

## TC ABSTRACT

### I. Basic project data

▪ Country:	Ecuador
▪ TC Name:	Program on Energy Efficiency in the Transport Sector
▪ TC number:	EC-T1286
▪ Team Leader/Members:	Francisco Arango (INE/CCS), team leader; Sandra López (INE/CCS); Rafael Acevedo (INE/TSP); Fernando Orduz (TSP/CEC); Marisol Inurritegui (RND/CEC); Patricio Crausaz (FMP/CEC); Gumersindo Velázquez (FMP/CEC); Betina Hennig (LEG/SGO)
▪ Taxonomy:	Client support
▪ Date of TC Abstract:	September 24 <sup>th</sup> , 2014
▪ Beneficiary:	Ministry of the Environment, Republic of Ecuador
▪ Executing agency and contact:	IDB, Francisco Arango (INE/CCS)
▪ IDB funding requested:	USD 670,000
▪ Local counterpart funding:	USD 218,000
▪ Disbursement period:	24 months (20 months of execution)
▪ Required start date:	December 15 <sup>th</sup> , 2014
▪ Types of consultants:	Firms and individual consultants
▪ Prepared by Unit:	INE/CCS
▪ UDR:	INE
▪ Included in Country Strategy:	Yes
▪ TC included in CPD:	No
▪ GCI-9 Sector Priority:	Protect the environment, respond to climate change and promote renewable energy and food security

### II. Objective and Justification

- 2.1 The objective of this technical cooperation (TC) is to support the Government of Ecuador with the preparation of potential mitigation measures in the transport sector with a view to mobilizing international climate finance resources and reducing greenhouse gas (GHG) emissions. According to Ecuador's second national communication to the United Nations Framework Convention on Climate Change (UNFCCC), in 2006 the transport sector in Ecuador contributed with 8% of the country's overall GHG emissions and with 48% of the energy related GHG emissions. Moreover, GHG emissions from the transport sector in Ecuador are increasing rapidly; in the last 20 years grew 80%<sup>1</sup>.
- 2.2 This TC will contribute to Ecuador's national priorities, including the formulation of a National Strategy for Climate Change and the greening of the energy matrix, as stated in the Ecuadorian National Development Plan ("*Plan Nacional para el Buen Vivir 2013 – 2017*"). The TC is aligned with the IDB Country Strategy with Ecuador 2012-2017 (GN-2680), which mentions the collaboration in the energy, transportation, and urban sustainability sectors. In terms of climate change, the strategy also identifies energy efficiency in the transportation sector as a priority area.
- 2.3 This TC is aligned with the objectives of the IDB's Ninth General Capital Increase (GCI-9), which establishes that the Bank will support the sustainable growth of Latin-America and the Caribbean, including the promotion of global environment sustainability, addressing the challenges presented by climate change, and ensuring that energy requirements for development are met. It further mandates that the Bank improves its capacity to assist the region in its transition to a green economy, including the development of institutional and regulatory frameworks to allow investments in areas such as sustainable transport, renewable energy and energy efficiency. The

<sup>1</sup> Andrés Hubenthal. "*Evaluación del sector transporte en Ecuador con miras a plantear medidas de mitigación al Cambio Climático*". UNDP. August 2010.

proposed TC will contribute to the implementation of IDB's Climate Change Strategy Action Plan (CCSAP) along its strategies on: (i) strengthening the knowledge base available to the Bank and its clients; (ii) expanding lending and technical assistance in key sectors; and (iii) scaling-up investments and leveraging private sector investments.

- 2.4 This TC contributes to the objectives of the Sustainable Energy and Climate Change Initiative IDB Special Program (IDB SECCI Fund) related to the reduction of GHG emissions and the mobilization of financial resources for climate change mitigation. According to an assessment prepared by the Bank for the Municipality of Quito, measures to reduce GHG emissions in the city could avoid 0.24 MtCO<sub>2</sub>e/y by 2025 and would require investments of USD 200 million from 2014 to 2016. The Ministry of Environment of Ecuador has estimated that renovating the fleet of heavy-duty vehicles could reduce 3.6 MtCO<sub>2</sub>e/y. The Government of Ecuador, through its *Plan Renova*, has provided incentives for vehicle renewal worth USD 72 million. A reform to *Plan Renova* has the potential to mobilize new resources for the adoption of low-carbon vehicle technologies.

### III. Description of activities and outputs

- 3.1 **Component 1. Assessment and design of climate change mitigation actions.** This component will prepare studies for the design of potential climate change mitigation actions in the transport sector in Ecuador, including:

- a. Adoption of homologation and fuel efficiency standards for heavy-duty vehicles (i.e. trucks and buses).
- b. Deployment of low-carbon technologies for freight transport and mass transit, including a review to the incentives to fleet renewal available through Ecuador's *Plan Renova*.
- c. Countrywide enforcement of routine technical inspections of heavy-duty vehicles.
- d. Operational optimization of mass transit modes in Quito (e.g. metro, bus rapid transit system, conventional public transportation).
- e. Adoption of user information technologies for mass transit.

