

ECUADOR

PROGRAM ON ENERGY EFFICIENCY IN THE TRANSPORT SECTOR

ADOPTION OF LOW-CARBON TECHNOLOGIES FOR HEAVY-DUTY VEHICLES IN ECUADOR

TERMS OF REFERENCE

I. BACKGROUND AND JUSTIFICATION

- 1.1. The transport sector in Ecuador contributed with 8% of the country's overall greenhouse gas (GHG) emissions in 2006, and with 48% of the energy related GHG emissions (Ecuador's second national communication to the United Nations Framework Convention on Climate Change – UNFCCC). Moreover, GHG emissions from the transport sector in Ecuador are increasing rapidly; in the last 20 years grew 80%¹. Furthermore, freight transportation contributed with 41% of the road transport emissions related to fuel consumption in Ecuador, in 2013².
- 1.2. In 2007 the Ministry of Transport and Public Works launched a Vehicle Fleet Renovation Plan (*Plan Renova*) to ensure the replacement of old public transportation vehicles through a scrappage program by providing an economic incentive to acquire a new vehicle nationally produced at a preferential price or exemption from tariffs on imported vehicles. As per 2013 when the *Plan Renova* implementation was extended until December 2015, there were scrapped more than 14,000 vehicles in Ecuador and it is expected to increase scrapped units up to 20,000 by 2015.
- 1.3. The Government of Ecuador, through its *Plan Renova* has provided incentives for vehicle renovation worth USD 72 million. A reform to *Plan Renova* has the potential to mobilize new resources for the adoption of low-carbon vehicle technologies.
- 1.4. In order to implement Ecuador's National Climate Change Strategy 2012-2025, the Ministry of Environment of Ecuador (MAE) has requested technical assistance to the IDB to design the Low-carbon Freight Transport NAMA in Ecuador taking into consideration the assessment for the adoption of low-carbon technologies for heavy-duty vehicles in Ecuador, and prepare a NAMA proposal that could seek for international climate finance for its implementation.

II. OBJECTIVE

- 2.1. Assessment of the adoption of low-carbon technologies for heavy-duty vehicles in Ecuador, including a market study for its deployment, elaboration of vehicle testing protocols, preparation of business models, and proposing a draft regulation for vehicle homologation and fuel efficiency standards. The results of the present consultancy will be an input to the preparation of a NAMA proposal for Low-carbon Freight Transport in Ecuador that could be eligible for international climate finance for its implementation, according to the current discussions under the UNFCCC.

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

² Instituto Nacional de Eficiencia Energética y Energías Renovables de Ecuador. "Línea base de investigación en eficiencia energética del sector transporte de Ecuador". INER. November 2014.

III. ACTIVITIES

- 3.1 **Market study for the deployment of low-carbon technologies.** The consultants shall identify technologies available, providing information on the characteristics, performance, costs, and availability of each vehicle technology, as well as details on maintenance requirements and costs, and provision of repair parts, tooling and technical support. It should also describe compatibility with country's geography and fuel/electricity supply and availability.
- 3.2 **Assessment of the institutional and regulatory framework for low-carbon technologies in freight transportation.** The consultants shall provide an assessment of the institutional and regulatory framework for the adoption of low-carbon technologies in freight transportation at national and local level. For this purpose, an analysis about the current framework that regulates the heavy-duty vehicles market shall be develop, this assessment must include and identification of the opportunities and restrictions that exist for the introduction of low-carbon technologies in freight transportation, aspect such as foreign trade and national market regulations should be considered.
- 3.3 **Preparation of business models for low-carbon technologies.** The consultants shall elaborate and assess different business models that may prove feasible for the commercial adoption of low-carbon heavy-duty technologies in Ecuador, taking into consideration results from activities 3.1 and 3.2 above. The business models should include a schedule of investments, an identification of financing sources (incl. national and international climate finance sources), and specific recommendations on further incentives necessary to enhance the deployment of low-carbon technologies in freight transportation in Ecuador.

IV. CHARACTERISTICS OF THE CONSULTING SERVICES

- 4.1 **Type:** Firm of one of the IDB's member countries.
- 4.2 **Type of contract:** Lump sum.
- 4.3 **Time frame:** The activities under these terms of reference should be completed within five months.
- 4.4 **Place of work:** Home-based with at least one mission to Quito.
- 4.5 **Qualifications:** The consultant team should have at least the following experience:
 - a. **Project Coordinator.** At least ten years of demonstrated professional experience leading projects in advanced vehicle technologies.
 - b. **Transport engineer.** At least five years of demonstrated professional experience in freight transportation and heavy-duty vehicle technologies.
 - c. **Transport economist or environmental/industrial engineer.** At least five years of demonstrated professional experience in freight transportation and low-carbon heavy-duty vehicle technologies.

