

REGIONAL

CLIMATE TECHNOLOGY TRANSFER MECHANISMS AND NETWORKS IN LATIN- AMERICA AND THE CARIBBEAN

CAPACITY BUILDING TECHNICAL COORDINATOR

RG-T2384

TERMS OF REFERENCE

I. BACKGROUND

- 1.1 The project on “Climate technology transfer mechanisms and networks in Latin America and the Caribbean” (the Project) was endorsed by the CEO of the Global Environment Facility (GEF) and approved by the Inter-American Development Bank (IDB). The objective of the Project is to promote the development and transfer of Environmentally Sound Technologies (EST) in Latin America and the Caribbean (LAC), in order to contribute to the ultimate goal of reducing Greenhouse Gas (GHG) emissions and reducing the vulnerability to climate change in specific sectors in LAC.
- 1.2 The Project’s strategy is to build national capacities to identify, assess, develop and transfer EST in LAC. In order to achieve this strategy, the Project will: (i) promote regional collaborative efforts; (ii) support planning and policy-making processes at national and sectoral levels; (iii) serve as a platform for the demonstration of policies and enabling mechanisms; and (iv) mobilize private and public resources. The Project will pilot institutional frameworks and mechanisms for the development and transfer of EST for climate change mitigation and adaptation, taking into consideration and contributing directly to key design features of the Technology Mechanism as agreed under the United Nations Framework Convention on Climate Change (UNFCCC). Furthermore, to maximize global and local environmental benefits, the Project focuses on sectors that are a priority for climate change mitigation and adaptation in LAC, i.e. renewable energy, energy efficiency, transport, forestry and agriculture, prioritizing specific initiatives according to criteria including EST cost-effectiveness, replicability, national circumstances, capabilities and priorities.
- 1.3 The project will be executed around four interlinked components: (i) **development of national policy and institutional capacities**. The objective of this component is to develop institutional capacities and analytical tools to address issues on EST in the context of national and sectoral policies and plans. The activities of this component will focus on the role of national authorities responsible for climate change policy-making, in particular with regards to the identification, assessment and adoption of EST to achieve climate change policy objectives; (ii) **strengthen technology networks and centers**. This component will support the creation and strengthening of regional EST networks on energy, transport, forestry and climate-resilient agriculture. Activities under component two will aim at identifying and prioritizing opportunities of the adoption of EST in each sector in LAC, and in promoting regional partnerships and collaboration through, inter alia, the identification of relevant expertise in the region and selected outreach and dissemination activities; (iii) **pilot technology transfer mechanisms**. This component aims at creating enabling environments for the development and transfer of EST. The activities under

this component will identify, assess and showcase specific examples of technology transfer mechanisms and policies (e.g. regulations, standards, financial mechanisms, joint research and development, etc.). Among other analytical tools, technology roadmaps will be used to identify and discuss the concrete actions and mechanisms that are required for the adoption of specific technologies in a given context; (iv) **leverage private and public investments**. Component four will leverage private and public investments in the development and transfer of EST in LAC. The Project will catalyze investment through the identification of investment opportunities, the elaboration of technology assessments and feasibility studies, and the assessment of the economic and financial feasibility of the adoption of EST (including cost-benefit analysis, market studies, business and financial models and the design of financial mechanisms). The Project will also support the mobilization of international climate financing, supporting the preparation of project proposals and facilitating partnerships.

- 1.4 The Project implementation arrangements include a GEF Implementing Agency (IA) and five Project Executing Agencies (PEA):
- *Instituto Nacional de Ecología y Cambio Climático of Mexico* (INECC) is the PEA responsible for the execution of component one of the Project on the development of national policy and institutional capacities.
 - *Fundación Bariloche*, in Argentina, is the PEA responsible for the execution of the energy sector activities.
 - World Resource Institute (WRI), in the United States, is the PEA responsible for the execution of activities related to the transport sector.
 - *Centro Agronómico Tropical de Investigación y Enseñanza* (CATIE), in Costa Rica, is the PEA for activities on forestry.
 - The IDB, in its capacity as legal representative and administrator of the Regional Fund for Agricultural Technology (Fontagro), is the PEA responsible for the execution of activities in the agriculture sector.

II. OBJECTIVE

- 2.1 The primary function of the technical coordinator for capacity building is the planning, coordination and supervision of the activities of component one of the Project, on the development of national policy and institutional capacities.

III. MAIN ACTIVITIES

- 3.1 Coordinate the activities related to the development of national capacities under component one of the Project, including the coordination with national governments, designated national entities, PEAs, the IDB and other project partners;
- 3.2 Respond to requests by participating countries on issues related to climate change planning under the scope of the Project;
- 3.3 Prepare annual work plans for the execution of activities of component one on the development of national policy and institutional capacities;

- 3.4 Prepare terms of reference and supervise the selection of consultants and consulting firms preparing products under the Project;
- 3.5 Supervise and review the work of consultants and consulting firms preparing products under the Project;
- 3.6 Supervise the organization of workshops, including the preparation of agendas, the selection of speakers and liaising with project partners;
- 3.7 Review and submit regular project update reports and project financial reports to the IDB;
- 3.8 Facilitate and collaborate with the independent teams performing the mid-term and final evaluations of the Project.

IV. REPORTS

- 4.1 The project assistant should submit monthly reports of activities.

V. SCHEDULE OF PAYMENT

- 5.1 The technical coordinator will receive monthly payments.

VI. COORDINATION

- 6.1 The Director for Climate Change Mitigation at INECC will be responsible for the supervision of the technical coordinator.

VII. CHARACTERISTICS OF THE CONSULTANCY

- 7.1 **Consultancy Category & Modality:** National consultant, DTC.
- 7.2 **Contract Duration:** 18 months.
- 7.3 **Location:** INECC offices in Mexico City, Mexico.

VIII. QUALIFICATIONS

- 8.1 A good understanding of climate change issues in Latin America and the Caribbean;
- 8.2 Ability to work independently;
- 8.3 Skills in facilitating meetings effectively and efficiently and to resolve conflicts as they arise;
- 8.4 Ability to accommodate additional demands on a short notice;
- 8.5 Good team player;
- 8.6 Financial management skills and proven organizational abilities.
- 8.7 Education: Advanced university degree in economics, engineering, environment sciences or a relevant field.
- 8.8 Work experience: Five years of relevant experience in climate change planning;
- 8.9 Computer proficiency and knowledge of spreadsheet and database packages (e.g. MS Word, Excel, etc.).
- 8.10 Language Requirements: Fluency in English and Spanish.

REGIONAL

CLIMATE TECHNOLOGY TRANSFER MECHANISMS AND NETWORKS IN LATIN-AMERICA AND THE CARIBBEAN

PROJECT ASSISTANT - INSTITUTO NACIONAL DE ECOLOGÍA Y CAMBIO CLIMÁTICO

RG-T2384

TERMS OF REFERENCE

I. BACKGROUND

- 1.1 The project on “Climate technology transfer mechanisms and networks in Latin America and the Caribbean” (the Project) was endorsed by the CEO of the Global Environment Facility (GEF) and approved by the Inter-American Development Bank (IDB). The objective of the Project is to promote the development and transfer of Environmentally sound Technologies (EST) in Latin America and the Caribbean (LAC), in order to contribute to the ultimate goal of reducing Greenhouse Gas (GHG) emissions and reducing the vulnerability to climate change in specific sectors in LAC.
- 1.2 The Project’s strategy is to build national capacities to identify, assess, develop and transfer EST in LAC. In order to achieve this strategy, the Project will: (i) promote regional collaborative efforts; (ii) support planning and policy-making processes at national and sectoral levels; (iii) serve as a platform for the demonstration of policies and enabling mechanisms; and (iv) mobilize private and public resources. The Project will pilot institutional frameworks and mechanisms for the development and transfer of EST for climate change mitigation and adaptation, taking into consideration and contributing directly to key design features of the Technology Mechanism as agreed under the United Nations Framework Convention on Climate Change (UNFCCC). Furthermore, to maximize global and local environmental benefits, the Project focuses on sectors that are a priority for climate change mitigation and adaptation in LAC, i.e. renewable energy, energy efficiency, transport, forestry and agriculture, prioritizing specific initiatives according to criteria including EST cost-effectiveness, replicability, national circumstances, capabilities and priorities.
- 1.3 The project will be executed around four interlinked components: (i) **development of national policy and institutional capacities**. The objective of this component is to develop institutional capacities and analytical tools to address issues on EST in the context of national and sectoral policies and plans. The activities of this component will focus on the role of national authorities responsible for climate change policy-making, in particular with regards to the identification, assessment and adoption of EST to achieve climate change policy objectives; (ii) **strengthen technology networks and centres**. This component will support the creation and strengthening of regional EST networks on energy, transport, forestry and climate-resilient agriculture. Activities under component two will aim at identifying and prioritizing opportunities of the adoption of EST in each sector in LAC, and in promoting regional partnerships and collaboration through, inter alia, the identification of relevant expertise in the region and selected outreach and dissemination activities; (iii) **pilot technology transfer mechanisms**. This component aims at creating enabling environments for the development and transfer of EST. The activities under

this component will identify, assess and showcase specific examples of technology transfer mechanisms and policies (e.g. regulations, standards, financial mechanisms, joint research and development, etc.). Among other analytical tools, technology roadmaps will be used to identify and discuss the concrete actions and mechanisms that are required for the adoption of specific technologies in a given context; and (iv) **leverage private and public investments**. Component four will leverage private and public investments in the development and transfer of EST in LAC. The project will catalyse investment through the identification of investment opportunities, the preparation of technology assessments and feasibility studies, and the assessment of the economic and financial feasibility of the adoption of EST (including cost-benefit analysis, market studies, business and financial models and the design of financial mechanisms). The project will also support the mobilization of international climate financing, supporting the preparation of project proposals and facilitating partnerships.

- 1.4 The Project implementation arrangements include a GEF Implementing Agency (IA) and five Project Executing Agencies (PEA):
 - *Instituto Nacional de Ecología y Cambio Climático* of Mexico (INECC) is the PEA responsible for the execution of component one of the Project on the development of national policy and institutional capacities.
 - *Fundación Bariloche*, in Argentina, is the PEA responsible for the execution of the energy sector activities.
 - World Resource Institute (WRI), in the United States, is the PEA responsible for the execution of activities related to the transport sector.
 - *Centro Agronómico Tropical de Investigación y Enseñanza* (CATIE), in Costa Rica, is the PEA for activities on forestry.
 - The IDB, in its capacity as legal representative and administrator of the Regional Fund for Agricultural Technology (Fontagro), is the PEA responsible for the execution of activities in the agriculture sector.

II. OBJECTIVE

- 2.1 The primary function of the Project Assistant is to support the execution of the activities of component one of the Project, on the development of national policy and institutional capacities.

III. MAIN ACTIVITIES

- 3.1 Provide administrative and logistical support to INECC and the technical coordinator for the activities on capacity development;
- 3.2 Support the organization of workshops, including the arrangements to secure the venue, as well as travel and lodging of participants;
- 3.3 Support the technical coordinator in the day-to-day communication and coordination with other PEAs, project partners, and IDB staff responsible for the supervision of the Project;

- 3.4 Assist INECC on issues related to IDB/GEF procurement and reporting policies and procedures;
- 3.5 Participate in editing, formatting, and finalization of project documents;
- 3.6 Compile regular project update reports and project financial reports for IDB and GEF;
- 3.7 Perform other duties as required.

IV. REPORTS

- 4.1 The project assistant should submit monthly reports of activities.

V. SCHEDULE OF PAYMENT

- 5.1 The project assistant will receive monthly payments.

VI. COORDINATION

- 6.1 The Director for Climate Change Mitigation at INECC will be responsible for the overall supervision of the project assistant. The technical coordinator for the activities on capacity development will supervise the day-to-day activities of the project assistant.

VII. CHARACTERISTICS OF THE CONSULTANCY

- 7.1 Consultancy Category & Modality: National consultant, DTC
- 7.2 Contract Duration: 18 months.
- 7.3 Location: INECC, Mexico City, Mexico.

VIII. QUALIFICATIONS

- 8.1 Maintains effective client relationships.
- 8.2 Reports to internal and external clients in a timely and appropriate manner.
- 8.3 Organizes and prioritizes work schedule to meet client needs and deadlines.
- 8.4 Responds to client needs promptly.
- 8.5 Education: Associate degree in business, public administration, finance or a relevant field.
- 8.6 Work experience: Two years of relevant project assistance experience.
- 8.7 Computer proficiency and knowledge of spreadsheet and database packages (e.g. MS Word, Excel, etc.).
- 8.8 Language Requirements: Fluency in English and Spanish.

REGIONAL

CLIMATE TECHNOLOGY TRANSFER MECHANISMS AND NETWORKS IN LATIN-AMERICA AND THE CARIBBEAN

RENEWABLE ENERGY TECHNICAL COORDINATOR

RG-T2384

TERMS OF REFERENCE

I. BACKGROUND

- 1.1 The project on “Climate technology transfer mechanisms and networks in Latin America and the Caribbean” (the Project) was endorsed by the CEO of the Global Environment Facility (GEF) and approved by the Inter-American Development Bank (IDB). The objective of the Project is to promote the development and transfer of Environmentally Sound Technologies (EST) in Latin America and the Caribbean (LAC), in order to contribute to the ultimate goal of reducing Greenhouse Gas (GHG) emissions and reducing the vulnerability to climate change in specific sectors in LAC.
- 1.2 The Project’s strategy is to build national capacities to identify, assess, develop and transfer EST in LAC. In order to achieve this strategy, the Project will: (i) promote regional collaborative efforts; (ii) support planning and policy-making processes at national and sectoral levels; (iii) serve as a platform for the demonstration of policies and enabling mechanisms; and (iv) mobilize private and public resources. The Project will pilot institutional frameworks and mechanisms for the development and transfer of EST for climate change mitigation and adaptation, taking into consideration and contributing directly to key design features of the Technology Mechanism as agreed under the United Nations Framework Convention on Climate Change (UNFCCC). Furthermore, to maximize global and local environmental benefits, the Project focuses on sectors that are a priority for climate change mitigation and adaptation in LAC, i.e. renewable energy, energy efficiency, transport, forestry and agriculture, prioritizing specific initiatives according to criteria including EST cost-effectiveness, replicability, national circumstances, capabilities and priorities.
- 1.3 The project will be executed around four interlinked components: (i) **development of national policy and institutional capacities**. The objective of this component is to develop institutional capacities and analytical tools to address issues on EST in the context of national and sectoral policies and plans. The activities of this component will focus on the role of national authorities responsible for climate change policy-making, in particular with regards to the identification, assessment and adoption of EST to achieve climate change policy objectives; (ii) **strengthen technology networks and centres**. This component will support the creation and strengthening of regional EST networks on energy, transport, forestry and climate-resilient agriculture. Activities under component two will aim at identifying and prioritizing opportunities of the adoption of EST in each sector in LAC, and in promoting regional partnerships and collaboration through, inter alia, the identification of relevant expertise in the region and selected outreach and dissemination activities; (iii) **pilot technology transfer mechanisms**. This component aims at creating enabling environments for the development and transfer of EST. The activities under

this component will identify, assess and showcase specific examples of technology transfer mechanisms and policies (e.g. regulations, standards, financial mechanisms, joint research and development, etc.). Among other analytical tools, technology roadmaps will be used to identify and discuss the concrete actions and mechanisms that are required for the adoption of specific technologies in a given context; and (iv) **leverage private and public investments**. Component four will leverage private and public investments in the development and transfer of EST in LAC. The project will catalyse investment through the identification of investment opportunities, the elaboration of technology assessments and feasibility studies, and the assessment of the economic and financial feasibility of the adoption of EST (including cost-benefit analysis, market studies, business and financial models and the design of financial mechanisms). The project will also support the mobilization of international climate financing, supporting the preparation of project proposals and facilitating partnerships.