- 3.2 The expected outputs under this component include:

- a. A market study for the deployment of low-carbon technologies for heavy-duty vehicles, including a diagnosis of the current circulating mass transit fleet and technology recommendations for its renovation; a characterization of the current available new fleet typology and its fuel economy; a characterization of current technology offer; an estimation of the future heavy-duty fleet, which will eventually circulate in Ecuador; and a business roundtable for vehicle operators (i.e. buses and trucks) and vehicle suppliers (hybrid and electric technologies).
- b. Draft regulation for the adoption of vehicle homologation and fuel efficiency standards for heavy-duty vehicles.
- c. An assessment of *Plan Renova* and a proposal to establish incentives for the adoption of low-carbon technologies for heavy-duty vehicles.
- d. Business models for the operation of low-carbon technologies for heavy-duty vehicles, including mass transit in Quito and freight transport.
- e. Vehicle testing protocols for low-carbon heavy-duty vehicles.
- f. An action plan for the enforcement of the existing regulation on technical inspections of heavy-duty vehicles.
- g. A plan to optimize the operation of mass transit modes in Quito in preparation for the commissioning of the first line of the city's metro (including BRT corridors and conventional buses).

h. An assessment of information technology options for mass transit in Quito.

- 3.3 **Component 2. Nationally Appropriate Mitigation Actions (NAMAs).** This component will prepare two proposals for internationally-supported NAMAs. The proposals will evaluate of specific aspects needed for each NAMA, including: (i) an estimation of GHG emissions and GHG emissions reductions; (ii) an estimation of the investments required and the justification of the need for international climate finance; (iii) an assessment of financial, technical, regulatory and capacity barriers; (iv) an estimation of development benefits (co-benefits); (v) recommendations on measurement, reporting and verification (MRV); (vi) a risk assessment; (vii) a stakeholder analysis; and (viii) a strategy for the implementation of the proposed NAMAs.

#### IV. Indicative budget

Activity/Component	Description	IDB	Counterpart*	Total
<b>Component 1</b>				
Adoption of low-carbon technologies for heavy-duty vehicles	Market study for the deployment of low-carbon technologies	100,000	36,000 <sup>†</sup>	136,000
	Draft regulation for vehicle homologation and fuel efficiency standards	40,000	20,000 <sup>•</sup>	60,000
	Business models for low-carbon technologies	60,000	30,000 <sup>†</sup>	90,000
	Assessment of <i>Plan Renova</i> and elaboration of recommendations	80,000	62,000 <sup>†</sup>	142,000
	Vehicle testing protocols	100,000	0	100,000
Enforcement of technical inspections of heavy-duty vehicles	Action plan for the enforcement of technical inspections	30,000	15,000 <sup>†</sup>	45,000
Optimization of mass transit	Plan to optimize the operation of mass transit modes in Quito	100,000	30,000	130,000
Information technologies for mass transit user	Assessment of information technology options for mass transit in Quito	20,000	0	20,000
<b>Component 2</b>				
NAMA Proposals	NAMA on low-carbon freight transport	70,000	25,000 <sup>•</sup>	95,000
	NAMA on mass transit in Quito	40,000	incl. above	40,000
Execution, monitoring and evaluation		30,000	0	30,000
<b>Total</b>		<b>670,000</b>	<b>218,000</b>	<b>888,000</b>

\* Tentative counterpart funding. Detailed counterpart funding will be further elaborated in the TC Document.

<sup>†</sup> In kind

<sup>•</sup> Cash

#### V. Executing agency and execution structure

- 5.1 The Ministry of the Environment of Ecuador has requested the Bank, through the Climate Change and Sustainability Division (INE/CCS), to be the executing agency for the technical cooperation. The implementation arrangements will include a working group comprised by officials from the Ministry of Environment, the Ministry of Transport and Public Works, and the Municipality of the Metropolitan District of Quito through its departments of environment and mobility. The details and specific responsibilities of the working group will be elaborated during the preparation of the TC document.

The procurement of individual consulting services will be carried out by the IDB in accordance with Human Resources (HRD) policies (AM-650). The procurement of firm consulting services will be carried out by the IDB in accordance with the Policies for the Selection and Contracting of Consultants Financed by the Inter-American Development Bank (GN-2350-9). The procurement of consulting services different from consultants will be carried out by IDB in accordance with

Corporate Procurement Policies (GN-2303-20) while IDB's new policies regarding the matter are not in force.

**VI. Project risks and issues**

- 6.1 The proposed TC requires the participation of different stakeholders from the governmental and private sectors. Ensuring a smooth execution will require an active effort by the project team to guarantee an adequate coordination among stakeholders. In order to avoid risks regarding the quality of the work developed by participating consultants, the project team will supervise the products by continuously reviewing, monitoring and evaluating during the preparation and final delivery stages of the requested products.

**VII. Environmental and Social Classification**

- 7.1 No environmental and/or social impacts are foreseen. On the contrary, the products from this TC will contribute to reduce GHG emissions and achieve other global and local development benefits. Therefore it is expected that the TC will be classified as a Category "C" project per the Social and Environmental Safeguards of the Bank.