

## TECHNICAL COOPERATION DOCUMENT (TC)

### I. BASIC PROJECT DATA OF THE TC

▪ Country/Region:	Regional
▪ TC Name:	Benchmark Study on Korean State-Owned Transport Enterprises
▪ TC Number:	RG-T3025
▪ Team Leader/Members:	Reinaldo Fioravanti, Team Leader (INE/TSP); Changho Lee, Carolina Lembo, Ivan Corbacho, Juliana de Moraes and Lauramaria Pedraza (INE/TSP); and Pilar Jiménez de Arechaga (LEG/SGO)
▪ Taxonomy:	Research and dissemination
▪ Date of TC Abstract authorization:	April 17 <sup>th</sup> , 2017
▪ Beneficiary:	Regional
▪ Executing Agency:	Inter-American Development Bank (IDB)
▪ Donors providing funding:	Public Capacity Building Korea Fund for Economic Development (KPC)
▪ IDB funding requested:	US\$400,000
▪ Local counterpart funding:	N/A
▪ Disbursement period:	24 months
▪ Required start date:	August 15 <sup>th</sup> , 2017
▪ Types of consultants:	Individual and consulting firms
▪ Prepared by Unit:	INE/TSP
▪ Unit of Disbursement Responsibility:	INE/TSP
▪ Included in Country Strategy:	No
▪ TC included in CPD:	No
▪ Alignment to the Update to the Institutional Strategy 2010-2020:	Transversal theme of Institutional Capacity and the Rule of Law

### II. OBJECTIVES AND JUSTIFICATION

- 2.1 **Objective.** The main objective of this Technical Cooperation (TC) is to support the Latin American and Caribbean (LAC) region in terms of sustainable construction and maintenance, through best practices that can be learned from Korean transport State-Owned Enterprises (SOE).
- 2.2 **Specific objectives.** Under the activities of this TC, a group of government officials from LAC will participate in a study tour in Korea in order to acquire knowledge on: (i) road and transportation policy including expressway, toll road, and Public Private Partnerships (PPP) of Korea; (ii) sustainable budget security for new construction and maintenance of transport SOE in Korea; (iii) project management, construction management, and operation and maintenance of the road sector in Korea; and (iv) toll collection, traffic management, and other road related knowledge.
- 2.3 There are many road service challenges in the LAC region: insufficient resources, lack of construction equipment and raw materials, skillful labor, transparency, etc. Among these challenges, the levels of service are frequently poor due to the lack of maintenance budget. In order to reduce government expenditure and improve road service, some LAC countries have granted concessions of some of its roads to the private sector. The actual needs and problem-solving mechanisms of each

LAC country are different and this TC will investigate these differences to act effectively and efficiently to overcome these challenges.

- 2.4 In this TC, the actual and current needs of each country will be investigated by the benchmark of the Korea Expressway Corporation (KEC), a Korean SOE. It is known that Korea has had a rapid development experience, as seen after the Korean War for example. In the course of 55 years, from 1960 to 2016, the country's Gross Domestic Product (GDP) per capita has increased 175 times (from US\$155 to US\$27,000),<sup>1</sup> registered vehicle raised 677 times (from 31,000 to 21,000,000), and paved roads 83 times (from 1,100 km to 91,000 km).<sup>2</sup> Among Korea's SOEs, KEC is the agency to construct and operate the whole expressway with 3,872 km of operation length, 4,100,000 daily traffic volume and about US\$9.7 billion of annual budget.<sup>3</sup> This rapid growth shows the potential for LAC to learn sustainable development of transport mechanisms from Korean SOEs. Through the benchmark study, the needs of the region will be analyzed and some of them will be guided strategically by technical support.
- 2.5 **Strategic alignment.** The program is consistent with the update to the Institutional Strategy (UIS) 2010-2020 (AB-3008) as it is aligned with one of the transversal areas: Institutional Capacity and the Rule of Law. The program will perform an institutional diagnosis and provide recommendations for the improvement of management of road assets through capacity building. The program is also consistent with the Bank's Strategy Sustainable Infrastructure for Competitiveness and Inclusive Growth, as it will focus on planning, building, and maintaining infrastructure for the delivery of quality services. Additionally, the program is consistent with the Transportation Sector Framework Document (GN-2740-7) contributing to the advancement of institutions and regulatory frameworks in the sector.