- 1.4 The Project implementation arrangements include a GEF Implementing Agency (IA) and five Project Executing Agencies (PEA):
- *Instituto Nacional de Ecología y Cambio Climático* of Mexico (INECC) is the PEA responsible for the execution of component one of the Project on the development of national policy and institutional capacities.
 - *Fundación Bariloche*, in Argentina, is the PEA responsible for the execution of the energy sector activities.
 - World Resource Institute (WRI), in the United States, is the PEA responsible for the execution of activities related to the transport sector.
 - *Centro Agronómico Tropical de Investigación y Enseñanza* (CATIE), in Costa Rica, is the PEA for activities on forestry.
 - The IDB, in its capacity as legal representative and administrator of the Regional Fund for Agricultural Technology (Fontagro), is the PEA responsible for the execution of activities in the agriculture sector.

II. OBJECTIVE

- 2.1 The primary function of the technical coordinator for renewable energy is the planning, coordination and supervision of the activities of the Project related to the development and transfer of renewable energy technologies.

III. MAIN ACTIVITIES

- 3.1 Lead and coordinate the activities on the development and transfer of renewable energy technologies under components two, three and four the Project, including liaising with national governments, designated national entities, PEAs, the IDB and other project partners;
- 3.2 Respond to requests by participating countries on issues related to development and transfer of renewable energy technologies under the scope of the Project;
- 3.3 Prepare annual work plans for the execution of activities under the responsibility of *Fundación Bariloche*;

- 3.4 Prepare terms of reference and supervise the selection of consultants and consulting firms preparing products under the responsibility of *Fundación Bariloche*;
- 3.5 Supervise and review the work of consultants and consulting firms preparing products under the responsibility of *Fundación Bariloche*;
- 3.6 Organize sessions and/or side events on the development and transfer of renewable energy technologies, including the preparation of agendas, the selection of speakers and liaising with project partners;
- 3.7 Establish a broad network of organizations and individuals in LAC with relevant expertise on EST in the energy sector;
- 3.8 Review and submit regular project update reports and project financial reports to the IDB;
- 3.9 Facilitate and collaborate with the independent teams performing the mid-term and final evaluations of the Project.

IV. REPORTS

- 4.1 The technical coordinator should submit monthly reports of activities.

V. SCHEDULE OF PAYMENT

- 5.1 The technical coordinator will receive monthly payments.

VI. COORDINATION

- 6.1 The Executive President of *Fundación Bariloche* will be responsible for the supervision of the technical coordinator.

VII. CHARACTERISTICS OF THE CONSULTANCY

- 7.1 Consultancy Category & Modality: International consultant, DTC
- 7.2 Contract Duration: 18 months.
- 7.3 Location: Fundación Bariloche, Buenos Aires, Argentina.

VIII. QUALIFICATIONS

- 8.1 Education: Advanced university degree (Master's degree or equivalent) in engineering, environment sciences or a relevant field;
- 8.2 Work experience: Seven years of relevant experience in renewable energy, energy policy, technology and innovation and climate change; international experience in Latin America and the Caribbean;
- 8.3 Computer proficiency and knowledge of spreadsheet and database packages (e.g. MS Word, Excel, etc.).
- 8.4 Language Requirements: Fluency in English and Spanish. Knowledge of Portuguese is an advantage.

Regional

Climate Technology Transfer Mechanisms and Networks in Latin-America and the Caribbean

ENERGY EFFICIENCY TECHNICAL COORDINATOR

RG-T2384

Terms of Reference

I. BACKGROUND

- 1.1 The project on “Climate technology transfer mechanisms and networks in Latin America and the Caribbean” (the Project) was endorsed by the CEO of the Global Environment Facility (GEF) and approved by the Inter-American Development Bank (IDB). The objective of the Project is to promote the development and transfer of Environmentally Sound Technologies (EST) in Latin America and the Caribbean (LAC), in order to contribute to the ultimate goal of reducing Greenhouse Gas (GHG) emissions and reducing the vulnerability to climate change in specific sectors in LAC.
- 1.2 The Project’s strategy is to build national capacities to identify, assess, develop and transfer EST in LAC. In order to achieve this strategy, the Project will: (i) promote regional collaborative efforts; (ii) support planning and policy-making processes at national and sectoral levels; (iii) serve as a platform for the demonstration of policies and enabling mechanisms; and (iv) mobilize private and public resources. The Project will pilot institutional frameworks and mechanisms for the development and transfer of EST for climate change mitigation and adaptation, taking into consideration and contributing directly to key design features of the Technology Mechanism as agreed under the United Nations Framework Convention on Climate Change (UNFCCC). Furthermore, to maximize global and local environmental benefits, the Project focuses on sectors that are a priority for climate change mitigation and adaptation in LAC, i.e. renewable energy, energy efficiency, transport, forestry and agriculture, prioritizing specific initiatives according to criteria including EST cost-effectiveness, replicability, national circumstances, capabilities and priorities.
- 1.3 The project will be executed around four interlinked components: (i) **development of national policy and institutional capacities**. The objective of this component is to develop institutional capacities and analytical tools to address issues on EST in the context of national and sectoral policies and plans. The activities of this component will focus on the role of national authorities responsible for climate change policy-making, in particular with regards to the identification, assessment and adoption of EST to achieve climate change policy objectives; (ii) **strengthen technology networks and centers**. This component will support the creation and strengthening of regional EST networks on energy, transport, forestry and climate-resilient agriculture. Activities under component two will aim at identifying and prioritizing opportunities of the adoption of EST in each sector in LAC, and in promoting regional partnerships and collaboration through, inter alia, the identification of relevant expertise in the region and selected outreach and dissemination activities; (iii) **pilot technology transfer mechanisms**. This component aims at creating enabling environments for the development and transfer of EST. The activities under

this component will identify, assess and showcase specific examples of technology transfer mechanisms and policies (e.g. regulations, standards, financial mechanisms, joint research and development, etc.). Among other analytical tools, technology roadmaps will be used to identify and discuss the concrete actions and mechanisms that are required for the adoption of specific technologies in a given context; and (iv) **leverage private and public investments**. Component four will leverage private and public investments in the development and transfer of EST in LAC. The project will catalyze investment through the identification of investment opportunities, the elaboration of technology assessments and feasibility studies, and the assessment of the economic and financial feasibility of the adoption of ESTs (including cost-benefit analysis, market studies, business and financial models and the design of financial mechanisms). The project will also support the mobilization of international climate financing, supporting the preparation of project proposals and facilitating partnerships.

- 1.4 The Project implementation arrangements include a GEF Implementing Agency (IA) and five Project Executing Agencies (PEA):
- *Instituto Nacional de Ecología y Cambio Climático* of Mexico (INECC) is the PEA responsible for the execution of component one of the Project on the development of national policy and institutional capacities.
 - *Fundación Bariloche*, in Argentina, is the PEA responsible for the execution of the energy sector activities.
 - World Resource Institute (WRI), in the United States, is the PEA responsible for the execution of activities related to the transport sector.
 - *Centro Agronómico Tropical de Investigación y Enseñanza* (CATIE), in Costa Rica, is the PEA for activities on forestry.
 - The IDB, in its capacity as legal representative and administrator of the Regional Fund for Agricultural Technology (Fontagro), is the PEA responsible for the execution of activities in the agriculture sector.

II. OBJECTIVE

- 2.1 The primary function of the technical coordinator for energy efficiency is the planning, coordination and supervision of the activities of the Project related to the development and transfer of energy efficiency technologies.

III. MAIN ACTIVITIES

- 3.1 Lead and coordinate the activities on the development and transfer of energy efficiency technologies under components two, three and four the Project, including liaising with national governments, designated national entities, PEAs, the IDB and other project partners;
- 3.2 Respond to requests by participating countries on issues related to development and transfer of energy efficiency technologies under the scope of the Project;
- 3.3 Prepare annual work plans for the execution of activities under the responsibility of *Fundación Bariloche*;

- 3.4 Prepare terms of reference and supervise the selection of consultants and consulting firms preparing products under the responsibility of *Fundación Bariloche*;
- 3.5 Supervise and review the work of consultants and consulting firms preparing products under the responsibility of *Fundación Bariloche*;
- 3.6 Organize sessions and/or side events on the development and transfer of energy efficiency technologies, including the preparation of agendas, the selection of speakers and liaising with project partners;
- 3.7 Establish a broad network of organizations and individuals in LAC with relevant expertise on EST in the energy sector;
- 3.8 Review and submit regular project update reports and project financial reports to the IDB;
- 3.9 Facilitate and collaborate with the independent teams performing the mid-term and final evaluations of the Project.

IV. REPORTS

- 4.1 The technical coordinator should submit monthly reports of activities.

V. SCHEDULE OF PAYMENT

- 5.1 The technical coordinator will receive monthly payments.

VI. COORDINATION

- 6.1 The Executive President of *Fundación Bariloche* will be responsible for the supervision of the technical coordinator.

VII. CHARACTERISTICS OF THE CONSULTANCY

- 7.1 Consultancy Category & Modality: International consultant, DTC
- 7.2 Contract Duration: 18 months.
- 7.3 Location: Fundación Bariloche, Buenos Aires, Argentina.

VIII. QUALIFICATIONS

- 8.1 Education: Advanced university degree (Master's degree or equivalent) in engineering, environment sciences or a relevant field;
- 8.2 Work experience: Seven years of relevant experience in energy efficiency, energy policy, technology and innovation and climate change; international experience in Latin America and the Caribbean;
- 8.3 Computer proficiency and knowledge of spreadsheet and database packages (e.g. MS Word, Excel, etc.).
- 8.4 Language Requirements: Fluency in English and Spanish. Knowledge of Portuguese is an advantage.

REGIONAL

CLIMATE TECHNOLOGY TRANSFER MECHANISMS AND NETWORKS IN LATIN-AMERICA AND THE CARIBBEAN

TRANSPORTATION TECHNICAL COORDINATOR

RG-T2384

TERMS OF REFERENCE

I. BACKGROUND

- 1.1 The project on “Climate technology transfer mechanisms and networks in Latin America and the Caribbean” (the Project) was endorsed by the CEO of the Global Environment Facility (GEF) and approved by the Inter-American Development Bank (IDB). The objective of the Project is to promote the development and transfer of Environmentally Sound Technologies (EST) in Latin America and the Caribbean (LAC), in order to contribute to the ultimate goal of reducing Greenhouse Gas (GHG) emissions and reducing the vulnerability to climate change in specific sectors in LAC.
- 1.2 The Project’s strategy is to build national capacities to identify, assess, develop and transfer EST in LAC. In order to achieve this strategy, the Project will: (i) promote regional collaborative efforts; (ii) support planning and policy-making processes at national and sectoral levels; (iii) serve as a platform for the demonstration of policies and enabling mechanisms; and (iv) mobilize private and public resources. The Project will pilot institutional frameworks and mechanisms for the development and transfer of EST for climate change mitigation and adaptation, taking into consideration and contributing directly to key design features of the Technology Mechanism as agreed under the United Nations Framework Convention on Climate Change (UNFCCC). Furthermore, to maximize global and local environmental benefits, the Project focuses on sectors that are a priority for climate change mitigation and adaptation in LAC, i.e. renewable energy, energy efficiency, transport, forestry and agriculture, prioritizing specific initiatives according to criteria including EST cost-effectiveness, replicability, national circumstances, capabilities and priorities.
- 1.3 The project will be executed around four interlinked components: (i) **development of national policy and institutional capacities**. The objective of this component is to develop institutional capacities and analytical tools to address issues on EST in the context of national and sectoral policies and plans. The activities of this component will focus on the role of national authorities responsible for climate change policy-making, in particular with regards to the identification, assessment and adoption of EST to achieve climate change policy objectives; (ii) **strengthen technology networks and centres**. This component will support the creation and strengthening of regional EST networks on energy, transport, forestry and climate-resilient agriculture. Activities under component two will aim at identifying and prioritizing opportunities of the adoption of EST in each sector in LAC, and in promoting regional partnerships and collaboration through, inter alia, the identification of relevant expertise in the region and selected outreach and dissemination activities; (iii) **pilot technology transfer mechanisms**. This component aims at creating enabling environments for the development and transfer

of EST. The activities under this component will identify, assess and showcase specific examples of technology transfer mechanisms and policies (e.g. regulations, standards, financial mechanisms, joint research and development, etc.). Among other analytical tools, technology roadmaps will be used to identify and discuss the concrete actions and mechanisms that are required for the adoption of specific technologies in a given context; (iv) **leverage private and public investments**. Component four will leverage private and public investments in the development and transfer of EST in LAC. The project will catalyse investment through the identification of investment opportunities, the elaboration of technology assessments and feasibility studies, and the assessment of the economic and financial feasibility of the adoption of ESTs (including cost-benefit analysis, market studies, business and financial models and the design of financial mechanisms). The project will also support the mobilization of international climate financing, supporting the preparation of project proposals and facilitating partnerships.

