

TC ABSTRACT

I. Basic Project Data

▪ Country/Region:	COLOMBIA/CAN - Andean Group
▪ TC Name:	Support for Strengthening the Rural Road Network
▪ TC Number:	CO-T1542
▪ Team Leader/Members:	CRUZ MORENO, PAULA (INE/TSP) Team Leader; CAMOS DAURELLA, GIBET (INE/TSP) Alternate Team Leader; GALARZA MOLINA, DIANA CAROLINA (INE/TSP); ROSA DA SILVA CRUVINEL, RODRIGO (INE/TSP); ARIZA DONADO, NATALIA (CAN/CCO); BUSTOS RIOS, MARIA PAOLA (CAN/CCO); ALONSO MARTIN, TANIA (INE/TSP); CARDENAS GARCIA, CLAUDIA MYLENNA (VPC/FMP); HILLMAN, EUGENIO F. (VPC/FMP); BERTOSSI, FANNY (INE/TSP); LEE, CHUNGHWAN (INE/TSP)
▪ Taxonomy:	Client Support
▪ Number and name of operation supported by the TC:	N/A
▪ Date of TC Abstract:	01 Apr 2020
▪ Beneficiary:	Colombia
▪ Executing Agency:	INTER-AMERICAN DEVELOPMENT BANK
▪ IDB funding requested:	US\$750,000.00
▪ Local counterpart funding:	US\$0.00
▪ Disbursement period:	32 months
▪ Types of consultants:	Individuals; Firms
▪ Prepared by Unit:	INE/TSP - Transport
▪ Unit of Disbursement Responsibility:	CAN/CCO - Country Office Colombia
▪ TC included in Country Strategy (y/n):	Yes
▪ TC included in CPD (y/n):	Yes
▪ Alignment to the Update to the Institutional Strategy 2010-2020:	Social inclusion and equality ; Productivity and innovation ; Economic integration; Institutional capacity and rule of law

II. Objective and Justification

- 2.1 The general objective of this TC is to implement a strategy for strengthening the rural road network in Colombia. It is then sought to support the Colombia Government, through the National Planning Department and the Ministry of Transportation, in strengthening the rural road network. The specific objectives contemplate: (i) contribute to the construction of the rural road network inventories from the use of new technologies such as artificial intelligence and satellital images; (ii) prioritize regional integration routes and corridors that promote productive development in coordination with the Ministry of Agriculture and identify investment needs; (iii) implement the use of new materials for the construction of roads of the rural road network through pilots; (iv) develop knowledge products that help generate evidence and contribute to the development of local capacities; and (v) development of a communication strategy with mayors and governors.
- 2.2 One of the most important challenges to increase productivity and economic competitiveness that Colombia faces is to improve the provision and quality of transport infrastructure and associated services. In the last 20 years, the Colombian transport network expanded thanks to the participation of the private sector. This expansion process was consolidated under the 4G road concessions program, which has allowed Colombia to advance in the improvement and construction of its high-

impact transport infrastructure (large foreign trade corridors). However, the country still has considerable lags in terms of quantity, quality, and coverage of the transport infrastructure and specially in the services associated with it. The rural network or “first-mile network” is fundamental to the transport of agricultural products from rural areas to municipalities and collection centers. Between 2010 and 2016, Colombia invested 3.1 billion pesos in the rural network, however, only 25% of the network is in good condition, increasing the production costs of the agricultural sector. For this reason, the GoC identified the rural road network as a strategic priority for the country's competitiveness, equity, and regional integration. One of the main obstacles is the lack of a detailed inventory of the rural network of the country, which makes it difficult for regional investment to be focused and executed efficiently. Currently, Colombia has a National Road Inventory Program; however, it is necessary to advance its implementation specifically in the rural network: (i) to establish the state and specific needs of the regional network; and (ii) to be able to standardize and systemize the information and road infrastructure demand. Today, with new technologies (Big Data, drones, satellite images) Colombia could generate, at a lower cost and time, georeferenced inventories of the network with centralized data, that facilitate decision making and investment prioritization. With regard to the new technologies used to identify the lengths of tertiary roads, Korea's construction industry has utilized drones for diverse construction related purposes, including to observe inaccessible areas and inspect their safety, to create digital maps, and to calculate the number of earthworks, etc. In addition, Korea's government has implemented many policies of fostering drone technologies and relevant industries, enhancing the credibility of drone land surveying and refining the quality of digital topographic maps through several pilot projects. Likewise, Colombia defined the “specifications of a typical project” for the improvement of rural roads and good contracting practices (standardization of contracts, transparency, and publicity, packaging of rehabilitation and maintenance contracts). In this case, it is also necessary to comply with the implementation of these measures to generate economies of scale, improve spending efficiency, promote the participation of more proponents and optimize the use of investment resources. Based on this analysis, this TC will support the GoC, through a package of measures such as studies, implementation of new technologies, pilots' schemes, etc. for the strengthening of the rural road network. These activities contribute to the national government's strategy for the improvement and maintenance of productive roads: the Colombia Rural program, which promotes rural connectivity through investments in the rural network in 2019-2022.

