

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

REGIONAL

**CLIMATE TECHNOLOGY TRANSFER MECHANISMS AND NETWORKS IN
LATIN AMERICA AND THE CARIBBEAN
(RG-T2384)**

TECHNICAL COOPERATION DOCUMENT

The project team is comprised by: Francisco Arango (INE/CCS), Team Leader; Sandra López (INE/CCS), Ana Ríos (INE/CCS), Juan Chang (INE/CCS), Jose Emiliano Detta (INE/CCS), Maricarmen Esquivel (INE/CCS), Gmelina Ramirez (CCS/CME), Patrick Doyle (SCF/SMU), Mauricio Bouskela (IFD/CTI), María Teresa Soto-Aguilar (VPC/FMP), Ileana Pinto (VPC/FMP) and Viviana Maya (LEG/SGO).

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TC DOCUMENT

I. BASIC INFORMATION

▪ Country/Region:	Regional
▪ TC Name:	Climate Technology Transfer Mechanisms and Networks in Latin America and the Caribbean
▪ TC Number:	RG-T2384
▪ Team Leader/Members:	Francisco Arango (INE/CCS), Team Leader; Sandra López, Ana Ríos, Juan Chang, Jose E. Detta, Maricarmen Esquivel, Gmelina Ramirez (INE/CCS); Patrick Doyle (SCF/SMU); Mauricio Bouskela (IFD/CTI); María Teresa Soto-Aguilar (VPC/FMP); Ileana Pinto (VPC/FMP); Viviana Maya (LEG/SGO); and Kai Hertz (ORP/GCM)
▪ Taxonomy:	Client Support
▪ Date of Abstract authorization:	January 18 th , 2013
▪ Beneficiary:	Public and private entities of member countries in LAC
▪ Executing Agency:	Instituto Nacional de Ecología y Cambio Climático (INECC), Fundación Bariloche (Bariloche), World Resources Institute (WRI), Centro Agronómico Tropical de Investigación y Enseñanza (CATIE) and Inter-American Development Bank (IDB) in its capacity as legal representative and administrator of the Regional Fund for Agricultural Technology (FONTAGRO)
▪ Donors providing funding:	Global Environment Facility (GEF) and Special Climate Change Fund (SCCF)
▪ IDB Funding Requested* :	GEF Trust Fund: US\$9,082,500 SCCF: US\$1,816,500 Total: US\$10,899,000
▪ Disbursement period:	40 months (36 months of execution)
▪ Required start date:	January, 2015
▪ Types of consultants:	Consulting firms and individual consultants
▪ Prepared by Unit:	INE/CCS
▪ Unit of Disbursement Responsibility:	Infrastructure and Environment Sector (INE/INE)
▪ TC Included in Country Strategy:	No
▪ TC Included in CPD:	No
▪ GCI-9 Sector Priority:	Protect the environment, respond to climate change and promote renewable energy and food security

* Agency fee (10%): GEF Trust Fund, US\$908,250; SCCF, US\$181,650; Total: US\$1,089,900

II. OBJECTIVES AND JUSTIFICATION

- 2.1. The objective of this technical cooperation 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. The project's strategy is to build national capacities to identify, assess, develop and transfer EST, focusing on: (i) the promotion of and support to regional collaborative efforts; (ii) the support to planning and policy-making processes at national and sectoral levels; (iii) the demonstration of policies and enabling mechanisms; and (iv) the mobilization of private and public financial and human resources. The project will pilot institutional frameworks and mechanisms to enhance the development and transfer of EST, taking into

consideration and contributing directly to key design features of the Technology Mechanism (TM) agreed under the United Nations Framework Convention on Climate Change (UNFCCC). To facilitate the understanding of the document, a list of abbreviations can be found in this [link](#).