- 1.4 The Project implementation arrangements include a GEF Implementing Agency (IA) and five Project Executing Agencies (PEA):
- *Instituto Nacional de Ecología y Cambio Climático* of Mexico (INECC) is the PEA responsible for the execution of component one of the Project on the development of national policy and institutional capacities.
 - *Fundación Bariloche*, in Argentina, is the PEA responsible for the execution of the energy sector activities.
 - The World Resource Institute (WRI) / EMBARQ (WRI's Centre for Sustainable Transport), in the United States, is the PEA responsible for the execution of activities related to the transport sector.
 - *Centro Agronómico Tropical de Investigación y Enseñanza* (CATIE), in Costa Rica, is the PEA for activities on forestry.
 - The IDB, in its capacity as legal representative and administrator of the Regional Fund for Agricultural Technology (Fontagro), is the PEA responsible for the execution of activities in the agriculture sector.

II. OBJECTIVE

- 2.1 The primary function of the technical coordinator for transportation is the planning, coordination and supervision of the activities of the Project related to the development and transfer of EST for the transport sector.

III. MAIN ACTIVITIES

- 3.1 Lead and coordinate the activities on the development and transfer of EST for the transport sector under components two, three and four the Project, including liaising with national governments, designated national entities, PEAs, the IDB and other project partners;
- 3.2 Respond to requests by participating countries on issues related to development and transfer of EST for the transport sector under the scope of the Project;

- 3.3 Prepare annual work plans for the execution of activities under the responsibility of WRI;
- 3.4 Prepare terms of reference and supervise the selection of consultants and consulting firms preparing products under the responsibility of WRI;
- 3.5 Supervise and review the work of consultants and consulting firms preparing products under the responsibility of WRI;
- 3.6 Organize sessions and/or side events on the development and transfer of EST for the transport, including the preparation of agendas, the selection of speakers and liaising with project partners;
- 3.7 Establish a broad network of organizations and individuals in LAC with relevant expertise on EST in the transport sector;
- 3.8 Review and submit regular project update reports and project financial reports to the IDB;
- 3.9 Facilitate and collaborate with the independent teams performing the mid-term and final evaluations of the Project.

IV. REPORTS

- 4.1 The technical coordinator should submit monthly reports of activities.

V. SCHEDULE OF PAYMENT

- 5.1 The technical coordinator will receive monthly payments.

VI. COORDINATION

- 6.1 The Director of EMBARQ will be responsible for the supervision of the technical coordinator.

VII. CHARACTERISTICS OF THE CONSULTANCY

- 7.1 Consultancy Category & Modality: International consultant, DTC.
- 7.2 Contract Duration: 18 months.
- 7.3 Location: WRI, Washington D.C., United States of America.

VIII. QUALIFICATIONS

- 8.1 Education: Advanced university degree (Master's degree or equivalent) in engineering, environment sciences or a relevant field.
- 8.2 Work experience: Seven years of relevant experience in transportation, transport policy, technology and innovation and climate change; international experience in Latin America and the Caribbean.
- 8.3 Computer proficiency and knowledge of spreadsheet and database packages (e.g. MS Word, Excel, etc.).
- 8.4 Language Requirements: Fluency in English and Spanish. Knowledge of Portuguese is an advantage.

REGIONAL

CLIMATE TECHNOLOGY TRANSFER MECHANISMS AND NETWORKS IN LATIN-AMERICA AND THE CARIBBEAN

FORESTRY TECHNICAL COORDINATOR

RG-T2384

TERMS OF REFERENCE

I. BACKGROUND

- 1.1 The project on “Climate technology transfer mechanisms and networks in Latin America and the Caribbean” (the Project) was endorsed by the CEO of the Global Environment Facility (GEF) and approved by the Inter-American Development Bank (IDB). The objective of the Project is to promote the development and transfer of Environmentally Sound Technologies (EST) in Latin America and the Caribbean (LAC), in order to contribute to the ultimate goal of reducing Greenhouse Gas (GHG) emissions and reducing the vulnerability to climate change in specific sectors in LAC.
- 1.2 The Project’s strategy is to build national capacities to identify, assess, develop and transfer EST in LAC. In order to achieve this strategy, the Project will: (i) promote regional collaborative efforts; (ii) support planning and policy-making processes at national and sectoral levels; (iii) serve as a platform for the demonstration of policies and enabling mechanisms; and (iv) mobilize private and public resources. The Project will pilot institutional frameworks and mechanisms for the development and transfer of EST for climate change mitigation and adaptation, taking into consideration and contributing directly to key design features of the Technology Mechanism as agreed under the United Nations Framework Convention on Climate Change (UNFCCC). Furthermore, to maximize global and local environmental benefits, the Project focuses on sectors that are a priority for climate change mitigation and adaptation in LAC, i.e. renewable energy, energy efficiency, transport, forestry and agriculture, prioritizing specific initiatives according to criteria including EST cost-effectiveness, replicability, national circumstances, capabilities and priorities.
- 1.3 The project will be executed around four interlinked components: (i) **development of national policy and institutional capacities**. The objective of this component is to develop institutional capacities and analytical tools to address issues on EST in the context of national and sectoral policies and plans. The activities of this component will focus on the role of national authorities responsible for climate change policy-making, in particular with regards to the identification, assessment and adoption of EST to achieve climate change policy objectives; (ii) **strengthen technology networks and centres**. This component will support the creation and strengthening of regional EST networks on energy, transport, forestry and climate-resilient agriculture. Activities under component two will aim at identifying and prioritizing opportunities of the adoption of EST in each sector in LAC, and in promoting regional partnerships and collaboration through, inter alia, the identification of relevant expertise in the region and selected outreach and dissemination activities; (iii) **pilot technology transfer mechanisms**. This component aims at creating enabling environments for the development and transfer of EST. The activities under

this component will identify, assess and showcase specific examples of technology transfer mechanisms and policies (e.g. regulations, standards, financial mechanisms, joint research and development, etc.). Among other analytical tools, technology roadmaps will be used to identify and discuss the concrete actions and mechanisms that are required for the adoption of specific technologies in a given context; and (iv) **leverage private and public investments**. Component four will leverage private and public investments in the development and transfer of EST in LAC. The project will catalyse investment through the identification of investment opportunities, the elaboration of technology assessments and feasibility studies, and the assessment of the economic and financial feasibility of the adoption of ESTs (including cost-benefit analysis, market studies, business and financial models and the design of financial mechanisms). The project will also support the mobilization of international climate financing, supporting the preparation of project proposals and facilitating partnerships.

- 1.4 The Project implementation arrangements include a GEF Implementing Agency (IA) and five Project Executing Agencies (PEA):
- *Instituto Nacional de Ecología y Cambio Climático* of Mexico (INECC) is the PEA responsible for the execution of component one of the Project on the development of national policy and institutional capacities.
 - *Fundación Bariloche*, in Argentina, is the PEA responsible for the execution of the energy sector activities.
 - World Resource Institute (WRI), in the United States, is the PEA responsible for the execution of activities related to the transport sector.
 - *Centro Agronómico Tropical de Investigación y Enseñanza* (CATIE), in Costa Rica, is the PEA for activities on forestry.
 - The IDB, in its capacity as legal representative and administrator of the Regional Fund for Agricultural Technology (Fontagro), is the PEA responsible for the execution of activities in the agriculture sector.

II. OBJECTIVE

- 2.1 The primary function of the technical coordinator for forestry is the planning, coordination and supervision of the activities of the Project related to the development and transfer of forest monitoring technologies.

III. MAIN ACTIVITIES

- 3.1 Lead and coordinate the activities on the development and transfer of forest monitoring technologies under components two, three and four the Project, including liaising with national governments, designated national entities, PEAs, the IDB and other project partners;
- 3.2 Respond to requests by participating countries on issues related to development and transfer of forest monitoring technologies under the scope of the Project;
- 3.3 Prepare annual work plans for the execution of activities under the responsibility of CATIE;

- 3.4 Prepare terms of reference and supervise the selection of consultants and consulting firms preparing products under the responsibility of CATIE;
- 3.5 Supervise and review the work of consultants and consulting firms preparing products under the responsibility of CATIE;
- 3.6 Organize sessions and/or side events on the development and transfer of forest monitoring technologies, including the preparation of agendas, the selection of speakers and liaising with project partners;
- 3.7 Establish a broad network of organizations and individuals in LAC with relevant expertise on EST for the monitoring of forestry resources;
- 3.8 Review and submit regular project update reports and project financial reports to the IDB;
- 3.9 Facilitate and collaborate with the independent teams performing the mid-term and final evaluations of the Project.

IV. REPORTS

- 4.1 The technical coordinator should submit monthly reports of activities.

V. SCHEDULE OF PAYMENT

- 5.1 The technical coordinator will receive monthly payments.

VI. COORDINATION

- 6.1 The Climate Change and Watershed lead at CATIE will be responsible for the supervision of the technical coordinator.

VII. CHARACTERISTICS OF THE CONSULTANCY

- 7.1 Consultancy Category & Modality: International consultant, DTC
- 7.2 Contract Duration: 18 months.
- 7.3 Location: CATIE, Cartago, Costa Rica.

VIII. QUALIFICATIONS

- 8.1 Education: Advanced university degree (Master's degree or equivalent) in forestry, agronomy, engineering, environment sciences or a relevant field;
- 8.2 Work experience: Seven years of relevant experience in forest management and policy, technology and innovation and climate change; international experience in Latin America and the Caribbean;
- 8.3 Computer proficiency and knowledge of spreadsheet and database packages (e.g. MS Word, Excel, etc.).
- 8.4 Language Requirements: Fluency in English and Spanish. Knowledge of Portuguese is an advantage.

REGIONAL

CLIMATE TECHNOLOGY TRANSFER MECHANISMS AND NETWORKS IN LATIN-AMERICA AND THE CARIBBEAN

AGRICULTURE TECHNICAL COORDINATOR

RG-T2384

TERMS OF REFERENCE

I. BACKGROUND

- 1.1 The project on “Climate technology transfer mechanisms and networks in Latin America and the Caribbean” (the Project) was endorsed by the CEO of the Global Environment Facility (GEF) and approved by the Inter-American Development Bank (IDB). The objective of the Project is to promote the development and transfer of Environmentally Sound Technologies (EST) in Latin America and the Caribbean (LAC), in order to contribute to the ultimate goal of reducing Greenhouse Gas (GHG) emissions and reducing the vulnerability to climate change in specific sectors in LAC.
- 1.2 The Project’s strategy is to build national capacities to identify, assess, develop and transfer EST in LAC. In order to achieve this strategy, the Project will: (i) promote regional collaborative efforts; (ii) support planning and policy-making processes at national and sectoral levels; (iii) serve as a platform for the demonstration of policies and enabling mechanisms; and (iv) mobilize private and public resources. The Project will pilot institutional frameworks and mechanisms for the development and transfer of EST for climate change mitigation and adaptation, taking into consideration and contributing directly to key design features of the Technology Mechanism as agreed under the United Nations Framework Convention on Climate Change (UNFCCC). Furthermore, to maximize global and local environmental benefits, the Project focuses on sectors that are a priority for climate change mitigation and adaptation in LAC, i.e. renewable energy, energy efficiency, transport, forestry and agriculture, prioritizing specific initiatives according to criteria including EST cost-effectiveness, replicability, national circumstances, capabilities and priorities.
- 1.3 The project will be executed around four interlinked components: (i) **development of national policy and institutional capacities**. The objective of this component is to develop institutional capacities and analytical tools to address issues on EST in the context of national and sectoral policies and plans. The activities of this component will focus on the role of national authorities responsible for climate change policy-making, in particular with regards to the identification, assessment and adoption of EST to achieve climate change policy objectives; (ii) **strengthen technology networks and centers**. This component will support the creation and strengthening of regional EST networks on energy, transport, forestry and climate-resilient agriculture. Activities under this component will aim at identifying and prioritizing opportunities of the adoption of EST in each sector in LAC, and in promoting regional partnerships and collaboration through, inter alia, the identification of relevant expertise in the region and selected outreach and dissemination activities; (iii) **pilot technology transfer mechanisms**. This component aims at creating enabling environments for the development and transfer of EST. The activities under

this component will identify, assess and showcase specific examples of technology transfer mechanisms and policies (e.g. regulations, standards, financial mechanisms, joint research and development, etc.). Among other analytical tools, technology roadmaps will be used to identify and discuss the concrete actions and mechanisms that are required for the adoption of specific technologies in a given context; and (iv) **leverage private and public investments**. Component four will leverage private and public investments in the development and transfer of EST in LAC. The project will catalyze investment through the identification of investment opportunities, the elaboration of technology assessments and feasibility studies, and the assessment of the economic and financial feasibility of the adoption of EST (including cost-benefit analysis, market studies, business and financial models and the design of financial mechanisms). The project will also support the mobilization of international climate financing, supporting the preparation of project proposals and facilitating partnerships.

- 1.4 The Project implementation arrangements include a GEF Implementing Agency (IA) and five Project Executing Agencies (PEA):
 - *Instituto Nacional de Ecología y Cambio Climático* of Mexico (INECC) is the PEA responsible for the execution of component one of the Project on the development of national policy and institutional capacities.
 - *Fundación Bariloche*, in Argentina, is the PEA responsible for the execution of the energy sector activities.
 - World Resource Institute (WRI), in the United States, is the PEA responsible for the execution of activities related to the transport sector.
 - *Centro Agronómico Tropical de Investigación y Enseñanza* (CATIE), in Costa Rica, is the PEA for activities on forestry.
 - The IDB, in its capacity as legal representative and administrator of the Regional Fund for Agricultural Technology (Fontagro), is the PEA responsible for the execution of activities in the agriculture sector.

II. OBJECTIVE

- 2.1 The primary function of the technical coordinator for agriculture is the planning, coordination and supervision of the activities of the Project related to the development and transfer of technologies for adaptation in agriculture.