III. Description of Activities and Outputs

- 3.1 **Component I: Component 1: Identification of rural routes based on artificial intelligence algorithms.** Through this component, the GoC will be supported with the identification of the rural network using new technologies, such as the use of satellite images, artificial intelligence, and others. For this project, it is estimated it will be possible to survey 45% of the inventory of the rural road network of the country, and complete the corresponding information for maps of the National Integral System of Roads
- 3.2 **Component II: Component 2: National Road Plan Pilot for Regional Integration - PNVIR.** The activities to be carried out are: (i) collection of primary information on the roads in the region; (ii) prioritization of the corridors in accordance with the methodology of the National Road Plan for Regional Integration (PNVIR); (iii) identification of investment needs, with budgets; (iv) definition of the methodology for a road maintenance program with community support; and (v) development of guide manuals that allow replication in other areas of the country.

- 3.3 **Component III: Component 3: Knowledge transfer from Korea to Colombia about drone technologies and other type of technologies.** This component aims to contribute to strengthening the institutional capacities of the transport sector in Colombia, through the development of training workshops and dissemination of good practices focused on new technologies for surveying or building rural roads. In addition, it will finance the dissemination strategy of the knowledge products developed in components 1 and 2.

IV. Budget

Indicative Budget

Activity/Component	IDB/Fund Funding	Counterpart Funding	Total Funding
Component 1: Identification of rural routes based on artificial intelligence algorithms	US\$200,000.00	US\$0.00	US\$200,000.00
Component 2: National Road Plan Pilot for Regional Integration - PNVR	US\$400,000.00	US\$0.00	US\$400,000.00
Component 3: Knowledge transfer from Korea to Colombia about drone technologies and other type of technologies	US\$150,000.00	US\$0.00	US\$150,000.00
Total	US\$750,000.00	US\$0.00	US\$750,000.00

V. Executing Agency and Execution Structure

- 5.1 By virtue of the fact that it is a Client Support TC, in accordance with the applicable policies and guidelines (documents GN-2470 and GN-2629-1) the Bank, through the Transportation Division, will be the executing agency of the TC. The selection and contracting of consulting services will be carried out in accordance with the Policies for the Selection and Hiring of Consultants financed by the Inter-American Development Bank (GN-2350-9). Acquisitions and financial management. The activities to be carried out under this operation have been included in the Procurement Plan (annex) and will be executed following the Bank's established procurement methods, namely; (i) hiring individual consultants, as established in AM-650 standards; (ii) contracting of consulting firms for services of an intellectual nature according to GN-2765-1 and its associated operational guides (OP-1155-4); and (iii) contracting of logistics and other services other than consulting, in accordance with policy GN-2303-20. This TC does not present fiduciary management risks as it will be executed by the IDB. For this reason, no financial audit is required. Execution structure. The execution period will be 24 months, and the disbursement period will be 32 months.
- 5.2 At the request of the beneficiary, the IDB will carry out the execution of this operation due to the Bank's experience in Latin America and the Caribbean in coordinating road maintenance studies, with attention to the effects of climate change. This justification is consistent with the criteria that appear in Appendix 10 of Document GN-2629-1, in its version attached to document OP-1155-2.

VI. Project Risks and Issues

- 6.1 No risks have been identified for this TC.

VII. Environmental and Social Classification

7.1 The ESG classification for this operation is "undefined".