- 2.2. In order to maximize the project's global and local environmental benefits, its activities will focus on priority sectors for climate change mitigation and adaptation in LAC: renewable energy, energy efficiency, transport, forestry and agriculture. The project includes specific criteria to promote a broad and diverse participation by countries in LAC, including small island developing states in the Caribbean that will benefit from mitigation and adaptation activities. During the project's first year, activities will focus on engaging regional stakeholders to identify priority sector-specific areas of work, build and strengthen thematic networks and offer examples of analytical work on enabling policies and mechanisms for the development and transfer of EST. During the second and third year of the project, focus will gradually shift to respond to in-country originated requests and support the identification, prioritization and implementation of sector-specific EST.
- 2.3. The project will focus on the development of national capacities to: (i) elaborate plans and policies to facilitate the development and transfer of EST; and (ii) identify, select, finance and adopt EST. While the former objective will emphasize the role of public institutions and deliver specific results regarding policies and plans for the development of EST, the latter will seek to engage the private sector and other technology users in the policy-making process, with a view also to piloting investments in specific EST. This approach aims at adequately identifying and addressing the barriers to the adoption of EST at all relevant levels (e.g. regulatory, financial, technical, information, etc.).
- 2.4. At its sixteenth session, the Conference of the Parties to the UNFCCC decided to establish a TM, with a view to supporting actions regarding the development and transfer of EST for climate change mitigation and adaptation. The TM includes a Technology Executive Committee (TEC) and a Climate Technology Centre and Network (CTCN). The Climate Technology Centre is hosted by the United Nations Environment Program and the United Nations Industrial Development Organization, and supported by [eleven centres of excellence](#) in developing and developed countries.
- 2.5. Countries in LAC contribute with 10.5% of global GHG emissions.¹ LAC's specific geographic, natural and socioeconomic context makes the region particularly vulnerable to climate change and therefore significant impacts are expected, in particular on water resources, coastal zones, biodiversity, health and agriculture. According to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC), important changes in precipitation and increases in temperature have been observed in the region. A complete description of the regional context for the operation can be found in the following [link](#).

III. DESCRIPTION OF ACTIVITIES/COMPONENTS AND BUDGET

- 3.1. The project will be executed around four interlinked components. The first component will address the policy and regulatory barriers, improving the capacity of policy-makers to identify and assess EST needs and opportunities, and to formulate policies and plans to

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>.

promote the adoption of priority EST. Component two of the project will facilitate the access to regional expertise, thus reducing the cost and time associated to the implementation of EST related initiatives and therefore contributing to the removal of information, technical and capacity barriers. Component three will draw from the expertise linked through component two and produce recommendations on actions, mechanisms and policies for the adoption of EST, in particular for those EST identified as a priority under component one. Component three will contribute to removing policy and regulatory barriers to the deployment of EST by supporting stakeholders evaluate and adopt enabling policies and mechanisms for the deployment of EST. Component four will promote investments in the adoption of EST by means of producing feasibility, technology and cost-benefit assessments, market studies and financial models, and financing proposals for investments in EST.

- 3.2. **Component 1. Development of national policy and institutional capacities. (US\$1,138,824).** 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. These activities include: (i) expert dialogues on EST and climate change policy in the context of national systems for technology and innovation; (ii) elaboration of policy recommendations to integrate considerations on EST in national systems for technology and innovation; (iii) regional dialogues on climate change planning and EST; and (iv) elaboration of guidelines and methodologies for the inclusion of EST considerations on climate change planning. *Instituto Nacional de Ecología y Cambio Climático* (INECC), in Mexico, is the Project Executing Agency (PEA) for this component. INECC will coordinate with and receive technical support from the four sectoral PEAs (Bariloche, WRI, CATIE, IDB-Fontagro).
- 3.3. **Component 2. Strengthen technology networks and centers. (US\$865,000).** This component will support the creation and strengthening of four regional EST networks on energy, transport, forestry and climate-resilient agriculture. Activities under this component aim at identifying and prioritizing opportunities for the adoption of EST in each sector in LAC, and promoting regional partnerships and collaboration through, *inter alia*, the identification of relevant expertise in the region and selected outreach and dissemination activities. Strong emphasis will be placed in linking and contributing to existing regional networking initiatives, with a view also to ensuring the continuation of the networks' activities beyond project closure. Activities under this component include: (i) outreach and network building; (ii) mapping of regional expertise; (iii) elaboration of sectoral overviews of EST in LAC; and (iv) elaboration of business plans to ensure the sustainability of the activities of EST networks. The regional expertise identified and linked through the activities of EST networks will be available to stakeholders in LAC and will also be used to complete project activities under Components 3 and 4. Bariloche, WRI, CATIE and IDB-Fontagro will be responsible for the execution of this set of activities for its corresponding sector. Relevant experience and lessons supporting regional EST networks will be shared among PEAs, with a view to distilling and disseminating best practices across sectors.