III. MAIN ACTIVITIES

- 3.1 Lead and coordinate the activities on the development and transfer of technologies for adaptation in agriculture under components two, three and four the Project, including the coordination and communication with national governments, designated national entities, PEAs, the IDB and other project partners;
- 3.2 Respond to requests by participating countries on issues related to development and transfer of technologies for adaptation in agriculture under the scope of the Project;

- 3.3 Prepare annual work plans for the execution of activities under the responsibility of IDB-Fontagro;
- 3.4 Prepare terms of reference and supervise the selection of consultants and consulting firms preparing products under the responsibility of IDB-Fontagro;
- 3.5 Supervise and review the work of consultants and consulting firms preparing products under the responsibility of IDB-Fontagro;
- 3.6 Organize sessions and/or side events on the development and transfer of technologies for adaptation in agriculture, including the preparation of agendas, the selection of speakers and liaising with project partners;
- 3.7 Establish a broad network of organizations and individuals in LAC with relevant expertise on technologies for adaptation in agriculture;
- 3.8 Review and submit regular project update reports and project financial reports to the IDB;
- 3.9 Facilitate and collaborate with the independent teams performing the mid-term and final evaluations of the Project.

IV. REPORTS

- 4.1 The technical coordinator should submit monthly reports of activities.

V. SCHEDULE OF PAYMENT

- 5.1 The technical coordinator will receive monthly payments.

VI. COORDINATION

- 6.1 Kai Hertz, Operations Lead Specialist of the Grants and Co-financing Management Unit (ORP/GCM) at the IDB will be responsible for the supervision of the technical coordinator.

VII. CHARACTERISTICS OF THE CONSULTANCY

- 7.1 Consultancy Category & Modality: International consultant, DTC.
- 7.2 Contract Duration: 18 months.
- 7.3 Location: IDB HQ, Washington, D.C., United States of America.

VIII. QUALIFICATIONS

- 8.1 Education: Advanced university degree (Master's degree or equivalent) in agronomy, engineering, environment sciences or a relevant field;
- 8.2 Work experience: Seven years of relevant experience in agriculture policy, technology and innovation and climate change; international experience in Latin America and the Caribbean;
- 8.3 Computer proficiency and knowledge of spreadsheet and database packages (e.g. MS Word, Excel, etc.).
- 8.4 Language Requirements: Fluency in English and Spanish. Knowledge of Portuguese is an advantage.

REGIONAL

CLIMATE TECHNOLOGY TRANSFER MECHANISMS AND NETWORKS IN LATIN-AMERICA AND THE CARIBBEAN

OVERVIEW OF ENVIRONMENTALLY SOUND TECHNOLOGIES FOR RENEWABLE ENERGY IN LATIN AMERICA AND THE CARIBBEAN

RG-T2384

TERMS OF REFERENCE

I. BACKGROUND

- 1.1 The project on “Climate technology transfer mechanisms and networks in Latin America and the Caribbean” (the Project) was endorsed by the CEO of the Global Environment Facility (GEF) and approved by the Inter-American Development Bank (IDB). The objective of the Project is to promote the development and transfer of Environmentally Sound Technologies (EST) in Latin America and the Caribbean (LAC), in order to contribute to the ultimate goal of reducing Greenhouse Gas (GHG) emissions and reducing the vulnerability to climate change in specific sectors in LAC.
- 1.2 Countries in LAC contribute with 10.5% of global GHG emissions.¹ With a share of 33% of the region’s emissions, compared to 65% globally, the energy sector of LAC is comparatively less carbon-intensive.² This is mainly due to the high reliance of the region’s power sector on hydropower, which accounts for 62% of the installed capacity and 70% of power generation. Despite the relatively low-carbon footprint of LAC’s energy matrix, historic trends and forecasts indicate that LAC’s energy consumption and GHG emissions are on the rise, with electricity demand growing at a rate of 4.8% annually over the next 10 years, and with large energy infrastructure investments programmed in the upcoming decades. According to the International Energy Agency (IEA) the region is expected to double the energy demand over the next two to three decades.
- 1.3 The Project’s strategy is to build national capacities to identify, assess, develop and transfer EST in LAC. In order to achieve this strategy, the Project will: (i) promote regional collaborative efforts; (ii) support planning and policy-making processes at national and sectoral levels; (iii) serve as a platform for the demonstration of policies and enabling mechanisms; and (iv) mobilize private and public resources. The Project will pilot institutional frameworks and mechanisms for the development and transfer of EST for climate change mitigation and adaptation, taking into consideration and contributing directly to key design features of the Technology Mechanism as agreed under the United Nations Framework Convention on Climate Change (UNFCCC). Furthermore, to maximize global and local environmental benefits, the Project focuses on sectors that are a priority for climate change mitigation and adaptation in LAC, i.e. renewable energy, energy efficiency, transport, forestry and agriculture, prioritizing specific initiatives according to criteria including EST cost-effectiveness, replicability, national circumstances, capabilities and priorities.

¹ WRI, CAIT 2.0. 2013. Climate Analysis Indicators Tool: WRI’s Climate Data Explorer. Washington, DC: World Resources Institute. Available at: <http://cait2.wri.org>.

² *Op.cit.*

II. OBJECTIVE

- 2.1 The objective of this consultancy is to elaborate an overview of EST for renewable energy in LAC that includes the needs, opportunities and barriers for their adoption.

III. MAIN ACTIVITIES

- 3.1 Identify key stakeholders of the renewable energy sector in LAC countries and internationally (national and local regulators, technology providers, energy companies, industry associations, communities, etc.);
- 3.2 Provide examples of mechanisms to enhance implementation of available renewable energy technologies (solar, wind, geothermal, biomass, hydro) that can be deployed in LAC countries, as well as, strategies for risk management;
- 3.3 Describe existing financial and technology transfers flows for the adoption of EST in renewable energy in LAC countries;
- 3.4 Illustrate examples of information, regulatory, technical, and financial barriers preventing the adoption of EST for renewable energy in LAC countries.

IV. REPORTS

- 4.1 The consultant should submit an interim report and a final report:
 - a. The interim report shall include activities as per paragraph 3.1 and 3.2 above. The interim report shall be submitted within 50 calendar days from the signature of the contract.
 - b. The final report shall consolidate the interim report and include activities as per paragraph 3.3 and 3.4 above. The final report shall be submitted within 120 calendar days from the signature of the contract

V. SCHEDULE OF PAYMENT

- 5.1 Payments for the consulting services will be specified in the contract and will be made as follows:
 - a. 20% at contract signature;
 - b. 40% upon delivery and approval of the first interim report; and
 - c. 40% upon delivery and approval of final report.

VI. COORDINATION

- 6.1 The Executive President of *Fundación Bariloche* will be responsible for the execution of this contract as well as the approval of the products prepared by the consulting firm.

VII. CHARACTERISTICS OF THE CONSULTANCY

- 7.1 Consultancy Category & Modality: Consulting firm, selection under a Fixed Budget (FBS).

7.2 Contract Duration: The activities under these terms of reference shall be completed within five months.

7.3 Location: Home-based.

VIII. QUALIFICATIONS

8.1 Work experience: Consultant's team should be comprised by two professionals with advanced university degrees (Master's degree or equivalent) in engineering, environmental sciences or a relevant field and at least 8 years of demonstrated professional experience in renewable energy, energy policy and significant experience in renewable energy technologies and climate change in LAC countries.

8.2 Language Requirements: Fluency in English and Spanish. Knowledge of Portuguese is an advantage.

REGIONAL

CLIMATE TECHNOLOGY TRANSFER MECHANISMS AND NETWORKS IN LATIN-AMERICA AND THE CARIBBEAN

OVERVIEW OF ENVIRONMENTALLY SOUND TECHNOLOGIES FOR ENERGY EFFICIENCY IN LATIN AMERICA AND THE CARIBBEAN

(RG-T2384)

TERMS OF REFERENCE

I. BACKGROUND

- 1.1 The project on “Climate technology transfer mechanisms and networks in Latin America and the Caribbean” (the Project) was endorsed by the CEO of the Global Environment Facility (GEF) and approved by the Inter-American Development Bank (IDB). The objective of the Project is to promote the development and transfer of Environmentally Sound Technologies (EST) in Latin America and the Caribbean (LAC), in order to contribute to the ultimate goal of reducing Greenhouse Gas (GHG) emissions and reducing the vulnerability to climate change in specific sectors in LAC.
- 1.2 Countries in LAC contribute with 10.5% of global GHG emissions.³ With a share of 33% of the region’s emissions, compared to 65% globally, the energy sector of LAC is comparatively less carbon-intensive.⁴ This is mainly due to the high reliance of the region’s power sector on hydropower, which accounts for 62% of the installed capacity and 70% of power generation. Despite the relatively low-carbon footprint of LAC’s energy matrix, historic trends and forecasts indicate that LAC’s energy consumption and GHG emissions are on the rise, with electricity demand growing at a rate of 4.8% annually over the next 10 years, and with large energy infrastructure investments programmed in the upcoming decades. According to the International Energy Agency (IEA) the region is expected to double the energy demand over the next two to three decades.
- 1.3 The Project’s strategy is to build national capacities to identify, assess, develop and transfer EST in LAC. In order to achieve this strategy, the Project will: (i) promote regional collaborative efforts; (ii) support planning and policy-making processes at national and sectoral levels; (iii) serve as a platform for the demonstration of policies and enabling mechanisms; and (iv) mobilize private and public resources. The Project will pilot institutional frameworks and mechanisms for the development and transfer of EST for climate change mitigation and adaptation, taking into consideration and contributing directly to key design features of the Technology Mechanism as agreed under the United Nations Framework Convention on Climate Change (UNFCCC). Furthermore, to maximize global and local environmental benefits, the Project focuses on sectors that are a priority for climate change mitigation and adaptation in LAC, i.e. renewable energy, energy efficiency, transport, forestry and agriculture, prioritizing specific initiatives according to criteria including EST cost-effectiveness, replicability, national circumstances, capabilities and priorities.

³ WRI, CAIT 2.0. 2013. Climate Analysis Indicators Tool: WRI’s Climate Data Explorer. Washington, DC: World Resources Institute. Available at: <http://cait2.wri.org>.

⁴ *Op.cit.*

II. OBJECTIVE

- 2.1 The objective of this consultancy is to elaborate an overview of EST for energy efficiency in LAC that includes the needs, opportunities and barriers for their adoption.

III. MAIN ACTIVITIES

- 3.1 Identify key stakeholders of energy efficiency activities in LAC countries and internationally (regulators, industries, technology providers, industry associations, etc.);
- 3.2 Highlight promising energy efficiency technologies for different industrial processes, that can be deployed in LAC countries;
- 3.3 Illustrate examples of information, regulatory, technical, and financial barriers preventing the adoption of EST for energy efficiency in LAC countries;
- 3.4 Describe actions needed to facilitate the adoption of the promising technologies listed in activity 3.2 (institutional and legal arrangements; national policies; technical, financial and operational feasibility; business models, training needed, among others);
- 3.5 Describe existing financial and technology transfers flows for the adoption of EST for energy efficiency in LAC countries.

IV. REPORTS

- 4.1 The consultant should submit an interim report and a final report:
 - a. The interim report shall include activities as per paragraph 3.1 and 3.2 above. The interim report shall be submitted within 50 calendar days from the signature of the contract.
 - b. The final report shall consolidate the interim report and include activities as per paragraph 3.3 to 3.5 above. The final report shall be submitted within 120 calendar days from the signature of the contract.

V. SCHEDULE OF PAYMENT

- 5.1 Payments for the consulting services will be specified in the contract and will be made as follows:
 - a. 20% at contract signature;
 - b. 40% upon delivery and approval of the first interim report; and,
 - c. 40% upon delivery and approval of final report.

VI. COORDINATION

- 6.1 The Executive President of *Fundación Bariloche* will be responsible for the execution of this contract as well as the approval of the products prepared by the consulting firm.

VII. CHARACTERISTICS OF THE CONSULTANCY

- 7.1 Consultancy Category & Modality: Consulting firm, selection under a Fixed Budget (FBS).
- 7.2 Contract Duration: The activities under these terms of reference shall be completed within five months.
- 7.3 Location: Home-based.

VIII. QUALIFICATIONS

- 8.1 Work experience: Consultant's team should be comprised by two professionals with advanced university degree (Master's degree or equivalent) in engineering, environmental sciences or a relevant field; and at least 8 years of demonstrated professional experience in energy efficiency in industrial processes, energy policy and significant experience in energy efficiency technologies and climate change in LAC countries.
- 8.2 Language Requirements: Fluency in English and Spanish. Knowledge of Portuguese is an advantage.

REGIONAL

CLIMATE TECHNOLOGY TRANSFER MECHANISMS AND NETWORKS IN LATIN-AMERICA AND THE CARIBBEAN

OVERVIEW OF OPPORTUNITIES FOR ENVIRONMENTALLY SOUND TECHNOLOGIES IN THE TRANSPORT SECTOR IN LATIN AMERICA AND THE CARIBBEAN

RG-T2384

TERMS OF REFERENCE

I. BACKGROUND

- 1.1 The project on “Climate technology transfer mechanisms and networks in Latin America and the Caribbean” (the Project) was endorsed by the CEO of the Global Environment Facility (GEF) and approved by the Inter-American Development Bank (IDB). The objective of the Project is to promote the development and transfer of Environmentally Sound Technologies (EST) in Latin America and the Caribbean (LAC), in order to contribute to the ultimate goal of reducing Greenhouse Gas (GHG) emissions and reducing the vulnerability to climate change in specific sectors in LAC.
- 1.2 Countries in LAC contribute with 10.5% of global GHG emissions.⁵ The transport sector in LAC is growing at a fast rate, having reached approximately 30% of the overall GHG emissions from the energy sector.⁶ Economic development, rapid urbanization and motorization, inadequate mass transit options, and inefficient freight and logistics sectors are some of the drivers for the increase in GHG emissions in the transportation sector. In addition to these, urban sprawl, larger commuting distances, higher costs of commuting by public transport, as well as a gradual growth in the size, weight and power of passenger vehicles, are additional factors contributing to the increase in GHG emissions from the transport sector.
- 1.3 The Project’s strategy is to build national capacities to identify, assess, develop and transfer EST in LAC. In order to achieve this strategy, the Project will: (i) promote regional collaborative efforts; (ii) support planning and policy-making processes at national and sectoral levels; (iii) serve as a platform for the demonstration of policies and enabling mechanisms; and (iv) mobilize private and public resources. The Project will pilot institutional frameworks and mechanisms for the development and transfer of EST for climate change mitigation and adaptation, taking into consideration and contributing directly to key design features of the Technology Mechanism as agreed under the United Nations Framework Convention on Climate Change (UNFCCC). Furthermore, to maximize global and local environmental benefits, the Project focuses on sectors that are a priority for climate change mitigation and adaptation in LAC, i.e. renewable energy, energy efficiency, transport, forestry and agriculture, prioritizing specific initiatives according to criteria including EST cost-effectiveness, replicability, national circumstances, capabilities and priorities.