V. REPORTS AND PAYMENTS

- 5.1. The consultant will submit an inception report, two interim reports, and a final report.

- a. The inception report should include the general methodology, work plan and detailed timetable for the development of the consultancy. The inception report should be submitted within 15 calendar days from the signature of the contract.
 - b. The first interim report should include the market study for the deployment of low-carbon technologies (as per paragraph 3.1 above). The first interim report should be submitted within 90 calendar days from the signature of the contract.
 - c. The final report should include the final version of the market study, the assessment of the institutional and regulatory framework for low-carbon technologies in freight transportation and the business models for the adoption of low-carbon technologies. The final report should be submitted within 120 calendar days from the signature of the contract.
- 5.2. The inception and interim reports are expected in Spanish. The final report is expected in English and Spanish. All reports will be delivered as follows: i) the relevant electronic files in MS Word, Excel, or other application acceptable to the IDB (must include all annexes and appendices); ii) an electronic PDF file for each full report. These reports and electronic files should be delivered to the project supervisors within the time limits mentioned above.
- 5.3. Payments for the consulting services will be specified in the contract and will be made as follow:
- a. 20% at contract signature and approval of the inception report;
 - b. 40% upon approval of the first interim report;
 - c. 40% upon approval of the final report.

VI. COORDINATION

- 6.1. The Transport Division of the IDB office in Ecuador (TSP/CEC) will have the technical responsibility of the execution of this contract as well as approval of products prepared by the consultants. In representation of the IDB, the technical coordination for this consultancy rests with Mr. Fernando Orduz, Lead Transport Specialist of the Transport Division (e-mail: fernandoo@iadb.org).

ECUADOR

PROGRAMA DE EFICIENCIA ENERGÉTICA EN EL SECTOR TRANSPORTE

EVALUACIÓN Y REFORMA DEL PLAN RENOVA

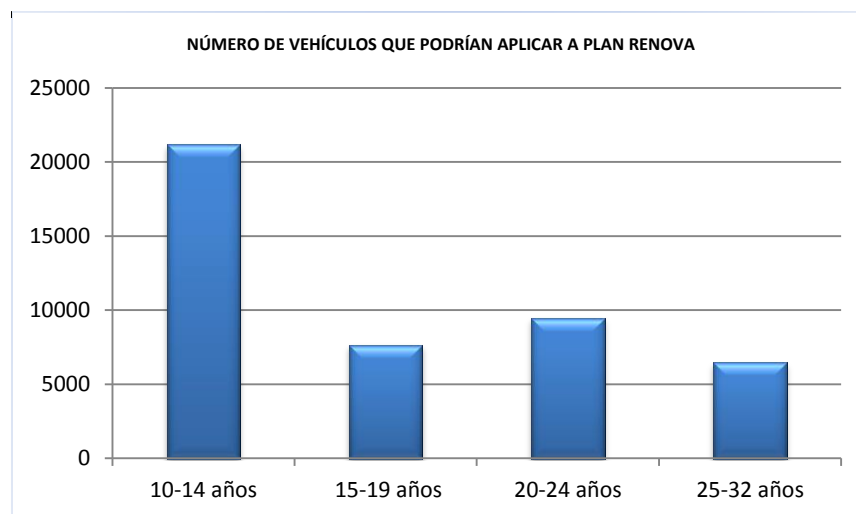
EC-T1286

TÉRMINOS DE REFERENCIA

I. ANTECEDENTES Y JUSTIFICACIÓN

- 1.1 Actualmente el parque automotor en Ecuador cuenta con 1'721.206 vehículos, de los cuales 241.130 vehículos prestan servicio público y comercial. En el año 2008, el Gobierno Nacional implementó el programa de renovación del parque automotor “Plan Renova” que permite renovar el parque automotor público y comercial. Se estima que 44.797 vehículos podrían aplicar para ser beneficiados del programa de renovación, lo que equivalente al 19% del total de vehículos que prestan servicio público y comercial. La circulación de estos vehículos genera un mayor consumo de combustible provocando un incremento en los niveles de contaminación, incremento en los costos de operación y mantenimiento y un inadecuado gasto por subsidios estatales.