### III. DESCRIPTION OF ACTIVITIES, COMPONENTS AND BUDGET

- 3.1 **Component 1. Benchmark Study (US\$250,000).** This component will finance a benchmark study with the KEC to mainly understand how the company operates and achieve financial and technical sustainability. The participants will be high-level LAC public officers from transport related ministries such as the Ministry of Transportation, Public Works, and/or Ministry of Finance. The purpose of this component is to share the case of Korea and discuss the challenges of road service in each country drawing solutions to overcome the challenges found. The participating countries will be selected by qualitative selection based on the countries' request and commitment. The selection process will be as follow:
- (i) A WebEx will be organized to explain the KEC experience and to briefly explain the topics that can be analyzed during the benchmark study, where all LAC IDB member countries are going to be invited;
  - (ii) After the WebEx, countries that are interested in participating in the benchmark study will have to submit a proposal with country specific data<sup>4</sup>

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<sup>1</sup> National accounts data and OECD national accounts data file, World Bank, 2017.

<sup>2</sup> Road handbook, Ministry of Land, Infrastructure, and Transport, Korea, 2016.

<sup>3</sup> Ibid.

<sup>4</sup> Country specific data can be: (i) data on road network like road map, length of road by level, and data from the organization in charge of road network by level; (ii) the country's GDP, GDP/capita, area, population, and number of vehicle registered in each category; (iii) toll road map, list of toll road, toll tariff criteria, traffic volume, average construction cost and maintenance cost; (iv) expressway map, list of expressways, owner

and information related to why the benchmark study is important to the development of the road network within its country<sup>5</sup>.

- (iii) The project team will analyze the countries' submissions and up to nine countries will be chosen using the following criteria: (i) submission on time; and (ii) submission of the best proposals related to the importance of the benchmark study for the development of road network.

**3.2 Component 2. Research and technical support (US\$110,000).** This component will finance the research and technical support before and after the benchmark study. The research performed before the benchmark study will consist of a government budget comparison and a national benefit comparison among different management systems. To better understand long term government budget and national benefits after adopting national road management system, the research will be performed among state-owned toll road networks, state-owned free road networks and a combination of private toll roads and state-owned free road network. The technical support after this benchmark study will be performed with two or three specific topics. The topics will be selected based on request, commitment, and condition of each participating country. The expected supporting topics that will be provided by this TC are: (i) consulting on the establishment of SOEs on transportation (or toll road agency) due to lack of government budget; (ii) capacity building for procurement and contracting; (iii) capacity building for project management; (iv) capacity building for construction quality management; (v) capacity building for road maintenance; (vi) consulting on a national road master plan; (vii) capacity building for staff members on action plan toward the creation of the national road master plan; (viii) consulting on an Intelligent ITS master plan; and (ix) capacity building for staff members on action plan toward the creation of the ITS master plan exists.

**3.3 Component 3. Administration and dissemination (US\$40,000).** This component will finance workshops in LAC on translation and publishing of the research results. The workshops will consist of: (i) the dissemination of the research and technical study output to each country; (ii) the conceptualization of the next phase of the TC to deepen the support toward the countries; and (iii) the translation of all related materials to English and Spanish, and published in both languages.

#### IV. BUDGET

4.1 The total budget of this TC is US\$400,000, itemized by the following components:

**Table 1. Indicative Budget (US\$)**

Activity	Unit	Amount	Total
<b>Component 1 – Benchmark study</b>			
<ul style="list-style-type: none"> <li>Benchmark study in Korea</li> <li>Participants will be government officials of LAC (about 27 persons)</li> </ul>	1	250,000	250,000
<b>Component 2. Research and Technical Study</b>			

and/or operator of expressways, toll tariff, traffic volume, average construction cost and maintenance cost; and (v) in the absence of toll roads or expressways, the country will need to provide a list of primary network that can potentially be used for as toll road, owner and operator, traffic volume, average construction cost and maintenance cost.

<sup>5</sup> The main topics that should be explored are: (i) the pros and cons of establishing SOEs on transportation (or toll road agency due to lack of government budget); (ii) procurement; (iii) project management; (iv) construction quality management; (v) road operation and maintenance; and (vi) ITS.