⁵ WRI, CAIT 2.0. 2013. Climate Analysis Indicators Tool: WRI’s Climate Data Explorer. Washington, DC: World Resources Institute. Available at: <http://cait2.wri.org>.

⁶ *Op.cit.*

II. OBJECTIVE

- 2.1 The objective of this consultancy is to elaborate an overview of opportunities for EST in the transport sector in LAC that includes the needs, opportunities and barriers for their adoption.

III. MAIN ACTIVITIES

- 3.1 Identify key stakeholders of the transport sector in LAC countries and internationally (national and local regulators, automakers, industry associations, dealers and consumers' organizations, etc.);
- 3.2 Highlight promising technologies for transportation demand management (i.e. parking management, road and congestion pricing technologies, high-occupancy vehicle lane control, bike sharing, etc.), intelligent transport systems (information technologies to improve transportation system performance and efficiency) for public and private transportation, that can be deployed in LAC countries;
- 3.3 Describe existing financial and technology transfers flows for the adoption of EST for the transport sector in LAC countries;
- 3.4 Illustrate examples of information, regulatory, technical, and financial barriers preventing the adoption of EST for the transport sector in LAC countries.

IV. REPORTS

- 4.1 The consultant should submit an interim report and a final report:
 - a. The interim report shall include activities as per paragraph 3.1 and 3.2 above. The interim report shall be submitted within 50 calendar days from the signature of the contract.
 - b. The final report shall consolidate the interim report and include activities as per paragraph 3.3 and 3.4 above. The final report shall be submitted within 120 calendar days from the signature of the contract.

V. SCHEDULE OF PAYMENT

- 5.1 Payments for the consulting services will be specified in the contract and will be made as follows:
 - a. 20% at contract signature;
 - b. 40% upon approval of the interim report; and,
 - c. 40% upon approval of final report.

VI. COORDINATION

- 6.1 The Director of EMBARQ will be responsible for the execution of this contract as well as the approval of the products prepared by the consulting firm.

VII. CHARACTERISTICS OF THE CONSULTANCY

- 7.1 Consultancy Category & Modality: Consulting firm, selection under a Fixed Budget (FBS).

7.2 Contract Duration: The activities under these terms of reference shall be completed within five months.

7.3 Location: Home-based.

VIII. QUALIFICATIONS

8.1 Work experience: Consultant's team should be comprised by two professionals with advanced university degrees (Master's degree or equivalent) in engineering, transportation, environmental sciences or a relevant field and at least 8 years of demonstrated professional experience in transportation, transport policy and significant experience in technologies for the transport and climate change in LAC countries.

8.2 Language Requirements: Fluency in English and Spanish. Knowledge of Portuguese is an advantage.

REGIONAL

CLIMATE TECHNOLOGY TRANSFER MECHANISMS AND NETWORKS IN LATIN-AMERICA AND THE CARIBBEAN

TECHNOLOGY OVERVIEW FOR INTEGRATED MASS TRANSIT SYSTEMS IN LATIN AMERICA AND THE CARIBBEAN – SUPPORT TO OPERATIONS

RG-T2384

TERMS OF REFERENCE

I. BACKGROUND

- 1.1 The project on “Climate technology transfer mechanisms and networks in Latin America and the Caribbean” (the Project) was endorsed by the CEO of the Global Environment Facility (GEF) and approved by the Inter-American Development Bank (IDB). The objective of the Project is to promote the development and transfer of Environmentally Sound Technologies (EST) in Latin America and the Caribbean (LAC), in order to contribute to the ultimate goal of reducing Greenhouse Gas (GHG) emissions and reducing the vulnerability to climate change in specific sectors in LAC.
- 1.2 Countries in LAC contribute with 10.5% of global GHG emissions.⁷ The transport sector in LAC is growing at a fast rate, having reached approximately 30% of the overall GHG emissions from the energy sector.⁸ Economic development, rapid urbanization and motorization, inadequate mass transit options, and inefficient freight and logistics sectors are some of the drivers for the increase in GHG emissions in the transportation sector. In addition to these, urban sprawl, larger commuting distances, higher costs of commuting by public transport, as well as a gradual growth in the size, weight and power of passenger vehicles, are additional factors contributing to the increase in GHG emissions from the transport sector.
- 1.3 The Project’s strategy is to build national capacities to identify, assess, develop and transfer EST in LAC. In order to achieve this strategy, the Project will: (i) promote regional collaborative efforts; (ii) support planning and policy-making processes at national and sectoral levels; (iii) serve as a platform for the demonstration of policies and enabling mechanisms; and (iv) mobilize private and public resources. The Project will pilot institutional frameworks and mechanisms for the development and transfer of EST for climate change mitigation and adaptation, taking into consideration and contributing directly to key design features of the Technology Mechanism as agreed under the United Nations Framework Convention on Climate Change (UNFCCC). Furthermore, to maximize global and local environmental benefits, the Project focuses on sectors that are a priority for climate change mitigation and adaptation in LAC, i.e. renewable energy, energy efficiency, transport, forestry and agriculture, prioritizing specific initiatives according to criteria including EST cost-effectiveness, replicability, national circumstances, capabilities and priorities.

⁷ WRI, CAIT 2.0. 2013. Climate Analysis Indicators Tool: WRI’s Climate Data Explorer. Washington, DC: World Resources Institute. Available at: <http://cait2.wri.org>.

⁸ *Op.cit.*

II. OBJECTIVE

- 2.1 The objective of this consultancy is to elaborate an overview of environmentally sound technologies that support the operation of integrated mass transit systems in LAC that includes the needs, opportunities and barriers for their adoption.

III. MAIN ACTIVITIES

- 3.1 Identify key stakeholders of integrated mass transit systems in LAC countries and internationally (national and local regulators, public transport authorities, operators, public transport associations, etc.);
- 3.2 Highlight promising technologies for the system operator (i.e. automatic vehicle location, transit signal priority, automatic passenger counting, computer-aided dispatch, lane control technologies), the customer (i.e. real-time passenger information, fare collection, security systems (CCTV), emergency response, information and advertising), the vehicle (i.e. fleet management and monitoring, collision avoidance systems, lane guidance, precision docking), that can be deployed in LAC countries;
- 3.3 Describe existing financial and technology transfers flows for the adoption of EST for integrated mass transit systems in LAC countries;
- 3.4 Illustrate examples of information, regulatory, technical, and financial barriers preventing the adoption of EST to support the operation of integrated transport systems in LAC countries.

IV. REPORTS

- 4.1 The consultant should submit the following reports:
 - a. The interim report shall include activities as per paragraph 3.1 and 3.2 above. The interim report shall be submitted within 120 calendar days from the signature of the contract.
 - b. The final report shall consolidate the interim report and include activities as per paragraph 3.3 and 3.4 above. The final report shall be submitted within 210 calendar days from the signature of the contract.

V. SCHEDULE OF PAYMENT

- 5.1 Payments for the consulting services will be specified in the contract and will be made as follows:
 - a. 20% at contract signature;
 - b. 40% upon approval of the interim report; and,
 - c. 40% upon approval of final report.

VI. COORDINATION

- 6.1 The Director of EMBARQ will be responsible for the execution of this contract as well as the approval of the products prepared by the consulting firm.

VII. CHARACTERISTICS OF THE CONSULTANCY

- 7.1 Consultancy Category & Modality: Consulting firm, Quality and Cost-Based selection (QCBS).
- 7.2 Contract Duration: The activities under these terms of reference shall be completed within 8 months.
- 7.3 Location: Home-based.

VIII. QUALIFICATIONS

- 8.1 Work experience: Consultant's team should be comprised by (i) a team leader with advanced university degree (Master's degree or equivalent) in engineering, transportation, environmental sciences or a relevant field and at least 10 years of professional experience in mass transit in LAC and project management; (ii) a transport expert with advanced university degree (Master's degree or equivalent) in engineering, transportation, environmental sciences or a relevant field and at least 8 years of professional experience in mass transit in LAC; (iii) a transport economist with advanced university degree (Master's degree or equivalent) in engineering, economics or a relevant field and at least 8 years of professional experience in mass transit in LAC.
- 8.2 Language Requirements: Fluency in English and Spanish. Knowledge of Portuguese is an advantage.

REGIONAL

CLIMATE TECHNOLOGY TRANSFER MECHANISMS AND NETWORKS IN LATIN-AMERICA AND THE CARIBBEAN

TECHNOLOGY OVERVIEW FOR INTEGRATED MASS TRANSIT SYSTEMS IN LATIN AMERICA AND THE CARIBBEAN – VEHICLE TECHNOLOGIES

RG-T2384

TERMS OF REFERENCE

I. BACKGROUND

- 1.1 The project on “Climate technology transfer mechanisms and networks in Latin America and the Caribbean” (the Project) was endorsed by the CEO of the Global Environment Facility (GEF) and approved by the Inter-American Development Bank (IDB). The objective of the Project is to promote the development and transfer of Environmentally Sound Technologies (EST) in Latin America and the Caribbean (LAC), in order to contribute to the ultimate goal of reducing Greenhouse Gas (GHG) emissions and reducing the vulnerability to climate change in specific sectors in LAC.
- 1.2 Countries in LAC contribute with 10.5% of global GHG emissions.⁹ The transport sector in LAC is growing at a fast rate, having reached approximately 30% of the overall GHG emissions from the energy sector.¹⁰ Economic development, rapid urbanization and motorization, inadequate mass transit options, and inefficient freight and logistics sectors are some of the drivers for the increase in GHG emissions in the transportation sector. In addition to these, urban sprawl, larger commuting distances, higher costs of commuting by public transport, as well as a gradual growth in the size, weight and power of passenger vehicles, are additional factors contributing to the increase in GHG emissions from the transport sector.
- 1.3 The Project’s strategy is to build national capacities to identify, assess, develop and transfer EST in LAC. In order to achieve this strategy, the Project will: (i) promote regional collaborative efforts; (ii) support planning and policy-making processes at national and sectoral levels; (iii) serve as a platform for the demonstration of policies and enabling mechanisms; and (iv) mobilize private and public resources. The Project will pilot institutional frameworks and mechanisms for the development and transfer of EST for climate change mitigation and adaptation, taking into consideration and contributing directly to key design features of the Technology Mechanism as agreed under the United Nations Framework Convention on Climate Change (UNFCCC). Furthermore, to maximize global and local environmental benefits, the Project focuses on sectors that are a priority for climate change mitigation and adaptation in LAC, i.e. renewable energy, energy efficiency, transport, forestry and agriculture, prioritizing specific initiatives according to criteria including EST cost-effectiveness, replicability, national circumstances, capabilities and priorities.

⁹ WRI, CAIT 2.0. 2013. Climate Analysis Indicators Tool: WRI’s Climate Data Explorer. Washington, DC: World Resources Institute. Available at: <http://cait2.wri.org>.

¹⁰ *Op.cit.*

II. OBJECTIVE

- 2.1 The objective of this consultancy is to elaborate an overview of environmentally sound vehicle technologies for integrated mass transit systems in LAC that includes the needs, opportunities and barriers for their adoption.

III. MAIN ACTIVITIES

- 3.1 Identify key mass transit stakeholders in LAC countries and internationally (national and local regulators, public transport authorities, operators, public transport associations, automakers, industry associations, and consumers' organizations, etc.);
- 3.2 Highlight promising technologies for environmentally sound vehicle technologies for integrated mass transit systems (e.g. hybrid and electric vehicles), that can be deployed in LAC countries;
- 3.3 Describe existing financial and technology transfers flows for the adoption of EST for integrated transport systems in LAC countries;
- 3.4 Illustrate examples of information, regulatory, technical, and financial barriers preventing the adoption of EST for integrated transport systems in LAC countries.

IV. REPORTS

- 4.1 The consultant should submit an interim report and a final report:
 - a. The interim report shall include activities as per paragraph 3.1 and 3.2 above. The interim report shall be submitted within 120 calendar days from the signature of the contract.
 - b. The final report shall consolidate the interim report and include activities as per paragraph 3.3 and 3.4 above. The final report shall be submitted within 210 calendar days from the signature of the contract.

V. SCHEDULE OF PAYMENT

- 5.1 Payments for the consulting services will be specified in the contract and will be made as follows:
 - a. 20% at contract signature;
 - b. 40% upon approval of the interim report; and,
 - c. 40% upon approval of final report.

VI. COORDINATION

- 6.1 The Director of EMBARQ will be responsible for the execution of this contract as well as the approval of the products prepared by the consulting firm.

VII. CHARACTERISTICS OF THE CONSULTANCY

- 7.1 Consultancy Category & Modality: Consulting firm, Quality and Cost-Based selection (QCBS).

7.2 Contract Duration: The activities under these terms of reference shall be completed within 8 months.

7.3 Location: Home-based.

VIII. QUALIFICATIONS

8.1 Work experience: Consultant's team should be comprised by (i) a team leader with advanced university degree (Master's degree or equivalent) in engineering, transportation, environmental sciences or a relevant field and at least 10 years of professional experience in mass transit in LAC and project management; (ii) a transport expert with advanced university degree (Master's degree or equivalent) in engineering, transportation, environmental sciences or a relevant field and at least 8 years of professional experience in mass transit in LAC; (iii) a transport economist with advanced university degree (Master's degree or equivalent) in engineering, economics or a relevant field and at least 8 years of professional experience in mass transit in LAC.