- 3.4. **Component 3. Pilot technology transfer mechanisms (US\$3,584,540).** 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, 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. The activities to be executed under this component are: (i) elaboration of case studies on EST development and transfer (e.g. experience with the adoption of flex-fuel cars in Brazil and solar thermal energy in Uruguay); (ii) preparation of technology roadmaps for the adoption of EST (e.g. roadmap on fuel efficiency standards for road vehicles, roadmap for the adoption of forest monitoring systems); and (iii) assessment of technical standards and regulations as mechanisms for the adoption of EST (e.g. comparative assessment of standards for energy efficiency in buildings). Project partners have agreed on a number of outputs of regional interest to be completed during the first year of the project (see [Detailed Results Matrix](#)). These outputs will serve to exemplify the type of analytical tools employed by the project to disseminate information on EST and the GEF supported project, and to motivate the participation of stakeholders in the project activities. During the second and third year of the project, sectoral PEAs will invite and respond to requests for technical assistance from countries in LAC to assess and pilot EST transfer mechanisms. Sectoral PEAs will be responsible for the execution of the activities under this component.
- 3.5. **Component 4. Leverage private and public investments. (US\$4,960,000).** This component will enable private and public investments in the development and transfer of EST in LAC. The project will facilitate 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. Outputs under this component will respond to country-originated requests that will be evaluated, prioritized and approved in accordance with criteria and procedures to be approved by the IDB and adopted by PEAs. The procedures should ensure transparency, consistency and efficiency, and prioritize EST following criteria including cost-effectiveness, mitigation potential, replicability and consistency with national circumstances, capabilities and priorities. Sectoral PEAs will be responsible for the execution of activities under this component. In the case of the agriculture sector, grants from the Special Climate Change Fund (SCCF) will also be used in combination with resources from Fontagro to promote and finance collaborative initiatives on EST development and transfer. With this purpose in mind, the IDB, in collaboration with Fontagro, will organize and administer a competitive call for proposals on EST for adaptation in agriculture that will be open to organizations that are eligible to receive funding from the IDB.
- 3.6. Approved work plans for the first year of project activities are included in the following links: [INECC](#), [Bariloche](#), [WRI](#), [CATIE](#), and [IDB/FONTAGRO](#). The work plans describe the activities to be undertaken and the products to be delivered by each PEA under every component. Work plans for subsequent years will be prepared by PEAs and approved by the IDB during project execution.

- 3.7. Direct emissions reductions from investments in EST in all sectors are estimated at 1.7 million tonnes CO₂-eq. Indirect emissions reductions from investments benefiting indirectly from the project activities are estimated at 3.3 million tonnes CO₂-eq. Total emission reductions are therefore estimated at 5 million tonnes CO₂-eq. Details on the estimation of global environment benefits are provided under this [link](#).
- 3.8. The project activities need to be in line with the TM, thus, collaborating with UNFCCC, TEC and CTCN is a key element of its strategy. The European, Asian and the African multilateral development banks are preparing similar projects with grants from GEF and all four banks, including the IDB, have agreed to collaborate during the implementation of these projects. National governments will play a crucial role as the project will promote the dialogue on enabling policy environments for the development and transfer of EST in the region. The private sector will participate in the discussion and piloting of technology transfer mechanisms and will play a key role in the adoption of EST. The project will implement the necessary participation mechanisms to ensure that the inputs and views from all relevant stakeholder, including civil society and academia, are adequately addressed.