FIGURA No.1



- 1.2 El Plan RENOVA permite renovar el Parque Automotor público y comercial mediante la exoneración de aranceles para la adquisición de unidades nuevas de producción nacional e importada y el otorgamiento de un incentivo económico para los vehículos que son sometidos al proceso de chatarrización, además de un incentivo adicional de compensación para el transporte urbano de pasajeros. Al mes de septiembre del año 2014, se han logrado chatarrizar 16.123 unidades (tabla 1) e ingresar 19.614 unidades nuevas. Pese al éxito del programa, todavía existe una gran cantidad de vehículos por renovar y así mejorar las condiciones en las que actualmente se presta el servicio del transporte público y comercial.

Tabla 1. Unidades Chatarrizadas por Modalidad y por Año

MODALIDAD	2008	2009	2010	2011	2012	2013	2014	TOTAL
Taxi	399	1.310	2.611	1.967	1.120	853	408	8.668
Carga Liviana	4	96	355	356	210	61	253	1335
Escolar	2	348	516	484	336	150	174	2010
Urbano	3	154	85	270	439	201	203	1355
Inter / Intra-provincial	-	202	209	286	367	107	91	1262
Carga Pesada	2	30	104	194	537	352	274	1493
TOTAL	410	2.140	3.880	3.557	3.009	1.724	1.403	16.123

- 1.3 El monto total en bonos emitidos por parte de la Agencia Nacional de Tránsito (ANT) bajo el Plan RENOVA a lo largo de su vigencia es de USD 100'111.023,00. En 2014, el monto de los bonos emitidos ascendió a USD 12'927.761 (tabla 2).

Tabla 2. Recursos Económicos Entregados por Certificados de Chatarrización

MODALIDAD	2008	2009	2010	2011	2012	2013	2014	TOTAL
Taxi	\$ 1.161.404	\$ 3.692.507	\$ 7.050.864	\$ 5.288.771	\$ 2.986.915	\$ 2.254.602	\$ 1.079.290	\$ 23.514.353
Carga Liviana	\$ 13.787	\$ 312.807	\$ 1.069.988	\$ 1.158.291	\$ 712.766	\$ 200.809	\$ 887.457	\$ 4.355.905
Escolar	\$ 12.289	\$ 2.241.295	\$ 3.566.004	\$ 3.680.529	\$ 3.276.527	\$ 1.304.457	\$ 1.680.904	\$ 15.762.005
Urbano	\$ 29.065	\$ 1.562.772	\$ 892.890	\$ 2.695.234	\$ 5.045.814	\$ 1.978.543	\$ 2.679.063	\$ 14.883.381
Inter / intraprovincial	\$ 0	\$ 2.127.619	\$ 2.180.404	\$ 2.928.348	\$ 4.879.463	\$ 1.381.799	\$ 1.382.331	\$ 14.879.964
Carga Pesada	\$ 25.510	\$ 362.913	\$ 1.274.640	\$ 2.913.777	\$ 9.900.679	\$ 7.019.180	\$ 5.218.716	\$ 26.715.415
TOTAL	\$ 1.242.055	\$ 10.299.913	\$ 16.034.790	\$ 18.664.950	\$ 26.802.164	\$ 14.139.390	\$ 12.927.761	\$ 100.111.023

- 1.4 La estructura del plan RENOVA diferencia el valor del bono entregado dependiendo de la antigüedad del vehículo, y tal como lo presenta la tabla 3 siguiente, se puede ver que el mayor número de vehículos chatarrizados pertenece al rango de 15 a 19 años, aunque en el caso de carga pesada y liviana hay un mayor número de vehículos chatarrizados en el rango de más de 30 años.

Tabla 3. Vehículos Chatarrizados por Antigüedad

Rango Años	Taxis	Carga Liviana	Transporte Escolar	Transporte Urbano	Transporte Inter/Intra provincial	Transporte Carga Pesada	TOTAL	
10 - 15	1496	39	236	220	37	3	2031	12,6%
15 - 19	5303	253	1292	605	471	40	7964	49,4%
20 - 25	921	134	316	345	506	126	2348	14,6%
25 - 30	532	63	53	158	162	252	1220	7,6%
Más de 30	416	847	113	27	86	1071	2560	15,9%
	8668	1336	2010	1355	1262	1492	6123	100%

- 1.5 En el caso de transporte urbano y carga pesada, todavía persiste gran número de unidades por renovar. Por ese motivo, el Plan RENOVA ha sido ratificado en su vigencia hasta el 31 de diciembre de 2015. El Plan Renova, también fue conceptualizado como una herramienta para la reducción de la contaminación, disminuyendo el consumo de combustible y promoviendo la adopción de tecnologías eficientes con menores emisiones.