8.2 Language Requirements: Fluency in English and Spanish. Knowledge of Portuguese is an advantage.

REGIONAL

CLIMATE TECHNOLOGY TRANSFER MECHANISMS AND NETWORKS IN LATIN-AMERICA AND THE CARIBBEAN OVERVIEW OF ENVIRONMENTALLY SOUND TECHNOLOGIES FOR FOREST MONITORING SYSTEMS IN LATIN AMERICA AND THE CARIBBEAN

RG-T2384

TERMS OF REFERENCE

I. BACKGROUND

- 1.1 The project on “Climate technology transfer mechanisms and networks in Latin America and the Caribbean” (the Project) was endorsed by the CEO of the Global Environment Facility (GEF) and approved by the Inter-American Development Bank (IDB). The objective of the Project is to promote the development and transfer of Environmentally Sound Technologies (EST) in Latin America and the Caribbean (LAC), in order to contribute to the ultimate goal of reducing Greenhouse Gas (GHG) emissions and reducing the vulnerability to climate change in specific sectors in LAC.
- 1.2 Countries in LAC contribute with 10.5% of global GHG emissions.¹¹ Tropical deforestation contributes with approximately 20% of annual global GHG emissions. In comparison to other regions, in LAC, Land Use, Land-Use Change and Forestry (LULUCF) is a critical contributor to GHG emissions (33%).¹² LULUCF is characterized by extensive changes in land vegetation, destruction of forests, expansion of agriculture, construction of large infrastructure projects and land degradation. Curbing deforestation and implementing sound forest management practices could reduce significantly the region’s GHG emissions, as well as bring about a suite of co-benefits associated with sustainable rural development, poverty reduction, and conservation of ecosystem services, such as access to safe drinking water and the protection of biodiversity.
- 1.3 The Project’s strategy is to build national capacities to identify, assess, develop and transfer EST in LAC. In order to achieve this strategy, the Project will: (i) promote regional collaborative efforts; (ii) support planning and policy-making processes at national and sectoral levels; (iii) serve as a platform for the demonstration of policies and enabling mechanisms; and (iv) mobilize private and public resources. The Project will pilot institutional frameworks and mechanisms for the development and transfer of EST for climate change mitigation and adaptation, taking into consideration and contributing directly to key design features of the Technology Mechanism as agreed under the United Nations Framework Convention on Climate Change (UNFCCC). Furthermore, to maximize global and local environmental benefits, the Project focuses on sectors that are a priority for climate change mitigation and adaptation in LAC, i.e. renewable energy, energy efficiency, transport, forestry and agriculture, prioritizing specific initiatives according to criteria including EST cost-effectiveness, replicability, national circumstances, capabilities and priorities.

¹¹ WRI, CAIT 2.0. 2013. Climate Analysis Indicators Tool: WRI’s Climate Data Explorer. Washington, DC: World Resources Institute. Available at: <http://cait2.wri.org>.

¹² *Op.cit.*

II. OBJECTIVE

- 2.1 The objective of this consultancy is to elaborate an overview of EST for forest monitoring systems in LAC that includes the needs, opportunities and barriers for their adoption.

III. MAIN ACTIVITIES

- 3.1 Identify key stakeholders of forest monitoring systems in LAC countries and internationally (national, regional, and local regulators; technology providers, etc.);
- 3.2 Highlight promising technologies for forest monitoring systems and data management platforms that can be deployed in LAC countries;
- 3.3 Describe actions and studies needed to enhance adoption of the promising technologies listed in activity 3.2 (institutional and legal arrangements; national and local policies; technical, financial and operational feasibility; capacity building; etc.).
- 3.4 Describe existing financial and technology transfers flows and gaps for the adoption of EST for forest monitoring systems in LAC countries;
- 3.5 Illustrate examples of information, regulatory, technical, and financial barriers preventing the adoption of EST for forest monitoring in LAC countries;
- 3.6 Provide elements for the selection of EST for forest monitoring that best fit the needs of the sector in LAC.

IV. REPORTS

- 4.1 The consultant should submit the following reports:
 - a. The interim report shall include activities as per paragraph 3.1 to 3.3 above. The interim report shall be submitted within 50 calendar days from the signature of the contract.
 - b. The final report shall consolidate the interim report and include activities as per paragraph 3.4 to 3.6 above. The final report shall be submitted within 120 calendar days from the signature of the contract.

V. SCHEDULE OF PAYMENT

- 5.1 Payments for the consulting services will be specified in the contract and will be made as follows:
 - a. 20% upon delivery and approval by the Bank of the contract signature.
 - b. 40% upon delivery and approval by the Bank of interim report.
 - c. 40% upon delivery and approval by the Bank of the final report.

VI. COORDINATION

- 6.1 The Climate Change and Watershed lead at CATIE will be responsible for the execution of this contract as well as the approval of the products prepared by the consulting firm.

VII. CHARACTERISTICS OF THE CONSULTANCY

- 7.1 **Consultancy Category & Modality:** Consulting firm, selection under a Fixed Budget (FBS).
- 7.2 **Contract Duration:** The activities under these terms of reference shall be completed within five months.
- 7.3 **Location:** Home-based.

VIII. QUALIFICATIONS

- 8.1 **Work experience:** Consultant's team should be comprised by two professionals with advanced university degree (Master's degree or equivalent) in forestry, agronomy, engineering, environmental sciences or a relevant field and significant experience in forest management, forestry policy, forest monitoring technologies and climate change in LAC countries.
- 8.2 **Language Requirements:** Fluency in English and Spanish. Knowledge of Portuguese is an advantage.

REGIONAL

CLIMATE TECHNOLOGY TRANSFER MECHANISMS AND NETWORKS IN LATIN-AMERICA AND THE CARIBBEAN

OVERVIEW OF ENVIRONMENTALLY SOUND TECHNOLOGIES FOR ADAPTATION IN THE AGRICULTURE SECTOR IN LATIN AMERICA AND THE CARIBBEAN

RG-T2384

TERMS OF REFERENCE

I. BACKGROUND

- 1.1 The project on “Climate technology transfer mechanisms and networks in Latin America and the Caribbean” (the Project) was endorsed by the CEO of the Global Environment Facility (GEF) and approved by the Inter-American Development Bank (IDB). The objective of the Project is to promote the development and transfer of Environmentally Sound Technologies (EST) in Latin America and the Caribbean (LAC), in order to contribute to the ultimate goal of reducing Greenhouse Gas (GHG) emissions and reducing the vulnerability to climate change in specific sectors in LAC.
- 1.2 Countries in LAC contribute with 10.5% of global GHG emissions.¹³ The agriculture sector accounts for 14% of the global emissions, while agricultural emissions from LAC countries contribute to 20%.¹⁴ Furthermore, LAC economy is based in agriculture activities that will be affected by the adverse effects on climate change, rising temperatures and changes in precipitation regimes, reducing agricultural production. Therefore LAC countries are highly vulnerable to climate change and it is needed to adopt adaptation measures.
- 1.3 The Project’s strategy is to build national capacities to identify, assess, develop and transfer EST in LAC. In order to achieve this strategy, the project will: (i) promote regional collaborative efforts; (ii) support planning and policy-making processes at national and sectoral levels; (iii) serve as a platform for the demonstration of policies and enabling mechanisms; and (iv) mobilize private and public resources. The project will pilot institutional frameworks and mechanisms for the development and transfer of EST for climate change mitigation and adaptation, taking into consideration and contributing directly to key design features of the Technology Mechanism as agreed under the United Nations Framework Convention on Climate Change (UNFCCC). Furthermore, to maximize global and local environmental benefits, the project focuses on sectors that are a priority for climate change mitigation and adaptation in LAC, i.e. renewable energy, energy efficiency, transport, forestry and agriculture, prioritizing specific initiatives according to criteria including EST cost-effectiveness, replicability, national circumstances, capabilities and priorities.

¹³ WRI, CAIT 2.0. 2013. Climate Analysis Indicators Tool: WRI’s Climate Data Explorer. Washington, DC: World Resources Institute. Available at: <http://cait2.wri.org>.

¹⁴ ICTSD, IFATPC, 2010. Agricultural Technologies for Climate Change Mitigation and Adaptation in Developing Countries. International Centre for Trade and Sustainable Development: Geneva, Switzerland. International Food & Agricultural Trade Policy Council, Washington DC. Available at: <http://www.ictsd.org>

II. OBJECTIVE

- 2.1 The objective of this consultancy is to elaborate an overview of EST for adaptation in the agriculture sector in LAC that includes the needs, opportunities and barriers for their adoption.

III. MAIN ACTIVITIES

- 3.1 Identify key stakeholders of the agriculture sector in LAC countries and internationally (national and local regulators, farmers, technology providers, industry associations, etc.).
- 3.2 Highlight promising technologies for adaptation in the agriculture sector (i.e. technologies for sprinkler and drip irrigation, fog and rainwater harvesting, slow-forming terraces, conservation tillage, integrated nutrient management, sustainable crop management, monitoring systems and seasonal to inter-annual prediction, etc.) that can be deployed in LAC countries.
- 3.3 Describe existing financial and technology transfers flows for the adoption of EST for adaptation in the agriculture sector in LAC countries.
- 3.4 Illustrate examples of information, regulatory, technical, and financial barriers preventing the adoption of EST for adaptation in the agriculture sector in LAC countries.
- 3.5 Provide elements for the selection of EST for adaptation in the agriculture sector that best fit the needs of the sector in LAC.

IV. REPORTS

- 4.1 The consultant should submit the following reports:
 - a. The interim report shall include activities as per paragraph 3.1 to 3.3 above. The interim report shall be submitted within 50 calendar days from the signature of the contract.
 - b. The final report shall consolidate the interim report and include activities as per paragraph 3.4 and 3.5 above. The final report shall be submitted within 120 calendar days from the signature of the contract.

V. SCHEDULE OF PAYMENT

- 5.1 Payments for the consulting services will be specified in the contract and will be made as follows:
 - a. 20% upon delivery and approval by the Bank of the contract signature.
 - b. 40% upon delivery and approval by the Bank of interim report.
 - c. 40% upon delivery and approval by the Bank of final report.

VI. COORDINATION

- 6.1 Kai Hertz, Operations Lead Specialist of the Grants and Co-financing Management Unit (ORP/GCM) at the IDB will be responsible for the execution of this contract as well as the approval of the products prepared by the consulting firm.

VII. CHARACTERISTICS OF THE CONSULTANCY

- 7.1 **Consultancy Category & Modality:** Consulting firm, selection under a Fixed Budget (FBS).
- 7.2 **Contract Duration:** The activities under these terms of reference shall be completed within five months.
- 7.3 **Location:** Home-based.

VIII. QUALIFICATIONS

- 8.1 **Work experience:** Consultant's team should be comprised by two professionals with advanced university degrees (Master's degree or equivalent) in agriculture, agronomy, engineering, environment sciences or a relevant field and significant experience in agriculture technologies and climate change in LAC countries.
- 8.2 **Language Requirements:** Fluency in English and Spanish. Knowledge of Portuguese is an advantage

REGIONAL

CLIMATE TECHNOLOGY TRANSFER MECHANISMS AND NETWORKS IN LATIN-AMERICA AND THE CARIBBEAN

OVERVIEW OF ENVIRONMENTALLY SOUND TECHNOLOGIES FOR ADAPTATION IN ANIMAL HUSBANDRY IN LATIN AMERICA AND THE CARIBBEAN

RG-T2384

TERMS OF REFERENCE

I. BACKGROUND

- 1.1 The project on “Climate technology transfer mechanisms and networks in Latin America and the Caribbean” (the Project) was endorsed by the CEO of the Global Environment Facility (GEF) and approved by the Inter-American Development Bank (IDB). The objective of the Project is to promote the development and transfer of Environmentally Sound Technologies (EST) in Latin America and the Caribbean (LAC), in order to contribute to the ultimate goal of reducing greenhouse gas (GHG) emissions and reducing the vulnerability to climate change in specific sectors in LAC.
- 1.2 Countries in LAC contribute with 10.5% of global GHG emissions.¹⁵ Emissions from livestock supply chains in LAC have the highest contribution globally compared with other regions, accounting for 18% of the global sector emissions.¹⁶ According to FAO “the sector faces the difficult challenge of having to reduce its GHG emissions while responding to a significant demand growth of livestock product (projected to increase 70% between 2005 and 2050), driven by a growing world population (9.6 billion by 2050), rising affluence and urbanization”.¹⁷
- 1.3 The Project’s strategy is to build national capacities to identify, assess, develop and transfer EST in LAC. In order to achieve this strategy, the Project will: (i) promote regional collaborative efforts; (ii) support planning and policy-making processes at national and sectoral levels; (iii) serve as a platform for the demonstration of policies and enabling mechanisms; and (iv) mobilize private and public resources. The Project will pilot institutional frameworks and mechanisms for the development and transfer of EST for climate change mitigation and adaptation, taking into consideration and contributing directly to key design features of the Technology Mechanism as agreed under the United Nations Framework Convention on Climate Change (UNFCCC). Furthermore, to maximize global and local environmental benefits, the Project focuses on sectors that are a priority for climate change mitigation and adaptation in LAC, i.e. renewable energy, energy efficiency, transport, forestry and agriculture, prioritizing specific initiatives according to criteria including EST cost-effectiveness, replicability, national circumstances, capabilities and priorities.

¹⁵ WRI, CAIT 2.0. 2013. Climate Analysis Indicators Tool: WRI’s Climate Data Explorer. Washington, DC: World Resources Institute. Available at: <http://cait2.wri.org>.

¹⁶ FAO. 2013. Tackling climate change through livestock. Rome, Italy: Food and Agriculture Organization of the United Nations. Available at: <http://www.fao.org/docrep/018/i3437e/i3437e.pdf>

¹⁷ *Op.cit.*

II. OBJECTIVE

- 2.1 The objective of this consultancy is to elaborate an overview of EST for adaptation in animal husbandry in LAC that includes the needs, opportunities and barriers for their adoption.

III. MAIN ACTIVITIES

- 3.1 Identify key stakeholders of animal husbandry in LAC countries and internationally (national and local regulators, farmers, technology providers, industry associations, etc.);
- 3.2 Highlight promising technologies for adaptation in animal husbandry (i.e. selective breeding and animal disease management, sustainable pasture management, seasonal to inter-annual prediction and livestock early warning systems, livestock disease management, sustainable farming systems, etc.) that can be deployed in LAC countries;
- 3.3 Describe existing financial and technology transfers flows for the adoption of EST for adaptation in animal husbandry in LAC countries;
- 3.4 Illustrate examples of information, regulatory, technical, and financial barriers preventing the adoption of EST for adaptation in animal husbandry in LAC countries.
- 3.5 Provide elements for the selection of EST for adaptation in animal husbandry that best fit the needs of the sector in LAC.

