

## TC Document

### I. Basic Information

▪ Country/Region:	Latin-America and the Caribbean
▪ TC Name:	Climate Change and Sustainable Landscapes
▪ TC Number:	RG-T2928
▪ Team Leader/Members:	Amal-Lee Amin (CSD/CCS) team leader, Michael Collins (CSD/RND), Allen Blackman, (CSD/CSD), Ana Rios (CSD/RND), Jennifer Doherty-Bigara (CSD/CCS), Thiago De Araujo (CSD/CCS) Juliana Almeida (CSD/CCS), Gregory Watson (MIF/MIF), Adrien Vogt-Schilb (CSD/CCS) Steven Wilson (MIF/MIF), Juan Durante (IFD/CMF), Pamela Ferro (CSD/CCS), Giovanni Frisari (CSD/CCS), Alfred Grünwaldt (CSD/CCS), Betina Hennig(LEG/SGO), Juan Gomez (CSD/CCS)
▪ Taxonomy	Research and Dissemination
▪ Date of TC Abstract authorization:	December, 2016
▪ Beneficiary:	Latin-American and Caribbean Countries
▪ Executing Agency and contact name:	Inter-American Development Bank – Amal-Lee Amin
▪ Donors providing funding:	Sustainable Energy and Climate Change Multi-Donor Fund (MSC).
▪ IDB Funding Requested:	US\$950,000
▪ Local counterpart funding, if any:	US\$237,500
▪ Disbursement period:	24 months (execution period: 24 months)
▪ Required start date:	May 2017
▪ Types of consultants:	Firms and individuals
▪ Prepared by Unit:	CCS
▪ Unit of Disbursement Responsibility:	CSD
▪ TC Included in Country Strategy:	No
▪ TC included in CPD:	No
▪ Alignment to the Update to the Institutional Strategy 2010-2020:	Development challenge of productivity and innovation; cross-cutting theme of climate change and environmental sustainability

### II. Objectives and Justification

- 2.1 Climate change will have major impacts in Latin-American and Caribbean (LAC) natural capital stocks and ecosystems services that are the basis for agriculture, forestry, fisheries, livestock, water and natural resource provision, with significant economic and social consequences affecting livelihoods across the region. Physical changes resulting from climate change include increased air and soil temperatures, sea level rise, changes in atmospheric carbon dioxide concentrations and changes in hydrological cycles. The increased frequency and severity of extreme weather events including hurricanes associated with sea level rise is already causing human, infrastructure, economic and ecosystem losses across the region (Field, Barros et al. 2012). A conservative estimate of regional incremental costs due to climate change impacts will be US\$85 to US\$110 billion annually by 2050 (Vergara, Rios et al. 2013). Climate change will aggravate water management and flooding, and increase the frequency of extreme weather events that could bring severe economic consequences (Intergovernmental Panel on Climate Change 2014). Water provision and management infrastructure will need to consider shifts in water availability and quality, including the resilience of water producing ecosystems. Climate change will have

major impacts on agriculture, affecting livelihoods across the region. Net exports of corn, soy, wheat and rice may fall by US\$11 billion by 2020 with more significant yield reductions in wheat and barley (Fernandes, Soliman et al. 2012).