Tabla 5. Ahorro Generado por el Plan Renova 2008 - 2014

Modalidad	Tipo de vehículo		Ahorros	
			Combustible (galones)	Subsidios (USD)
Taxi	Liviano	Automóvil	17.927.000	30.655.170
Carga Liviana	Liviano	Camioneta	2.026.613	3.465.508
	Mediano	Camión	85.925	146.932
Transporte Escolar	Mediano	Furgoneta	793.152	1.491.126
	Mediano	Microbús	104.229	195.951
	Pesado	Bus	762.514	1.433.526
Transporte Urbano	Mediano	Microbús	559.886	1.052.586
	Pesado	Bus	4.073.143	7.657.509
Transporte Interprovincial / Intraprovincial	Mediano	Microbús	193.526	363.829
	Pesado	Bus	3.049.714	5.733.462
Transporte Carga Pesada	Pesado	Volqueta / Camión	2.841.429	5.341.887
	Pesado	Tracto Camión	499.200	938.496
TOTAL			32.916.329	58.475.981

II. OBJETIVO

- 2.1 Evaluar la experiencia del Plan Renova y con base en esta evaluación plantear cambios y mejoras que garanticen la sostenibilidad, ampliación y la optimización de los beneficios en función del potencial de reducción de emisiones de gases de efecto invernadero (GEI).

III. ACTIVIDADES

- 3.1 **Evaluar las condiciones actuales del Plan Renova.** Los consultores deberán evaluar las condiciones en las que este programa se ha ido implementado, realizando un análisis de los resultados obtenidos durante los años de programa (2008-2014). También deberán evaluar los costos y beneficios obtenidos hasta 2014 y analizar sus resultados en cuanto a eficiencia energética a través de la estimación de la reducción de emisiones de GEI. Como mínimo se realizarán las siguientes actividades:

- **Analizar los resultados del Plan Renova en el periodo 2008-2014.** Los consultores deberán analizar los resultados del Plan Renova, incluyendo la cantidad y tipo de

vehículos que se han chatarrizado, y la inversión pública y privada que se hecho bajo el programa.

- **Evaluar los costos y los beneficios en cuanto a reducciones de GEI del Plan Renova en el periodo 2008-2014.** Los consultores deberán estimar los efectos sobre emisiones de GEI del programa durante 2008-2014.
- **Analizar la reglamentación y marco jurídico del Plan Renova del 2008 al 2014.** Los consultores deberán analizar el esquema jurídico del Plan Renova para las actividades de chatarrización y adquisición de nueva flota.

3.2 **Elaboración de una propuesta de mejoras para el Plan Renova.** El consultor deberá elaborar una propuesta de reforma al Plan Renova que incorpore incentivos para potenciar la reducción de emisiones de GEI. La propuesta deberá contener al menos.

- **Identificar y analizar condiciones para promover el cambio tecnológico y reducir las emisiones de GEI.** El equipo consultor deberá evaluar y proponer reformas al Plan Renova que promuevan la adopción de tecnologías vehiculares de bajo carbono. Esto incluye estimar tipos y cantidades de vehículos óptimos a reemplazar, tipos de incentivos, montos de créditos, esquemas de asignación y desembolso, etc.
- **Proponer reformas a la reglamentación y marco jurídico del Plan Renova para la adopción de tecnologías vehiculares de bajo carbono.** El equipo consultor deberá proponer mejoras en los aspectos institucionales para potenciar la implementación del Plan Renova, teniendo en cuenta los actores involucrados y el actual marco institucional y jurídico.

