. Support for establishing a terrestrial digital broadcasting network operating organization (DBNO: Digital Broadcasting Network Operator)
- ii. Country focused training (support for promotion of terrestrial digital broadcasting, technical transfer for terrestrial digital broadcasting programs, etc.)

(9) Other Important Issues: As Special Terms for Economic Partnership (STEP) apply to the Project, Japanese technologies are expected to be used in transmission and studio equipment. In addition, the Japanese standard for terrestrial digital broadcasting will be adopted. Therefore, in addition to the direct effects of the Project, business opportunities related to private broadcasting station equipment and home TV sets are likely to increase for Japanese companies.

4. Targeted Outcomes

(1) Quantitative Effects

1) Performance Indicators (Operation and Effect Indicators)

Indicator	Baseline	Target (2020) (Expected value 2 years after project completion)
a) PF transmitter equipment downtime ratio	-	8.2%
b) Studio equipment downtime ratio	-	8.2%
Population coverage of DTTB	95%(*)	84.5%
Number of beneficiaries	-	2,474,000 persons

* Analogue TV broadcasting coverage officially announced by the Sri Lankan government: 67.2% according to an estimate based on a JICA Project Preparatory Survey

2) Internal Rate of Return

Based on the conditions indicated below, the Economic Internal Rate of Return (EIRR) of the Project is calculated to be 11.7%.

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

Benefit: Expected payments for TV broadcasting resulting from a larger audience; expansion of the TV advertising market

Project Life: 18 years after the start of facility use

Note: The Financial Internal Rate of Return (FIRR) is not calculated since no income is currently expected to be derived from the Project.

(2) Qualitative Effects

Promotion of economic growth through the effective use of frequencies; improvement in public access to information (for potential disaster victims, etc.)

5. External Factors and Risk Control

The Lotus Tower, where NOC equipment is planned to be installed, will be completed on schedule (June 2015).

6. Results of Evaluations and Lessons Learned from Past Projects

(1) Results of Evaluation of Similar Past Projects

In Latin American countries and elsewhere where the Japanese terrestrial digital broadcasting standard has been adopted, JICA has been working not only to support the introduction of terrestrial digital broadcasting with the help of JICA experts but also to promote relationship-building between a wide range of Japanese companies and related government agencies in those countries by introducing various types of equipment and TV programs.

(2) Lessons for the Project

In addition to support by consultants hired in technical cooperation project, the Project plans to build and enhance relationships between Japanese companies/organizations and related government agencies in Sri Lanka by obtaining the cooperation from the Ministry of Internal Affairs and Communications as well as related Japanese companies and organizations through technical cooperation projects supporting introduction of terrestrial digital broadcasting.

7. Plan for Future Evaluation

(1) Indicators to be Used

- (1) Equipment downtime ratio (%)
- (2) Population coverage of DTTB (%)
- (3) Number of beneficiaries (persons)
- (4) EIRR (%)

(2) Timing of Next Evaluation

Two years after project completion

END