IV. REPORTS

- 4.1 The consultant should submit the following reports:
 - a. The interim report shall include activities as per paragraph 3.1 to 3.3 above. The interim report shall be submitted within 50 calendar days from the signature of the contract.
 - b. The final report shall consolidate the interim report and include activities as per paragraph 3.4 and 3.5 above. The final report shall be submitted within 120 calendar days from the signature of the contract.

V. SCHEDULE OF PAYMENT

- 5.1 Payments for the consulting services will be specified in the contract and will be made as follows:
 - a. 20% upon delivery and approval by the Bank of the contract signature.
 - b. 40% upon delivery and approval by the Bank of interim report.
 - c. 40% upon delivery and approval by the Bank of final report.

VI. COORDINATION

- 6.1 Kai Hertz, Operations Lead Specialist of the Grants and Co-financing Management Unit (ORP/GCM) at the IDB will be responsible for the execution of this contract as well as the approval of the products prepared by the consulting firm.

VII. CHARACTERISTICS OF THE CONSULTANCY

- 7.1 **Consultancy Category & Modality:** Consulting firm, selection under a Fixed Budget (FBS).
- 7.2 **Contract Duration:** The activities under these terms of reference shall be completed within five months.
- 7.3 **Location:** Home-based.

VIII. QUALIFICATIONS

- 8.1 **Work experience:** Consultant's team should be comprised by two professionals with advanced university degrees (Master's degree or equivalent) in veterinary, agronomy, engineering, environment sciences or a relevant field and significant experience in animal husbandry technologies and climate change in LAC countries.
- 8.2 **Language Requirements:** Fluency in English and Spanish. Knowledge of Portuguese is an advantage.

REGIONAL

CLIMATE TECHNOLOGY TRANSFER MECHANISMS AND NETWORKS IN LATIN-AMERICA AND THE CARIBBEAN

TECHNOLOGY ROADMAP ON ENERGY-EFFICIENT BUILDING ENVELOPES IN LATIN AMERICA AND THE CARIBBEAN.

RG-T2384

TERMS OF REFERENCE

I. BACKGROUND

- 1.1 The project on “Climate technology transfer mechanisms and networks in Latin America and the Caribbean” (the Project) was endorsed by the CEO of the Global Environment Facility (GEF) and approved by the Inter-American Development Bank (IDB). The objective of the Project is to promote the development and transfer of Environmentally Sound Technologies (EST) in Latin America and the Caribbean (LAC), in order to contribute to the ultimate goal of reducing Greenhouse Gas (GHG) emissions and reducing the vulnerability to climate change in specific sectors in LAC.
- 1.2 Countries in LAC contribute with 10.5% of global GHG emissions¹⁸. According to the Fifth Assessment Report (AR5) from the Intergovernmental Panel on Climate Change the world’s buildings account for 32% of global final energy use and 19% of all GHG emissions. In contrast, LAC’s buildings contribute to 25% of GHG emissions globally¹⁹. AR5 also states that under business as usual projections, use of energy in buildings globally could double or even triple by 2050. The International Energy Agency (IEA) has identified the building sector as one of the most cost-effective sectors for reducing energy consumption; therefore the building sector can contribute significantly to reduce GHG emissions.
- 1.3 The Project’s strategy is to build national capacities to identify, assess, develop and transfer EST in LAC. In order to achieve this strategy, the Project will: (i) promote regional collaborative efforts; (ii) support planning and policy-making processes at national and sectoral levels; (iii) serve as a platform for the demonstration of policies and enabling mechanisms; and (iv) mobilize private and public resources. The Project will pilot institutional frameworks and mechanisms for the development and transfer of EST for climate change mitigation and adaptation, taking into consideration and contributing directly to key design features of the Technology Mechanism as agreed under the United Nations Framework Convention on Climate Change (UNFCCC). Furthermore, to maximize global and local environmental benefits, the Project focuses on sectors that are a priority for climate change mitigation and adaptation in LAC, i.e. renewable energy, energy efficiency, transport, forestry and agriculture, prioritizing specific initiatives according to criteria including EST cost-effectiveness, replicability, national circumstances, capabilities and priorities.

¹⁸ WRI, CAIT 2.0. 2013. Climate Analysis Indicators Tool: WRI’s Climate Data Explorer. Washington, DC: World Resources Institute. Available at: <http://cait2.wri.org>.

¹⁹ UK Department for International Development, ELLA. 2013. Green Building in Latin America. London, UK: Evidence and Lessons from Latin America. Available at: <http://ella.practicalaction.org/sites/default>.

II. OBJECTIVE

- 2.1 The objective of this consultancy is to elaborate a technology roadmap on energy-efficient building envelopes in Latin America and the Caribbean for residential and commercial buildings.

III. MAIN ACTIVITIES

- 3.1 Identify key stakeholders of the building sector in LAC countries and internationally (regulators, constructors, manufacturers, providers, industry associations, academia, etc.);
- 3.2 Describe country-specific policy, regulatory, market and technical barriers preventing the adoption of technologies and construction practices to improve the energy efficiency of residential and commercial buildings, and recommend concrete actions for the removal of such barriers.
- 3.3 Illustrate efficient building envelope technologies, including an assessment of availability of energy-efficient building materials.
- 3.4 Describe policy measures to promote adoption of energy-efficient building envelopes in new constructions and retrofitting.
- 3.5 Highlight benefits of the adoption of energy-efficient building envelopes, including cost reduction and performance, energy demand and emission reductions.

IV. REPORTS

- 4.1 The consultant should submit the following reports:
 - a. The interim report shall include activities as per paragraph 3.1 and 3.2 above. The interim report shall be submitted within 60 calendar days from the signature of the contract.
 - b. The final report shall consolidate the interim reports and include activities as per paragraph 3.5 above. The final report shall be submitted within 210 calendar days from the signature of the contract.

V. SCHEDULE OF PAYMENT

- 5.1 Payments for the consulting services will be specified in the contract and will be made as follows:
 - a. 20% upon delivery and approval by the Bank of the contract signature.
 - b. 40% upon delivery and approval and delivery by the Bank of the interim report.
 - c. 40% upon delivery and approval by the Bank of the final report.

VI. COORDINATION

- 6.1 The Executive President of Fundación Bariloche will be responsible for the execution of this contract as well as the approval of the products prepared by the consulting firm.

VII. CHARACTERISTICS OF THE CONSULTANCY

- 7.1 **Consultancy Category & Modality:** Consulting firm, selection under Quality and Cost-Based (QCBS).
- 7.2 **Contract Duration:** The activities under these terms of reference shall be completed within eight months.
- 7.3 **Location:** Home-based.

VIII. QUALIFICATIONS

- 8.1 **Work experience:** Consultant's team should be comprised by two professionals with advanced university degree (Master's degree or equivalent) in engineering, environmental sciences or a relevant field and significant experience in energy efficiency technologies, materials, construction practices, and climate change in LAC countries.
- 8.2 **Language Requirements:** Fluency in English and Spanish. Knowledge of Portuguese is an advantage.

REGIONAL

CLIMATE TECHNOLOGY TRANSFER MECHANISMS AND NETWORKS IN LATIN-AMERICA AND THE CARIBBEAN

TECHNOLOGY ROADMAP FOR RENEWABLE ENERGY APPLICATIONS FOR SOLAR HEATING AND COOLING IN LATIN AMERICA AND THE CARIBBEAN

RG-T2383

TERMS OF REFERENCE

I. BACKGROUND

- 1.1 The project on “Climate technology transfer mechanisms and networks in Latin America and the Caribbean” (the Project) was endorsed by the CEO of the Global Environment Facility (GEF) and approved by the Inter-American Development Bank (IDB). The objective of the Project is to promote the development and transfer of Environmentally Sound Technologies (EST) in Latin America and the Caribbean (LAC), in order to contribute to the ultimate goal of reducing Greenhouse Gas (GHG) emissions and reducing the vulnerability to climate change in specific sectors in LAC.
- 1.2 Countries in LAC contribute with 10.5% of global GHG emissions.²⁰ With a share of 33% of the region’s emissions, compared to 65% globally, the energy sector of LAC is comparatively less carbon-intensive.²¹ This is mainly due to the high reliance of the region’s power sector on hydropower, which accounts for 62% of the installed capacity and 70% of power generation. Despite the relatively low-carbon footprint of LAC’s energy matrix, historic trends and forecasts indicate that LAC’s energy consumption and GHG emissions are on the rise, with electricity demand growing at a rate of 4.8% annually over the next 10 years, and with large energy infrastructure investments programmed in the upcoming decades. According to the International Energy Agency (IEA) the region is expected to double the energy demand over the next two to three decades.
- 1.3 The Project’s strategy is to build national capacities to identify, assess, develop and transfer EST in LAC. In order to achieve this strategy, the Project will: (i) promote regional collaborative efforts; (ii) support planning and policy-making processes at national and sectoral levels; (iii) serve as a platform for the demonstration of policies and enabling mechanisms; and (iv) mobilize private and public resources. The Project will pilot institutional frameworks and mechanisms for the development and transfer of EST for climate change mitigation and adaptation, taking into consideration and contributing directly to key design features of the Technology Mechanism as agreed under the United Nations Framework Convention on Climate Change (UNFCCC). Furthermore, to maximize global and local environmental benefits, the Project focuses on sectors that are a priority for climate change mitigation and adaptation in LAC, i.e. renewable energy, energy efficiency, transport, forestry and agriculture,

²⁰ WRI, CAIT 2.0. 2013. Climate Analysis Indicators Tool: WRI’s Climate Data Explorer. Washington, DC: World Resources Institute. Available at: <http://cait2.wri.org>.

²¹ *Op.cit.*

prioritizing specific initiatives according to criteria including EST cost-effectiveness, replicability, national circumstances, capabilities and priorities.

II. OBJECTIVE

- 2.1 The objective of this consultancy is to elaborate a technology roadmap for renewable energy applications for solar heating and cooling in residential and commercial buildings, and the industrial sector in Latin America and the Caribbean.

III. MAIN ACTIVITIES

- 3.1 Identify key stakeholders of the solar heating and cooling applications in LAC countries and internationally (regulators, constructors, manufacturers, providers, industry associations, academia, etc.).
- 3.2 Describe country-specific policy, regulatory, market and technology barriers preventing the adoption of renewable energy applications for solar heating and cooling in residential and commercial buildings, and the industrial sector; and recommend concrete actions for the removal of such barriers.
- 3.3 Illustrate renewable energy technologies for solar heating and cooling applications in residential and commercial buildings, and the industrial sector.
- 3.4 Describe policy measures to promote adoption of solar heating and cooling technologies in residential and commercial buildings, and the industrial sector.
- 3.5 Highlight benefits of the adoption of solar heating and cooling technologies, including cost reduction and performance, energy demand and emission reductions.

IV. REPORTS

- 4.1 The consultant should submit the following reports:
 - a. The interim report shall include activities as per paragraph 3.1 and 3.3 above. The interim report shall be submitted within 60 calendar days from the signature of the contract.
 - b. The final report shall consolidate the interim reports and include activities as per paragraph 3.4 and 3.5 above. The final report shall be submitted within 210 calendar days from the signature of the contract.

V. SCHEDULE OF PAYMENT

- 5.1 Payments for the consulting services will be specified in the contract and will be made as follows:
 - a. 20% upon delivery and approval by the Bank of the contract signature.
 - b. 40% upon delivery and approval by the Bank of the first interim report.
 - c. 40% upon delivery and approval by the Bank of the final report.

VI. COORDINATION

- 6.1 The Executive President of Fundación Bariloche will be responsible for the execution of this contract as well as the approval of the products prepared by the consulting firm.

VII. CHARACTERISTICS OF THE CONSULTANCY

- 7.1 **Consultancy Category & Modality:** Consulting firm, selection under Quality and Cost-Based (QCBS).
- 7.2 **Contract Duration:** The activities under these terms of reference shall be completed within eight months.
- 7.3 **Location:** Home-based.

VIII. QUALIFICATIONS

- 8.1 **Work experience:** Consultant's team should be comprised by two professionals with advanced university degree (Master's degree or equivalent) in engineering, environmental sciences or a relevant field and significant experience in renewable energy technologies, energy policy, and climate change in LAC countries. If deemed necessary, and not exceeding the suggested budget for the consultancy, the consulting firm may propose additional staff as part of the team.
- 8.2 **Language requirements:** Fluency in English and Spanish. Knowledge of Portuguese is an advantage.

REGIONAL

CLIMATE TECHNOLOGY TRANSFER MECHANISMS AND NETWORKS IN LATIN-AMERICA AND THE CARIBBEAN

ROADMAP ON FUEL ECONOMY STANDARDS FOR ROAD VEHICLES IN LATIN AMERICA AND THE CARIBBEAN

RG-T2384

TERMS OF REFERENCE

I. BACKGROUND

- 1.1 The project on “Climate technology transfer mechanisms and networks in Latin America and the Caribbean” (the Project) was endorsed by the CEO of the Global Environment Facility (GEF) and approved by the Inter-American Development Bank (IDB). The objective of the project is to promote the development and transfer of Environmentally Sound Technologies (EST) in Latin America and the Caribbean (LAC), in order to contribute to the ultimate goal of reducing Greenhouse Gas (GHG) emissions and reducing the vulnerability to climate change in specific sectors in LAC.
- 1.2 Countries in LAC contribute with 10.5% of global GHG emissions.²² The transport sector in LAC is growing at a fast rate, having reached approximately 30% of the overall GHG emissions from the energy sector.²³ Economic development, rapid urbanization and motorization, inadequate mass transit options, and inefficient freight and logistics sectors are some of the drivers for the increase in GHG emissions in the transportation sector. In addition to these, urban sprawl, larger commuting distances, higher costs of commuting by public transport, as well as a gradual growth in the size, weight and power of passenger vehicles, are additional factors contributing to the increase in GHG emissions from the transport sector.
- 1.3 The project’s strategy is to build national capacities to identify, assess, develop and transfer EST in LAC. In order to achieve this strategy, the project will: (i) promote regional collaborative efforts; (ii) support planning and policy-making processes at national and sectoral levels; (iii) serve as a platform for the demonstration of policies and enabling mechanisms; and (iv) mobilize private and public resources. The project will pilot institutional frameworks and mechanisms for the development and transfer of EST for climate change mitigation and adaptation, taking into consideration and contributing directly to key design features of the Technology Mechanism as agreed under the United Nations Framework Convention on Climate Change (UNFCCC). Furthermore, to maximize global and local environmental benefits, the project focuses on sectors that are a priority for climate change mitigation and adaptation in LAC, i.e. renewable energy, energy efficiency, transport, forestry and agriculture, prioritizing specific initiatives according to criteria including EST cost-effectiveness, replicability, national circumstances, capabilities and priorities.