Activity	Unit	Amount	Total
• Research on government budget comparison and national benefits comparison among different management systems	1	110,000	110,000
<b>Component 2. Research and Technical Study</b>			
• Technical support for the topics requested by each country			
<b>Component 3 - Administration &amp; Dissemination</b>			
• Workshop in participating countries	1	40,000	40,000
• Translation and publishing of Components 1 and 2			
<b>TOTAL</b>			<b>400,000</b>

4.2 The period of execution of this TC will be 24 months.

## V. EXECUTING AGENCY AND EXECUTION STRUCTURE

- 5.1 This TC will be executed by the Inter-American Development Bank (IDB) through the Transport Division (INE/TSP) in conformity with the guidelines for technical cooperation products (GN-2629-1).
- 5.2 The procurement of consulting services will be carried out by the IDB in accordance with the policies for the selection and contracting of consulting firms in Bank-executed operational work (GN-2765-1).
- 5.3 **The collaboration of Component 1 with KEC.** The purpose of the Component 1 is to benchmark a financial and technical sustainability of Korea toll road system, and develop the topics for technical support of this TC. In the financial and technical aspect, there should be various challenges from each LAC country which should be checked and discussed during the benchmark study with proper institutions with experience of toll road systems including physical infrastructure and management systems. KEC is the only SOE which manages the whole expressway network and performs all cycle of projects from feasibility study to operation and toll collection of Korea. KEC was founded in 1969 to construct and manage expressways in Korea, and currently manages about 3,870 km of expressway networks with 4.1 million traffic volume a day and about the equivalent of US\$10 million of daily toll revenue.

## VI. PROJECT RISKS AND ISSUES

- 6.1 There are no risks identified for this TC.

## VII. EXCEPTIONS TO BANK POLICY

- 7.1 No exceptions to Bank policy were identified.

## VIII. ENVIRONMENTAL AND SOCIAL CLASSIFICATION

- 8.1 Negative environmental and social impacts are not expected from the implementation of this TC given its classification as research and dissemination. In compliance with the Environment and Safeguards Policy (OP-703), it is proposed for this TC to be categorized as “C” (see [Safeguard Policy Filters](#)).

### ANNEXES:

- Annex I. [Result Matrix](#)
- Annex II. [Terms of Reference](#)
- Annex III. [Procurement Plan](#)




### Result Matrix

## Outcomes

<b>Outcome:</b>		<b>1. Special commitment on development from LAC</b>					
Indicators	Flags*	Unit of Measure	Baseline	Baseline Year	Means of verification	EOP	
1. Technical support request		#	0.00	2017	Number of Request letter received for technical support to IDB	P	4.00
						P (a)	
						A	
<b>Outcome:</b>		<b>2. Adoption of Transportation Sector Framework ork</b>					
Indicators	Flags*	Unit of Measure	Baseline	Baseline Year	Means of verification	EOP	
2. Transportation Sector Framework		#	100	2017	Next Transport Sector frame updated in IDB website	P	100
						P (a)	
						A	
<b>Outcome:</b>		<b>3. Development of succeeding Technical Cooperation</b>					
Indicators	Flags*	Unit of Measure	Baseline	Baseline Year	Means of verification	EOP	
3. Second Phase of Technical Cooperation		#	0.00	2017	Number of TC approved succeeding this TC	P	100
						P (a)	
						A	

 RF - Contribution

**Outputs: Annual Physical and Financial Progress**

1 Benchmark study: Korea Expressway Corporation						Physical Progress					Financial Progress						
Outputs	Fund Indicator	Unit of Measure	Baseline	Baseline Year	Means of Verification	2017	2018	2019	EOP	2017	2018	2019	EOP	Theme	Flags		
1.Benchmark study	Other(KPC) Public Capacity Building Korea Fund (KPC)	Number of Participants (#)	0	2017	Country report from each participating country. Mission report	P	27	0	0	27	P	50,000	100,000	0	250,000	Institutional Development	
						P(a)					P(a)						
						A					A						
2 Research and Technical support						Physical Progress					Financial Progress						
Outputs	Fund Indicator	Unit of Measure	Baseline	Baseline Year	Means of Verification	2017	2018	2019	EOP	2017	2018	2019	EOP	Theme	Flags		
2. Research and Technical support	Other(KPC) Public Capacity Building Korea Fund (KPC)	Number of study (#)	0	2017	Reports on government budget and benefit comparison. Two technical reports.	P	1	2	0	3	P	10,000	100,000	0	110,000	Sustainable Infrastructure	
						P(a)					P(a)						
						A					A						
3 Administration and Dissemination						Physical Progress					Financial Progress						
Outputs	Fund Indicator	Unit of Measure	Baseline	Baseline Year	Means of Verification	2017	2018	2019	EOP	2017	2018	2019	EOP	Theme	Flags		
3.Training Workshop delieverd	Other(KPC) Public Capacity Building Korea Fund (KPC)	Number of workshops in LAC (#)	0	2017	Workshop reports	P	0	2	0	2	P	-	30,000	10,000	40,000	Institutional Development	
						P(a)					P(a)						
						A					A						