Table 1. Indicative Results Matrix ^a

Output	Indicator	Base	Year 1	Year 2	Year 3	Target
Component 1						
Workshops on EST and systems for technology and innovation	Number of workshops held	0	1	1	1	3
Guidebook on EST	Number of guidebooks published	0	0	1	0	1
Regional dialogues on climate change planning and EST	Number of government representatives trained	0	15	15	30	60
Guidelines on climate change planning and EST	Number of guidelines on climate change planning published	0	0	1	0	1
Component 2						
Workshops/events to promote thematic networks	Number of workshops/events	0	4	4	4	12
Mapping of regional expertise on EST	Number of sectoral resources/expertise databases	0	4	4	4	4
Sectoral overviews of EST in specific sectors in LAC	Number of overviews of EST completed	0	6	0	0	6
Thematic networks business plans	Business plans produced	0	0	0	4	4
Component 3						
Case studies on EST development and transfer	Number of case studies disseminated	0	10	4	2	16
Technology roadmaps for the adoption of EST	Number of technology roadmaps disseminated	0	5	2	0	7
Assessments of EST transfer mechanisms	Assessments on EST adoption mechanisms disseminated	0	1	2	2	5
Component 4						
Technical assessment of EST	Tech. EST assessments completed	0	0	5	10	15
Economic assessments of EST	Cost-benefit, market studies or financial models and assessments of EST completed	0	0	5	10	15
Financing proposal for the development and transfer of EST	Project proposals on development and transfer of EST completed	0	0	3	5	8
Financing of EST for adaptation in agriculture	Number of collaborative projects on EST for adaptation in agriculture completed	0	0	0	6	6

^a For further details please see the project's detailed [Results Matrix](#).

- 3.9. The project is requesting US\$9,082,500 from the GEF Trust Fund and US\$1,816,500 from the SCCF. Resources from the GEF Trust Fund have been allocated to PEAs that execute components on the development of national capacities (INECC), energy (Bariloche), transport (WRI) and forestry (CATIE). The terms for the transfer and utilization of these resources will be governed by grant agreements to be signed between the IDB and each PEA, and by annual work plans to be agreed upon by the IDB, the Technical Committee and each PEA (see section IV). Resources from the SCCF will be executed by the IDB, with technical support provided by Fontagro.

Table 2. Indicative Budget ^a (US\$)

Description	GEF Trust Fund				SCCF	Total
	INECC	Bariloche	WRI	CATIE	IDB/GCM	
Component 1.	1,138,824	0	0	0	0	1,138,824
Component 2.	0	270,000	225,000	180,000	190,000	865,000
Component 3.	0	1,341,816	950,908	770,908	520,908	3,584,540
Component 4.	0	1,700,000	1,100,000	1,100,000	1,060,000	4,960,000
Project management	81,511	87,511	60,511	75,511	45,592	350,636
Total	1,220,335	3,399,327	2,336,419	2,126,419	1,816,500	10,899,000

^a For further details please see the [detailed budget](#).

IV. EXECUTING AGENCY AND EXECUTION STRUCTURE

- 4.1 The project implementation arrangements include the IDB –as a GEF implementing agency, five PEAs (INECC, Bariloche, WRI, CATIE, and the IDB, in its capacity as legal representative and administrator of Fontagro) and a Technical Committee. For additional details please refer to the following link: [Implementation Arrangements](#).
- 4.2 All procurement activities to be executed by the Bank, such as contracting of individual consultants, consulting firms and non-consulting services, will be carried out in accordance with Bank's current procurement policies and procedures.
- 4.3 All procurement activities to be carried out by PEA will follow the Policies for the Procurement of Goods and Works Financed by IDB (GN-2349-9) and the Policies for the Selection and Contracting of Consultants Financed by the IDB (GN-2350-9). Concerning external audits, the project team will determine if audited or unaudited project financial statements are required from each PEA based on the amount of the contribution, level of risk and complexity of the components to be executed. A procurement plan for the first year of project execution is included in Annex II of the technical cooperation document.

V. MAJOR ISSUES

- 5.1 The project has a number of medium to low-level risks, including: (i) the slow progress in the implementation of the TM under UNFCCC; (ii) poor coordination among PEAs; (iii) insufficient interest/support by national governments; (iv) lack of interest by the private sector; (v) EST are inadequate to the needs and practices of local technology users; (vi) political and/or economic instability; and (vii) lack of qualified experts to support the project activities. These risks will be mitigated with strategies proposed in the project design such as: (i) the project will pursue activities that will deliver positive results in terms of the development and transfer of EST even in the context of a challenged implementation of the TM; (ii) activities to engage with stakeholders and disseminate early results should also aim at identifying likely investment opportunities eligible under component four; (iii) formal and informal communication and reporting functions by PEAs will be adopted

to facilitate the coordination of inputs and activities and sufficient resources have been allocated to coordination and monitoring activities that include the assignment of at least one technical coordinator to each PEA; (iv) the project design includes the promotion of collaboration with a broad base of expert organizations in the region and abroad, mapping and linking to thematic networks the existing supply of technical expertise in the region; and (v) the IDB will liaise with PEAs with a view to linking investment opportunities with financing products available through the Bank.