²² WRI, CAIT 2.0. 2013. Climate Analysis Indicators Tool: WRI’s Climate Data Explorer. Washington, DC: World Resources Institute. Available at: <http://cait2.wri.org>.

²³ *Op.cit.*

II. OBJECTIVE

- 2.1 The objective of this consultancy is to elaborate a roadmap on fuel economy standards for road vehicles in Latin America and the Caribbean.

III. MAIN ACTIVITIES

- 3.1 Identify key stakeholders of the building sector in LAC countries and internationally (national and local regulators, automaker, providers, industry associations, dealers and consumers' organizations, academia, etc.).
- 3.2 Describe country-specific policy, regulatory, market and technology barriers preventing the adoption of fuel economy standards for road vehicles, and recommend concrete actions for the removal of such barriers.
- 3.3 Illustrate technologies to improve the fuel economy of road vehicles.
- 3.4 Describe policy options and fiscal measures to promote adoption of fuel economy standards for road vehicles.
- 3.5 Highlight benefits of the adoption of fuel economy standards for road vehicles, including cost reduction, fuel savings and emission reductions.

IV. REPORTS

- 4.1 The consultant should submit the following reports:
- a. The interim report shall include activities as per paragraph 3.1 and 3.3 above. The interim report shall be submitted within 60 calendar days from the signature of the contract.
 - b. The final report shall consolidate the interim reports and include activities as per paragraph 3.4 and 3.5 above. The final report shall be submitted within 210 calendar days from the signature of the contract.

V. SCHEDULE OF PAYMENT

- 5.1 Payments for the consulting services will be specified in the contract and will be made as follows:
- a. 20% upon delivery and approval by the Bank of the contract.
 - b. 40% upon delivery and approval by the Bank of the interim report.
 - c. 40% upon delivery and approval by the Bank of the final report.

VI. COORDINATION

- 6.1 The Director of EMBARQ will be responsible for the execution of this contract as well as the approval of the products prepared by the consulting firm.

VII. CHARACTERISTICS OF THE CONSULTANCY

- 7.1 **Consultancy Category & Modality:** Consulting firm, selection under Quality and Cost-Based (QCBS).

7.2 **Contract Duration:** The activities under these terms of reference shall be completed within eight months.

7.3 **Location:** Home-based.

VIII. QUALIFICATIONS

8.1 **Work experience:** Consultant's team should be comprised by two professionals with advanced university degree (Master's degree or equivalent) in engineering, transportation, environmental sciences or a relevant field and significant experience in transportation, transport policy, fuel economy standards and climate change in LAC countries.

8.2 **Language requirements:** Fluency in English and Spanish. Knowledge of Portuguese is an advantage.

REGIONAL

CLIMATE TECHNOLOGY TRANSFER MECHANISMS AND NETWORKS IN LATIN-AMERICA AND THE CARIBBEAN

COMPARATIVE ASSESSMENT OF STANDARDS FOR ENERGY EFFICIENCY IN BUILDINGS IN LATIN AMERICA AND THE CARIBBEAN

RG-T2384

TERMS OF REFERENCE

I. BACKGROUND

- 1.1 The project on “Climate technology transfer mechanisms and networks in Latin America and the Caribbean” (the Project) was endorsed by the CEO of the Global Environment Facility (GEF) and approved by the Inter-American Development Bank (IDB). The objective of the project is to promote the development and transfer of Environmentally Sound Technologies (EST) in Latin America and the Caribbean (LAC), in order to contribute to the ultimate goal of reducing Greenhouse Gas (GHG) emissions and reducing the vulnerability to climate change in specific sectors in LAC.
- 1.2 Countries in LAC contribute with 10.5% of global GHG emissions.²⁴ According to the Fifth Assessment Report (AR5) from the Intergovernmental Panel on Climate Change the world’s buildings account for 32% of global final energy use and 19% of all GHG emissions. In contrast, LAC’s buildings contribute to 25% of GHG emissions globally.²⁵ AR5 also states that under business as usual projections, use of energy in buildings globally could double or even triple by 2050. The International Energy Agency (IEA) has identified the building sector as one of the most cost-effective sectors for reducing energy consumption; therefore the building sector can contribute significantly to reduce GHG emissions.
- 1.3 The project’s strategy is to build national capacities to identify, assess, develop and transfer EST in LAC. In order to achieve this strategy, the project will: (i) promote regional collaborative efforts; (ii) support planning and policy-making processes at national and sectoral levels; (iii) serve as a platform for the demonstration of policies and enabling mechanisms; and (iv) mobilize private and public resources. The project will pilot institutional frameworks and mechanisms for the development and transfer of EST for climate change mitigation and adaptation, taking into consideration and contributing directly to key design features of the Technology Mechanism as agreed under the United Nations Framework Convention on Climate Change (UNFCCC). Furthermore, to maximize global and local environmental benefits, the project focuses on sectors that are a priority for climate change mitigation and adaptation in LAC, i.e. renewable energy, energy efficiency, transport, forestry and agriculture, prioritizing specific initiatives according to criteria including EST cost-effectiveness, replicability, national circumstances, capabilities and priorities.

²⁴ WRI, CAIT 2.0. 2013. Climate Analysis Indicators Tool: WRI’s Climate Data Explorer. Washington, DC: World Resources Institute. Available at: <http://cait2.wri.org>.

²⁵ UK Department for International Development, ELLA. 2013. Green Building in Latin America. London, UK: Evidence and Lessons from Latin America. Available at: <http://ella.practicalaction.org/sites/default>

II. OBJECTIVE

- 2.1 The objective of this consultancy is to elaborate a comparative analysis of energy efficiency standards in buildings in LAC, with a view to identifying best practices and promoting regional harmonization of standards.

III. MAIN ACTIVITIES

- 3.1 Identify which LAC countries have established energy efficiency requirements in building codes, or that have specific energy efficiency standards for commercial and residential buildings.
- 3.2 Identify key stakeholders of the building sector in LAC countries (regulators at national and local level, constructors, designers, manufacturers, providers, industry associations, academia, etc.).
- 3.3 Describe which elements of the building have been regulated in LAC countries (i.e. building envelope; building orientation; heating, ventilation, and air conditioning systems; ducts and pipes; automatic controls; installed equipment (including lighting, hydro-sanitary installations, and appliances).
- 3.4 Illustrate best practices for the implementation of energy efficiency standards in buildings in LAC.
- 3.5 Describe policy, regulatory, market and technical barriers preventing the adoption and implementation of energy efficiency standards in buildings.
- 3.6 Analyse how harmonization of energy efficiency standards in buildings in LAC could be promoted and propose activities needed to achieve regional harmonization of standards.

IV. REPORTS

- 4.1 The consultant should submit two interim reports and a final report.
 - a. The first interim report shall include activities as per paragraph 3.1 and 3.2 above. The first interim report shall be submitted within 60 calendar days from the signature of the contract.
 - b. The second interim report shall include activities as per paragraph 3.3 and 3.4 above. The second interim report shall be submitted within 120 calendar days from the signature of the contract.
 - c. The final report shall consolidate the interim reports and include activities as per paragraph 3.5 and 3.6 above. The final report shall be submitted within 210 calendar days from the signature of the contract.

V. SCHEDULE OF PAYMENT

- 5.1 Payments for the consulting services will be specified in the contract and will be made as follows:
 - a. 20% upon delivery and approval by the Bank of the contract signature.

- b. 20% upon delivery and approval by the Bank of the first interim report.
- c. 20% upon delivery and approval by the Bank of the second interim report.
- d. 40% upon delivery and approval by the Bank of the final report.

VI. COORDINATION

- 6.1 The Executive President of *Fundación Bariloche* will be responsible for the execution of this contract as well as the approval of the products prepared by the consulting firm.

VII. CHARACTERISTICS OF THE CONSULTANCY

- 7.1 **Consultancy Category & Modality:** Consulting firm, selection under Quality and Cost-Based (QCBS).
- 7.2 **Contract Duration:** The activities under these terms of reference shall be completed within eight months.
- 7.3 **Location:** Home-based.

VIII. QUALIFICATIONS

- 8.1 **Work experience:** Consultant's team should be comprised by two professionals with advanced university degree (Master's degree or equivalent) in engineering, environmental sciences or a relevant field and significant experience in energy efficiency standards for buildings, construction, and climate change in LAC countries.
- 8.2 **Language Requirements:** Fluency in English and Spanish. Knowledge of Portuguese is an advantage.

REGIONAL

CLIMATE TECHNOLOGY TRANSFER MECHANISMS AND NETWORKS IN LATIN-AMERICA AND THE CARIBBEAN

MAPPING OF EXISTING INITIATIVES ON FOREST MONITORING SYSTEMS IN LATIN AMERICA AND THE CARIBBEAN

RG-T2384

TERMS OF REFERENCE

I. BACKGROUND

- 1.1 The project on “Climate technology transfer mechanisms and networks in Latin America and the Caribbean” (the Project) was endorsed by the CEO of the Global Environment Facility (GEF) and approved by the Inter-American Development Bank (IDB). The objective of the Project is to promote the development and transfer of Environmentally Sound Technologies (EST) in Latin America and the Caribbean (LAC), in order to contribute to the ultimate goal of reducing Greenhouse Gas (GHG) emissions and reducing the vulnerability to climate change in specific sectors in LAC.
- 1.2 Countries in LAC contribute with 10.5% of global GHG emissions.²⁶ Tropical deforestation contributes with approximately 20% of annual global GHG emissions. In comparison to other regions, in LAC, Land Use, Land-Use Change and Forestry (LULUCF) is a critical contributor to GHG emissions (33%).²⁷ LULUCF is characterized by extensive changes in land vegetation, destruction of forests, expansion of agriculture, construction of large infrastructure projects and land degradation. Curbing deforestation and implementing sound forest management practices could reduce significantly the region’s GHG emissions, as well as bring about a suite of co-benefits associated with sustainable rural development, poverty reduction, and conservation of ecosystem services, such as access to safe drinking water and the protection of biodiversity.
- 1.3 The Project’s strategy is to build national capacities to identify, assess, develop and transfer EST in LAC. In order to achieve this strategy, the Project will: (i) promote regional collaborative efforts; (ii) support planning and policy-making processes at national and sectoral levels; (iii) serve as a platform for the demonstration of policies and enabling mechanisms; and (iv) mobilize private and public resources. The Project will pilot institutional frameworks and mechanisms for the development and transfer of EST for climate change mitigation and adaptation, taking into consideration and contributing directly to key design features of the Technology Mechanism as agreed under the United Nations Framework Convention on Climate Change (UNFCCC). Furthermore, to maximize global and local environmental benefits, the Project focuses on sectors that are a priority for climate change mitigation and adaptation in LAC, i.e. renewable energy, energy efficiency, transport, forestry and agriculture,

²⁶ WRI, CAIT 2.0. 2013. Climate Analysis Indicators Tool: WRI’s Climate Data Explorer. Washington, DC: World Resources Institute. Available at: <http://cait2.wri.org>.

²⁷ *Op.cit.*

prioritizing specific initiatives according to criteria including EST cost-effectiveness, replicability, national circumstances, capabilities and priorities.

II. OBJECTIVE

- 2.1 The objective of this consultancy is to elaborate a mapping of existing initiatives and policies on forest monitoring systems in LAC.

III. MAIN ACTIVITIES

- 3.1 Identify the existing initiatives on forest monitoring systems which LAC countries are participating in and describe national policies established in different countries of the region related to forest monitoring systems. Emphasize on linkages between the management of carbon stocks/sequestration and other forest-related natural resources (e.g. biodiversity, water, etc.).
- 3.2 Analyze existing global mechanisms on forest monitoring systems, its data requirements and LAC countries capabilities.
- 3.3 Identify stakeholders that have been participating in the design and implementation of existing initiatives and policies on forest monitoring systems in LAC countries and internationally (national, regional, and local regulators; communities; international organizations, academia, etc.).
- 3.4 Highlight discussions, decisions, practices and future requirements under the identified existing initiatives in paragraph 3.1 (e.g. UNREDD, FCPF, FAO and other relevant partnership).
- 3.5 Make recommendations on actions and/or studies needed to incorporate forest-related natural resources and management into forestry monitoring policies in LAC countries.

IV. REPORTS

- 4.1 The consultant will submit the following reports:
 - a. The first interim report shall include activities as per paragraph 3.1 and 3.2 above. The first interim report shall be submitted within 80 calendar days from the signature of the contract.
 - b. The final report shall consolidate the interim reports and include activities as per paragraph 3.3 to 3.5 above. The final report shall be submitted within 240 calendar days from the signature of the contract.

V. SCHEDULE OF PAYMENT

- 5.1 Payments for the consulting services will be specified in the contract and will be made as follows:
 - a. 20% upon delivery and approval by the Bank of the contract signature.
 - b. 40% upon delivery and approval by the Bank of interim report.
 - c. 40% upon delivery and approval by the Bank of final report.

VI. COORDINATION

- 6.1 The Climate Change and Watershed lead at CATIE will be responsible for the execution of this contract as well as the approval of the products prepared by the consulting firm.

VII. CHARACTERISTICS OF THE CONSULTANCY

- 7.1 **Consultancy Category & Modality:** Consulting firm, selection under a Fixed Budget (FBS).
- 7.2 **Contract Duration:** The activities under these terms of reference shall be completed within nine months.
- 7.3 **Location:** Home-based.

VIII. QUALIFICATIONS

- 8.1 **Work experience:** Consultant's team should be comprised by two professionals with advanced university degree (Master's degree or equivalent) in forestry, agronomy, engineering, environmental sciences or a relevant field and significant experience in forest management, forestry policy, forest monitoring systems and climate change in LAC countries.
- 8.2 **Language Requirements:** Fluency in English and Spanish. Knowledge of Portuguese is an advantage.