- 2.2 Ensuring the sustainability of landscapes is critical to increase productivity, reduce inequality and transform Latin America and the Caribbean into a more inclusive and prosperous society. The Food and Agriculture Organization has estimated that agricultural productivity in the region will need to increase by 60% of its 2009 levels by 2050 to meet new demand. This entails a gradual transformation of current practices while the impacts on soil, water, biodiversity and climate are minimized. The growing demands for food, wood and water require major changes in land and water management practices (The New Climate Economy, 2016). There are clear needs and opportunities to support climate smart agriculture and livestock technologies across small-holders and large scale producers, which in turn will address risks and raise the output to meet new demand (Fay, Hallegatte et al. 2015, Business and Sustainable Development Commission 2017). There are also clear needs and opportunities in approaches to improve land use including restoration of degraded lands that could reduce pressures created by land use and land use change as a major driver of greenhouse gas emissions (Stavi and Lal 2015, Business and Sustainable Development Commission 2017, de Moraes Sá, Lal et al. 2017).
- 2.3 In this context, the concept of “sustainable landscapes” has been developed and applied in both rural (Agrawal, Wollenberg et al. 2014, Vira, Wildburger et al. 2015) and urban (Shi and Woolley 2014, Steiner, Pieranunzi et al. 2014) circumstances. Sustainable landscapes have been defined as “a conceptual framework whereby stakeholders in a landscape aim to reconcile competing social, economic and environmental objectives. It seeks to move away from the often-unsustainable sectoral approach to land management. A landscape approach aims to ensure the realization of local level needs and action (i.e. the interests of different stakeholders within the landscape), while also considering goals and outcomes important to stakeholders outside the landscape, such as national governments or the international community” (Denier, Scherr et al. 2015). As such, the Sustainable Landscapes Approach (SLA) is a cross-sectoral integrated approach to land use management that considers both climate resilience and climate mitigation. Such approach (temporarily upstream and often addressing broader spatial scales) captures aspects of sustainability that often are not addressed in sector specific approaches that maximize singular production outcomes even while attempting to minimize impacts on the needs of other stakeholders. The importance of multi-sectorial approaches has been recognized by the Update to the Institutional Strategy 2010-2020 and the Environment and Biodiversity Sector Framework (2016); they are increasingly crucial to address the complex climate, social and environmental challenges of infrastructure and productive development in LAC.
- 2.4 Across the region, while it is understood that biodiversity and ecosystem services will be affected by climate change, landscapes, such as forests, wetlands and marine and coastal systems will also become increasingly important to provide nature based adaptation solutions –filtering water, preventing landslides, mitigating floods, protecting coasts and improving air quality– as well as acting as natural carbon sinks. Forestry, agro-forestry, wetland and coastal-marine systems will also play increasingly important roles in maintaining livelihoods and minimizing risks for highly vulnerable peoples (Fay, Hallegatte et al. 2015). Adopting sustainable landscape approaches will therefore become increasingly important, not just to ensure sustainability, but to

ensure the viability and implementation of productive natural resource management projects.

- 2.5 Nature based solutions –ecosystem restoration and enhancement, and improved ecosystem management– that support “green infrastructure” can help reduce climate related disaster risks. However, significant investments will be needed to transform economic systems from providing “grey solutions”<sup>1</sup> to their engagement in “nature based”<sup>2</sup> solutions” with their associated low-carbon and biodiversity co-benefits. While there is evidence that nature based solutions are being applied to address water provisioning and waste management challenges, the approach has not yet been brought to scale in addressing climate related disaster risk challenges. Scaled-up investments to support this transformation will come, in large part, from the creation of policy and incentive frameworks that transform how natural capital is managed and attract private investments to support nature based solutions and sustainable land use. Public investments are also needed to: (i) build institutional capacities to translate Nationally Determined Contributions<sup>3</sup> (NDC) policy aspirations regarding sustainable land use into sector and budgetary actions; (ii) accelerate the origination and preparation of low-carbon and climate-resilient projects; (iii) innovate and facilitate access to new technologies and business and financing models; and (iv) ensure access to concessional resources to reduce costs and risks for private investors (Bielenberg, et al. 2016, Granoff, et al. 2016, Mercer and IADB 2016, The New Climate Economy 2016, Business and Sustainable Development Commission 2017).
- 2.6 At the same time, the unique nature of climate change creates specific knowledge and capacity building needs (Pollitt 2015). Specific information and analysis under conditions of uncertainty are needed to better understand and respond to hazards, exposure, vulnerability and the consequences of climate change. New technologies, market mechanisms and business, financing and regulatory models are some of the tools that can reduce risk and support innovation in investments in adaptation (Trærup, Christiansen et al. 2014, Olhoff 2015).
- 2.7 Largely driven by the expansion of commercial agriculture, the clearing and degradation of forested landscapes in Latin America and the Caribbean (LAC) remains a pressing problem (Blackman et al. 2014). Deforestation in LAC averaged 0.5% per year in the first decade of the 2000s, five times the global rate (FAO 2011). The loss of intact forested landscapes has contributed to a host of local and global environmental problems including soil erosion and loss of hydrological and provisioning services (Chomitz 2007), loss of biodiversity (Gibson et al. 2011), and a sizable share of LAC’s total GHG emissions (Baccini et al. 2012; Harris et al. 2012).
- 2.8 Policymakers in LAC rely on an increasingly diverse set of strategies to address this problem ranging from establishing protected areas, to payments for environmental services, community forestry, voluntary supply chain commitments, land use zoning, forest concessions, etc. (Blackman et al. 2014). But while policy innovation has accelerated, resource constraints on policy implementation continue to bind. The human, financial, institutional and political resources that LAC policymakers must launch and sustain, including all sorts of environmental and natural resource policies, are generally grossly inadequate. LAC countries currently allocate only half of the

