



Technical Assistance Report

Project Number: 50299-001
Transaction Technical Assistance (TRTA)
September 2018

Democratic Socialist Republic of Sri Lanka: Expressway Operations Improvement Project

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Asian Development Bank

CURRENCY EQUIVALENTS

(as of 3 September 2018)

Currency unit	–	Sri Lanka rupee/s (SLRe/SLRs)
SLRe1.00	=	\$0.0061946
\$1.00	=	SLRs161.43000

ABBREVIATIONS

ADB	–	Asian Development Bank
CKE	–	Colombo–Katunayake Expressway
ETC	–	electronic toll collection
NKB	–	New Kelani Bridge
OCH	–	Outer Circular Highway
RDA	–	Road Development Authority
SLPA	–	Sri Lanka Ports Authority
TA	–	technical assistance

NOTE

In this report, “\$” refers to United States dollars.

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I. THE PROPOSED PROJECT

1. With economic growth averaging about 5.8% per annum since the end of the conflict in 2009, Sri Lanka is close to attaining upper middle-income country status.¹ To serve the dynamic transformation of the economy, the functions of the transport sector are gradually changing to provide growth-oriented infrastructure, support more diversified services, promote export, and cater to the value-adding manufacturing industry. New economic activities continue to be established close to population centers and international gateways. Colombo is the center of commercial and administrative functions with the largest international port. The Western Province, which includes Colombo, accounts for more than 40% of the national gross domestic product. About 48.7% of Sri Lanka's urban population is in Colombo, a district with a population of 2.3 million. The smooth flow of goods and people in an area with great potential is key to developing an efficient and high-value-added economy.

2. The road network is modestly developed in Sri Lanka. Passenger traffic is estimated to be 80 billion passenger-kilometers, out of which road transport has a share of 93%. Road transport also has the dominant share of 97% in freight ton-kilometers. The road area ratio in the Colombo municipal council area is 10.7%, better than in other congested Asian cities (e.g., Bangkok 7.1%, Jakarta 7.3%). However, traffic mobility in Colombo is deteriorating because of (i) the increasing traffic demand in the district with the most economic potential, (ii) further development of the expressway network, and (iii) the inefficient logistics infrastructure to the port despite the rapid expansion of the international gateway facilities to the world. The transport sector faces major challenges: (i) how to alleviate the intensifying congestion in Colombo without large-scale land acquisition; (ii) how to efficiently manage the incoming traffic through the New Kelani Bridge (NKB) from the expressway network, minimizing the burden on the existing road network in Colombo; and (iii) how to handle the increasing traffic of heavy vehicles to and from Colombo port without causing congestion in the surrounding area.

3. The proposed project will construct about 5.3 kilometers (km) of an elevated toll highway in Colombo between the NKB and the city center of Galle Face through the Colombo port premises, and support trade logistics facilitation to provide better logistics services for port users.² It will provide a direct link from the city center and the port to the Colombo–Katunayake Expressway (CKE) via the NKB with a modern toll collection system, and then constitute a part of the expressway network of Sri Lanka.³ The project will help alleviate traffic congestion in the densely populated areas around the international port, and also improve logistics connectivity between the international gateway and potential economic hinterland along the expressway network, thereby increasing economic efficiency and competitiveness of the country.

4. The project is aligned with the following impact: economic growth and regional trade and cooperation of the country facilitated. The project will have the following outcome: transport efficiency along the project road increased. The project is estimated to cost \$360.2 million. The government has requested a regular loan of \$300 million from Asian Development Bank (ADB) ordinary capital resources to help finance the project.

¹ World Bank. [World Bank Country and Lending Groups](#) (accessed 7 June 2018). Per capita income in 2016 was \$3,850. The World Bank defines upper middle-income economies as those with a gross national income per capita of \$3,956–\$12,235.

² The project will construct along the route a dedicated ramp to the port for port-related traffic.

³ Japan International Cooperation Agency (JICA). 2014. [Ex-Ante Evaluation: New Bridge Construction Project over the Kelani River](#). JICA is financing the NKB.

II. THE TECHNICAL ASSISTANCE

A. Justification

5. The Road Development Authority (RDA) has expanded its expressway network since the Southern Expressway, Sri Lanka's first expressway, was opened to traffic in 2011. The CKE has been in operation since 2013, and a part of the Outer Circular Highway since 2014.

6. The current toll rate policy and toll collection system have been developed on a project-by-project basis. Therefore, toll rates and collection systems differ among expressways. However, once the rest of the OCH is completed, the three expressways will be connected with each other. The planned new Central Expressway leading to the OCH will also join the network. Furthermore, the NKB, funded and implemented by the Japan International Cooperation Agency, links the CKE to the proposed elevated toll highway. The proposed project will become a part of the expressway network. The expanded expressway network will require a comprehensive, modern, and consistent toll policy and collection system to operate efficiently.

7. **Toll rate management.** The current toll rates consist of fixed fees and variable fees based on project-specific parameters such as recovery period, construction cost, and traffic volume. These parameters are, in principle, kept constant; thus, there is no built-in mechanism to regularly review and update the rates. Revenue from the three expressways in 2016 was about \$48 million, which still exceeds actual operation and maintenance costs of \$12 million. However, the current rates and toll policy may be neither reasonable nor sustainable in the emerging landscape because (i) application of different rates to each expressway would be unfair and even confusing to road users under the network; (ii) the expanding expressway network has yet to be incorporated in the toll rate policy; (iii) parameters used for the calculation do not include augmentation of expressway capacity, vehicle volume, and operation and maintenance costs; (iv) no inflation factor is considered; and (v) the impact of any new toll collection technology needs to be fully incorporated. The technical assistance (TA) will assist in developing a new accountable toll rate management tool to address long-term operational sustainability for the expanding expressway network.