- 5.2 Additionally, each proposed PEAs went through an institutional fiduciary capacity evaluation. The following are the summaries from the evaluations: (i) INECC's evaluation concluded the entity has very strong technical competencies. However, it identified areas for improvement. The analysis rated the fiduciary risk as medium. As risk mitigation measures, the project team will provide the necessary training to ensure that IDB's procurement policies and procedures are observed; and (ii) the evaluation of Bariloche, WRI and CATIE revealed that: (a) they have adequate technical and monitoring capacities to execute their activities under the project; (b) these institutions have integrated accounting management systems that are adequate; (c) their systems allow easy access and compilation of information on all accounting and financial operations as well as physical records; and (d) the activities to be executed by these institutions are regulated under terms of reference and Bank's policy, as well as rules of each institution. In conclusion, these three institutions were evaluated as having a medium or low fiduciary risk. Hence, mitigation measures will be taken where needed and become part of the technical cooperation agreements to ensure that IDB Procurement and Financial Management policies are observed by all PEAs.

VI. EXCEPTIONS TO BANK POLICY

- 6.1 No exceptions to the Bank's policies have been identified.

VII. ENVIRONMENTAL AND SOCIAL STRATEGY

- 7.1 The project does not generate negative environmental and/or social impacts. Its outputs will lead to positive environmental impacts. The project has been classified as category "C" per the Environment and Safeguards Compliance Policy (OP-703) (see the [Safeguard Policy Filter Report and Safeguard Classification Form](#)).
- 7.2 The project will address gender issues during the planning and execution of activities, including, inter alia, the assessment of gender-specific impacts and challenges from the adoption of EST. The project monitoring and evaluation will assess gender-specific impacts.

REQUIRED ANNEX:

- Annex: [Procurement Plan](#).

REQUIRED ELECTRONIC LINKS:

- [Terms of Reference](#)

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

RG-T2384	US\$9,082,500 (FMM)
	US\$1,816,500 (SCC)

TOTAL US\$10,899,000

CERTIFICATION

The Grants and Cofinancing Management Unit (ORP/GCM) certifies receipt of the GEF trustee commitment letters dated September 11, 2014 for project Climate Technology Transfer Mechanisms and Networks in Latin America and the Caribbean for **US\$10,899,000**, chargeable against the GEF Trust Fund (GEFTF) and the Special Climate Change Fund (SCCF).

[Original Signed]

10/29/2014

Sonia M. Rivera
Chief

Date

Grants and Cofinancing Management Unit
ORP/GCM

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

PROPOSED RESOLUTION DE-____/____

Regional. Nonreimbursable Technical Cooperation ATN/-____-RG and ATN/-____-RG
Climate Technology Transfer Mechanisms and Networks
in Latin America and the Caribbean

The Board of Executive Directors

RESOLVES:

1. That the President of the Inter-American Development Bank, or such representative as he shall designate, is authorized, in the name and on behalf of the Bank, and as Administrator of the IADB/GEF Fund, to enter into such agreements as may be necessary with the Instituto Nacional de Ecología y Cambio Climático (INECC), the Fundación Bariloche, the World Resources Institute (WRI), and the Centro Agronómico Tropical de Investigación y Enseñanza (CATIE), and to take such measures as may be pertinent for the execution of the technical cooperation proposal contained in document AT-____ with respect to a nonreimbursable technical cooperation to promote the development and transfer of environmentally sound technologies (EST) in Latin America and the Caribbean.

2. For the purposes of this resolution: (i) up to the sum of US\$9,082,500 shall be authorized, chargeable to the resources of the IADB/GEF Fund; and (ii) up to the sum of US\$1,816,500, shall be authorized, chargeable to the resources of Special Climate Change Fund (SCCF).

3. That the above-mentioned sum is to be provided on a nonreimbursable basis.