IV. CARACTERÍSTICAS DE LA CONSULTORÍA

- 4.1 **Tipo de consultoría:** Firma consultora de uno de los países miembros del BID
- 4.2 **Tipo de contrato:** Por producto
- 4.3 **Duración de la consultoría:** Las actividades descritas en los términos de referencia deberán completarse en 90 días.
- 4.4 **Lugar de la consultoría:** Lugar de residencia del consultor, con al menos una visita a Ecuador.
- 4.5 **Calificaciones del equipo consultor:**
 - a. Gerente de proyecto. Al menos diez años de experiencia profesional liderando proyectos relacionados con tecnologías de bajo carbono.
 - b. Especialista en derecho. Al menos cinco años de experiencia profesional en derecho público.
 - c. Especialista en cambio climático. Al menos cinco años de experiencia en proyectos de mitigación de cambio climático, en particular en el sector de transporte.

V. PRODUCTOS Y CALENDARIOS DE PAGOS

- 5.1 El consultor presentará dos reportes.

- a. El primer reporte debe incluir los resultados de las actividades descritas en el numeral 3.1. El primer reporte debe presentarse dentro de los 45 días calendarios a partir de la firma del contrato.
 - b. El segundo reporte debe incluir los resultados de las actividades descritas en el numeral 3.2. El segundo reporte debe presentarse dentro de los 90 días calendarios a partir de la firma del contrato.
- 5.2 Todos los reportes deben presentarse en español y en archivos electrónicos en formatos de MS Word, Excel u otras aplicaciones aceptadas por el BID (debe incluir todos los anexos y apéndices).
- 5.3 Los pagos de la consultoría se especificarán en el contrato y se realizarán de acuerdo con el siguiente calendario de pagos:
- a. Primer pago correspondiente al 20 % del monto total a la firma del contrato;
 - b. Segundo pago correspondiente al 40% del monto total a la entrega del primer informe;
 - c. Tercer pago correspondiente al 40 % del monto total a la entrega del informe final.

VI. COORDINACIÓN

- 6.1 La División de Transporte de la Representación de Ecuador (TSP/CEC) del BID coordinará las actividades de esta consultoría y tendrá la responsabilidad técnica de la ejecución de este contrato y de aprobar los productos preparados por la firma consultora. En representación del BID, la responsabilidad técnica de la coordinación de esta consultoría corresponde al Sr. Fernando Orduz, Especialista Líder de Transporte de la División de Transporte (e-mail: fernandoo@iadb.org).

ECUADOR

PROGRAM ON ENERGY EFFICIENCY IN THE TRANSPORT SECTOR

NAMA PROPOSAL ON LOW-CARBON FREIGHT TRANSPORT IN ECUADOR

EC-T1286

TERMS OF REFERENCE

I. BACKGROUND AND JUSTIFICATION

- 1.1 The transport sector in Ecuador contributed with 8% of the country's overall greenhouse gas (GHG) emissions in 2006, and with 48% of the energy related GHG emissions (Ecuador's second national communication to the United Nations Framework Convention on Climate Change – UNFCCC). Moreover, GHG emissions from the transport sector in Ecuador are increasing rapidly; in the last 20 years grew 80%³. Furthermore, freight transportation contributed with 41% of the road transport emissions related to fuel consumption in Ecuador, in 2013⁴.
- 1.2 In 2007 the Ministry of Transport and Public Works launched a Vehicle Fleet Renovation Plan (Plan Renova) to ensure the replacement of old public transportation vehicles through a scrappage program by providing an economic incentive to acquire a new vehicle nationally produced at a preferential price or exemption from tariffs on imported vehicles. As per 2013 when the Plan Renova implementation was extended until December 2015, there were scrapped more than 14,000 vehicles in Ecuador and it is expected to increase scrapped units up to 20,000 by 2015.
- 1.3 The Government of Ecuador, through its Plan Renova has provided incentives for vehicle renovation worth USD 72 million. A reform to Plan Renova has the potential to mobilize new resources for the adoption of low-carbon vehicle technologies.
- 1.4 In order to implement Ecuador's National Climate Change Strategy 2012-2025, the Ministry of Environment of Ecuador (MAE) has requested technical assistance to the IDB to design the Low-carbon Freight Transport NAMA in Ecuador taking into consideration the assessment for the adoption of low-carbon technologies for heavy-duty vehicles in Ecuador, and prepare a NAMA proposal that could seek for international climate finance for its implementation.

II. OBJECTIVES

- 2.1 Preparation of a NAMA proposal for Low-carbon Freight Transport in Ecuador that could be eligible for international climate finance for its implementation, according to the current discussions under the UNFCCC. The design of the Low-carbon Freight Transport NAMA in Ecuador should be based on the assessment for the adoption of low-carbon technologies for heavy-duty vehicles in Ecuador.