8. **Toll collection system.** The toll collection system also varies among the expressways. The CKE uses both manual toll collection and electronic toll collection (ETC) with a simple open tolling system, whereas the OCH and Southern Expressway use only manual toll collection with a closed system. The ETC system adopted in the CKE is very limited with radio-frequency identification (RFID) passive technology, compared with more advanced systems currently in operation in other countries. Therefore, the RDA decided to adopt a new ETC system of multi-lane free flow for the proposed project, which will be expanded to other expressways as a national ETC system architecture. Although operation and maintenance of the system are basically outsourced through a service agreement, it still requires policy-level initiatives and institution-level capacity development. The TA will support (i) the preparation of an action plan to create an enabling environment for the ETC system, (ii) the preparation of an information-technology-related organizational structure and identification of required human resources in the RDA, and (iii) the training of staff of the new information technology section to efficiently manage the system. The TA will also assist in enhancing expressway management capacity by obtaining key operational parameters to be secured by the newly introduced ETC system.

9. Considering the TA's objective to support policy initiatives and institutional capacity development in the new areas, the ADB-administered TA will be a better tool than a loan consulting service under the proposed loan project. Direct supervision of the consultant's activities

by ADB will ensure neutrality and quality of services in these areas that are unfamiliar to the RDA. The proposed TA is included in the country operations business plan, 2018–2020.⁴

B. Outputs and Activities

10. The major outputs and activities are summarized in Table 1.⁵

Table 1: Summary of Major Outputs and Activities

Major Outputs	Delivery Dates	Key Activities with Milestones
1. Toll rate policy guidelines prepared	October 2019	1.1 Review of the existing toll policies and best practices in other countries by May 2019 1.2 Preparation of sustainable toll policy model by July 2019 1.3 Preparation of toll rate policy guidelines with review framework by October 2019
2. Action plan to create enabling policy environment for the toll collection system prepared	December 2019	2.1 Identification of the remaining policy bottlenecks to implement and enforce the toll collection system by September 2019 2.2 Preparation of prerequisite and midterm action plans for the enabling policy environment by December 2019
3. Organizational structure and human resources plan for IT division prepared	July 2020	3.1 Preparation of organizational structure, staffing number, and qualification for IT division by July 2020
4. Training of IT division staff completed	March 2022	4.1 Preparation of the training program in accordance with the requirement of the new toll collection system by March 2020 4.2 Completion of all training activities by March 2022
5. Expressway management capacity enhanced	September 2023	5.1 Identify necessary financial and operational parameters to be obtained from the new toll collection system and ensure they are used of design specification for procurement of the toll collection system by October 2019 5.2 Provision of management support to prepare the expressway operation and management plan, traffic management, and road safety by September 2023

IT = information technology.

Source: Asian Development Bank.

⁴ 2017. *Country Operations Business Plan: Sri Lanka, 2018–2020*. Manila.

⁵ Output 1.c of the design and monitoring framework of the loan project will be supported by the proposed TA. The TA will also improve financial sustainability of the whole expressway network of Sri Lanka, including the proposed loan project.

C. Cost and Financing

11. The TA is estimated to cost \$550,000, of which \$500,000 will be financed on a grant basis by ADB's Technical Assistance Special Fund (TASF-6). The key expenditure items are listed in Appendix 1. The government will provide counterpart support in the form of counterpart staff, office space, and other in-kind contributions.

D. Implementation Arrangements

12. ADB will administer the TA. ADB's South Asia Department will select, supervise, and evaluate consultants.

13. The implementation arrangements are summarized in Table 2.

Table 2: Implementation Arrangements

Aspects	Arrangements		
Indicative implementation period	October 2018–September 2023		
Executing agency	Ministry of Highways and Road Development		
Implementing agency	Road Development Authority		
Consultants	To be selected and engaged by ADB		
	Firm: QCBS with quality–cost ratio of 90:10, using biodata technical proposals	Toll rate policy guidelines development (4.0 international, 4.5 national person-months)	\$180,275
	Individual: individual selection	International (6 person-months)	\$227,400
	Individual: individual selection	National expertise (36 person-months)	\$92,325
Disbursement	The TA resources will be disbursed following ADB's <i>Technical Assistance Disbursement Handbook</i> (2010, as amended from time to time).		

ADB = Asian Development Bank, QCBS = quality- and cost-based selection, TA = technical assistance.
Source: Asian Development Bank.

14. **Consulting services.** ADB will engage the consultants following the ADB Procurement Policy (2017, as amended from time to time) and its associated project administration instructions and/or staff instructions.⁶

⁶ Terms of Reference for Consultants (accessible from the list of linked documents in Appendix 2).

COST ESTIMATES AND FINANCING PLAN
(\$'000)

Item	Amount
Asian Development Bank^a	
1. Consultants	
a. Remuneration and per diem	
i. International consultants	227.50
ii. National consultants	103.87
b. Out-of-pocket expenditures	
i. International and local travel	139.00
ii. Training, seminars, and conferences	4.00
iii. Reports and communications	4.00
iv. Miscellaneous administration and support costs	3.20
2. Contingencies	18.43
Total	500.00

Note: The technical assistance (TA) is estimated to cost \$550,000, of which contributions from the Asian Development Bank are presented in the table above. The government will provide counterpart support in the form of counterpart staff, office space, and other in-kind contributions. The value of government contribution is estimated at \$50,000.

^a Financed by the Asian Development Bank's Technical Assistance Special Fund (TASF-6).

Source: Asian Development Bank estimates.

LIST OF LINKED DOCUMENTS

<http://www.adb.org/Documents/LinkedDocs/?id=50299-001-TA Report - Expressway Operations Improvement Project>

1. Terms of Reference for Consultants