## Other Cost

## Total Cost

[illegible]

 CRF Indicator

 **Standard Output Indicator**

	2017	2018	2019	Total Cost
P	\$ 60,000	230,000	10,000	\$ 400,000
P (a)				
A				

## **REGIONAL**

## **INE/TSP**

### **BENCHMARK STUDY ON KOREAN STATE-OWNED TRANSPORT ENTERPRISES (RG-T3025)**

#### **TERMS OF REFERENCE**

##### **I. BACKGROUND**

- 1.1 The infrastructure is one of the essential components on development of economy and reinforcement of competitiveness of each country. Among the infrastructures, roads take more portion of logistics than other modes in Latin American countries.
- 1.2 There are many challenges for the proper road transportation service in developing countries; lack of government budget for both new construction and maintenance, construction equipment, raw materials, skillful labor, experiences of road projects, etc.
- 1.3 To overcome the challenges, it is important to find the actual needs and status of the recipient country. However, there are huge differences among the countries; national strategy on expressway, toll road & free road, Public Private Partnership (PPP) project; project priorities of mode; conditions on economic and technical, etc. So, it is really important to find the actual needs, sometimes the recipient country may not realize, and to support in a timely manner.
- 1.4 The main object of Technical Cooperation (TC) RG-T302 is to share the case of Korea on road infrastructure with a focus on financial and technical sustainability and to discuss the challenges of road service in each country, drawing solutions to overcome the challenges.
- 1.5 In this project, it will be pursued the actual needs found by the participants themselves of the benchmark study tour of the State-Owned Enterprise of Korea (SOE).
- 1.6 Under the activities of the TC RG-T3025 a group of government officials from Latin American and Caribbean (LAC) countries will participate in a study tour in Korea acquiring knowledge on:
  - (i) Road and transportation policy including expressway, toll road, and PPP of Korea.
  - (ii) Sustainable budget security for new construction and maintenance of SOE of transportation in Korea.
  - (iii) Project management, construction management, and operation and maintenance of road sector in Korea.
  - (iv) Toll collection, traffic management, and other road related knowledge will support the participants' countries.

- 1.7 The participants will also visit headquarters of SOE, research institutes of SOE, traffic center, construction site, maintenance office, and other sites related to achieve the main object of this project.

## **II. OBJECTIVE OF THE CONSULTANCY**

- 2.1 The main object of this consultancy is to provide technical and organizational support to the study tour of the selected LAC government officials, to conduct the whole study tour, and to report its findings on challenges of road service in each participating country and recommendations how to overcome those challenges.

## **III. SCOPE AND ACTIVITIES**

- 3.1 It is estimated that the study tour will last seven to ten days in Korea and the participants will be a total of 27 persons: 3 officials from the 9 selected countries.
- 3.2 The participants will make two presentations within the following context:
  - (i) Topic: understanding of the participating country needs and conditions for road network development. Each country information will be used to customize the Technical support topic of Component 2; and to prepare next phase of TC to support the countries.
  - (ii) Date: first day and Last day of the study tour.
  - (iii) Presenter: one representative per each participant country.
  - (iv) Contents of the first presentation should include:
    - (a) Basic information: Gross Domestic Product (GDP), GDP/capita, area, population, number of vehicle registered in each category.
    - (b) Data on road network: road map, length of road by level, organization in charge of road network by level.
    - (c) Toll road: toll road map, list of toll road, owner and operator, toll tariff, traffic volume, average construction cost and maintenance cost.
    - (d) Expressway: expressway map, list of expressway, owner and operator, toll tariff, traffic volume, average construction cost and maintenance cost.
    - (e) If there is no toll road or expressway: list of primary network can be used for toll road, owner and operator, traffic volume, average construction cost and maintenance cost.
    - (f) Important and urgent agenda for the development of road network in each country. Technical topics need to be benchmarked from Korea.
  - (v) Contents of last presentation should include follows;
    - (a) Important and urgent topic for the development of road network in each country.
    - (b) Current situation and government plan on the topic.