³ Andrés Hubenthal. "Evaluación del sector transporte en Ecuador con miras a plantear medidas de mitigación al Cambio Climático". UNDP. August 2010.

⁴ Instituto Nacional de Eficiencia Energética y Energías Renovables de Ecuador. "Línea base de investigación en eficiencia energética del sector transporte de Ecuador". INER. November 2014.

III. ACTIVITIES

- 3.1 Feasibility assessment of the design of a Low-carbon Freight Transport NAMA in Ecuador. The consultants shall elaborate a feasibility assessment for a NAMA design, based on the evaluation of the adoption of low-carbon technologies for heavy-duty in Ecuador, which will be provided to the consultants at the beginning of the consultancy.
- 3.2 The feasibility assessment of the NAMA should include, as a minimum:
 - a. **Estimation of GHG emissions and GHG emissions reductions associated to different scenarios for low-carbon freight transport in Ecuador.** The consultants shall model and provide estimates of GHG emissions associated to each proposed scenario over the period 2010 – 2025. GHG emissions from each scenario should be compared to GHG emissions from appropriate baseline scenarios to estimate GHG emissions reductions. Estimates shall be adequately documented and follow principles and practices of internationally recognized GHG accounting standards.
 - b. **Estimation of development benefits associated to the different scenarios for low-carbon freight transport in Ecuador.** The consultants shall provide estimates of selected development benefits (i.e. co-benefits) associated to each proposed scenario over the period 2010 – 2025. Such development benefits may include effects on, inter alia, criteria pollutants, traffic congestion, road safety and economic benefits.
 - c. **Estimation of financial needs associated to the different scenarios for low-carbon freight transport in Ecuador.** Taking into account the evaluation of the adoption of low-carbon technologies for heavy-duty in Ecuador, the consultants shall provide preliminary estimates of the financial needs associated to each proposed scenario over the period 2010 – 2025. Estimates should be adequately documented and include a tentative classification of investments and expenditures required from private and public sources, national, municipal or international funding.
 - d. **Assessment of financial, technical, regulatory and capacity barriers.** The consultants shall identify and make a preliminary assessment of the financial, technical, regulatory and/or capacity barriers that may challenge the full implementation of the proposed scenarios.
- 3.3 **Discussion and dissemination workshop.** Upon completion of activity 3.1, the consultants shall organize a workshop in Quito to present and discuss the preliminary results and collect feedback from relevant stakeholders identified by the MAE. Feedback provided during the workshop should be included in the elaboration of activity 3.3 below.
- 3.4 **Elaboration of the NAMA proposal.** The consultants shall prepare a NAMA proposal that meet requirements for international climate financing based on activities 3.1 and 3.2 above.
- 3.5 The NAMA proposal should include, as minimum:
 - a. **Description of the NAMA.** Rationale or justification for the establishment and implementation of the NAMA (i.e., national and local context and background); definition of the NAMA boundaries; qualitative and quantitative objectives and

targets of the NAMA; policies, measures, technologies to be adopted to achieve NAMA objectives; implementation timeframe; elaboration on transformational impact of the NAMA.

- b. **Country's National Goals and Strategies.** Description of the NAMA's context and linkage within international, national, and local goals and strategies for climate change; description of current actions, policies and regulations already in place in the sector.
- c. **NAMA baseline scenario.** Definition and description of the baseline scenario and reasoning for the selection of the chosen NAMA baseline scenario; description of the methodology and data sources for determining the GHG emissions baseline of the NAMA scenario.
- d. **Estimated Emissions Outcome.** Methodology for determining GHG emissions reductions or avoidance as a result of the NAMA implementation, including mechanism to prevent double counting. Propose a method to track implementation of the NAMA and progress indicators for expected outcomes.
- e. **Development benefits associated.** Methodology for determining environmental, economic, and social benefits (i.e., co-benefits) as a result of the NAMA implementation, including parameters and indicators.
- f. **NAMA management.** Identify actions to institutionalize the NAMA describing the existing institutional and private sector roles, responsibilities and authority which influences the current situation (i.e., without NAMA), and propose if deemed necessary, new institutional and private sector roles, responsibilities and authority which influences the NAMA implementation.
- g. **NAMA implementation.** Definition of the appointed entities for managing, implementing and operating the NAMA, designating roles, responsibilities, level of authority and process flows. Definition of detailed work plan and its timeframe.
- h. **Stakeholder engagement.** Identification of key institutions (both public and private) that would play a role in the successful implementation of the NAMA. Description of the processes for stakeholder consultation and involvement during NAMA implementation.
- i. **Implementation barriers.** Assessment of financial, technical, regulatory, and capacity barriers associated to the full implementation of the NAMA; and definition and design of enabling mechanisms or actions needed to overcome these barriers in order to meet the NAMA objectives and targets.
- j. **Risk assessment.** Identify risks associated to NAMA implementation, and define appropriate risk response strategies.
- k. **Measurement, reporting and verification of the NAMA – NAMA MRV.** Description of the methodology and plan for monitoring, reporting and verifying GHG mitigation and co-benefits, indicating parameters and its measurement, frequency, data sources and monitoring criteria, as well as methodology to determine uncertainties.

1. **NAMA Finance.** Calculate the total incremental costs and estimated cost per unit of outcome. Calculate costs and investments for NAMA implementation and list the support requested and other sources of finance. Including management, enabling mechanisms to overcome barriers, capacity building, MRV system, technology transfer or adoption, among others.
- 3.6 **Submission to the Ministry of Environment of Ecuador for NAMA approval.** The consultants shall prepare all documentation needed for submitting the NAMA to the National Authority of NAMAs, the Ministry of Environment of Ecuador, in order to attain approval. The consultants should also provide support to the NAMA managing entity to complete requirements and procedures to register the NAMA in Ecuador.
- 3.7 **Recommendations for outreach and partnership-building.** The consultants shall make recommendations on outreach activities and potential partnerships to link the NAMA to financial sources. The strategy should include a wide range of international funding sources and instruments to advance the implementation of the proposed NAMA.

IV. CHARACTERISTICS OF THE CONSULTING SERVICES

- 4.1 **Type:** Firm or individual(s) of one of the IDB's member countries.
- 4.2 **Type of contract:** Lump sum.
- 4.3 **Time frame:** The activities under these terms of reference should be completed within five months.
- 4.4 **Place of work:** Home-based with at least one mission to Quito.
- 4.5 **Qualifications:** The consultant team should have at least the following experience:
 - a. **Project Coordinator.** At least ten years of demonstrated professional experience leading consulting teams in climate mitigation and climate finance.
 - b. **Transport and climate change specialist.** At least eight years of demonstrated professional experience climate change financial instruments and significant experience in transport.

V. REPORTS AND PAYMENTS

- 5.1 The consultant will submit an inception report, two interim reports, and a final report.
 - a. The inception report should include the general methodology, work plan and detailed timetable for the development of the consultancy. The inception report should be submitted within 10 calendar days from the signature of the contract.
 - b. The first interim report should include the feasibility assessment of the design of a Low-carbon Freight Transport NAMA (as per paragraph 3.1 above). The first interim report should be submitted within 60 calendar days from the signature of the contract.
 - c. The second interim report should include the NAMA proposal (as per paragraph 3.2 above) and include feedback provided during the workshop. The second interim report should be submitted within 90 calendar days from the signature of the contract.

- d. The final report should include comments from the working group comprised by national and local authorities on the NAMA proposal, as well as activities 3.3 to 3.6 above. The final report should be submitted within 120 calendar days from the signature of the contract.
- 5.2 The inception and interim reports are expected in Spanish. The final report is expected in English and Spanish. All reports will be delivered as follows: i) the relevant electronic files in MS Word, Excel, or other application acceptable to the IDB (must include all annexes and appendices); ii) an electronic PDF file for each full report. These reports and electronic files should be delivered to the project supervisors within the time limits mentioned above.
- 5.3 Payments for the consulting services will be specified in the contract and will be made as follow:
- a. 20% at contract signature and approval of the inception report;
 - b. 30% upon approval of the first interim report;
 - c. 30% upon approval of the second interim report; and,
 - d. 20% upon approval of the final report.

VI. COORDINATION

- 6.1 The Transport Division of the IDB office in Ecuador (TSP/CEC) will have the technical responsibility of the execution of this contract as well as approval of products prepared by the consultants. In representation of the IDB, the technical coordination for this consultancy rests with Mr. Fernando Orduz, Lead Transport Specialist of the Transport Division (e-mail: fernandoo@iadb.org).