- (c) Technical topic needs supporting from IDB or Korea for the development of road network.
  - (d) Other information needed on the topic.
- 3.3 The consulting firm will present reports summarizing the study tour and findings from the presentation from all participants. The report must include the followings:
  - (i) Summary report of the study tour including presentation material by client: The summary report should be English and Spanish. The presentation material should be Spanish version. (English version is optional).
  - (ii) Findings from participant's presentation including presentation materials: The findings should be analyzed by the topics, practicability for future loan projects, priority of the projects, and recommendation and action plan for top four prioritized projects.
- 3.4 The consulting firm will make a presentation on the summary and finding at Inter-American Development Bank (IDB) headquarters and at least two participating countries.
- 3.5 To undertake the activities described above, the consulting firm will interact with the project team at the Bank, and with government officials who may be engaged in this project.

#### IV. REPORTS/DELIVERABLES

- 4.1 The deliverables expected from the consultancy are summarized below:

Deliverable	Description
<b>Consultancy workplan/study tour plan</b>	
Summary report of the study tour	¶3.3
Findings from participant's presentation	¶3.3
Presentation at IDB Headquarters	¶3.4

#### V. PAYMENTS SCHEDULE

- 5.1 The Consultant will be remunerated according to the following schedule of product deliveries.
  - 30% at the delivery of a study tour plan
  - 40% at the finishing of the study tour
  - 30% at the approval of the final report and presentation at IDB and 2 participating countries.



## **VI. CHARACTERISTICS OF THE CONSULTANCY**

- 6.1 Consultancy category and modality: products and external services contractual, Lump Sum
- 6.2 Contract duration: 12 months
- 6.3 Place(s) of work: external consultancy
- 6.4 Division Leader or Coordinator: this consultancy will be coordinated and supervised by the team leader, Reinaldo Fioravanti (INE/TSP).

PROCUREMENT PLAN FOR NON-REIMBURSABLE TECHNICAL COOPERATIONS										
Country: Regional					Executing agency: INE/TSP					
Project number: RG-T3025					Title of Project: Benchmark Study on Korean State-Owned Transport Enterprises					
Period covered by the plan: 24 months										
								Consulting services(in US\$): 400,000		
Item No	Ref. AWP	Description (1)	Estimated contract cost (US\$)	Procurement Method (2)	Review of procurement (3)	Source of financing and percentage		Estimated date of the procurement notice or start of the contract	Technical review by the PTL (4)	Comments
						IDB/MIF %	Local/other %			
1		<b>Component 1 - Benchmark study</b>								
		<b>Consulting services</b>								
		· Benchmark study of SOE in Korea	250,000	SSS			100%	September, 2017		
		(Participants: 27 Government officials from 9 countries)								
2		<b>Component 2 - Research and Technical Study</b>								
		<b>Individual consultants</b>								
		· Research on Government budget comparison & National benefit comparison	10,000	QBS			100%	September, 2017		
		<b>Consulting services</b>								
		· Technical Support for the topics requested by each country	100,000	QCBS			100%	January, 2018		
3		<b>Component 3 - Administration &amp; Dissemination</b>								
		· Workshops in participating countries	40,000				100%	September, 2018		
		· Translation and publishing of component 1 & 2						January, 2019		
Total				0 Prepared by: Changho Lee				Date: June, 2017		

(1) Grouping together of similar procurement is recommended, such as computer hardware, publications, travel, etc. If there are a number of similar individual contracts to be executed at different times, they can be grouped together under a single heading, with an explanation in the comments column indicating the average individual amount and the period during which the contract would be executed. For example: an export promotion project that includes travel to participate in fairs would have an item called "airfare for fairs", an estimated total value of US\$5,000, and an explanation in the Comments column: "This is for approximately four different airfares to participate in fairs in the region in years X and X1".

(2) **Goods and works:** CB: Competitive bidding; PC: Price comparison; DC: Direct contracting.

(2) **Consulting firms:** CQS: Selection Based on the Consultants' Qualifications; QCBS: Quality and cost-based selection; LCS: Least Cost Selection; FBS: Selection under a Fixed Budget; SSS: Single Source Selection; QBS: Quality Based selection.

(2) **Individual consultants:** IICQ: International Individual Consultant Selection Based on Qualifications; SSS: Single Source Selection.

(2) **Country system:** include selection Method

(3) **Ex-ante/ex-post review:** In general, depending on the institutional capacity and level of risk associated with the procurement, ex-post review is the standard modality. Ex-ante review can be specified for critical or complex process.

(4) **Technical review:** The PTL will use this column to define those procurement he/she considers "critical" or "complex" that require ex ante review of the terms of reference, technical specifications, reports, outputs, or other items.