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<sup>1</sup> Physical and organizational structures and facilities (e.g. buildings, roads, dams and barriers).

<sup>2</sup> Natural and semi-natural areas, features, and green spaces in rural and urban and terrestrial, freshwater, coastal and marine areas.

<sup>3</sup> Commitments made by more than 190 countries to the Paris Agreement under the United Nations Framework Convention on Climate Change.

financial resources needed to effectively manage protected areas (Flores 2010). Given such constraints, it is critically important that LAC policymakers get the greatest bang-for-the-buck possible from the resources allocated to preserve forested landscapes. That, in turn, requires an understanding of whether and under what conditions various conservation policies are effective.

- 2.9 Unfortunately, however, reliable evidence on the effectiveness of policies used to conserve forested landscapes is sorely lacking (Baylis et al., in press; Fisher et al. 2014; Puri and Nath 2015). While rigorous evaluation of policy interventions has become commonplace if not mandatory in sectors such as health, education and agriculture, it still is quite rare in the natural resource sector. It is only in the past 5-10 years that researchers have begun to apply rigorous experimental and quasi-experimental program evaluation methods to interventions aimed at sustaining forest landscapes. Thus, the evidence base on all manner of interventions remains exceptionally thin.
- 2.10 The objective of this technical cooperation is to help public and private sector decision-makers understand the concept of sustainable landscape approaches, in particular, taking into account climate change considerations, as well as new tools available to provide support and enhance these approaches. Specifically, this technical cooperation will carry out activities to strengthen the capacity of national and sub-national governments and the private sector to design sustainable landscape approaches that could eventually be linked to relevant NDC actions.
- 2.11 In this context, the Inter-American Development Bank Group (IDBG) has already created “NDC Invest”, a one stop shop platform that will support the implementation phase of NDCs and allow the IDBG to fulfill its commitment of increasing climate change financing to 30% of its portfolio. The platform will also integrate and disseminate lessons learned from this and other relevant operations to mainstream sustainable landscape approaches in future operations.
- 2.12 The operation is consistent with the Update to the Institutional Strategy 2010-2020 (GN-2788-5) and is aligned with the development challenge of productivity and innovation as it intends to generate information that will provide scientific grounds for private and public decision makers to create new frameworks and policies that will ultimately translate into more productive and resilient ecosystems.<sup>4</sup> The operation is also aligned with the cross-cutting theme of climate change and environmental sustainability as it will provide key insights to implement sustainable landscape approaches which allow for holistic interventions aligned with countries’ NDCs and Sustainable Development Goals. Additionally, the program will contribute to the Corporate Results Framework 2016-2019 (GN-2727-4) (CRF) by providing training for government agencies to strengthen their technological and managerial tools to improve the delivery of their services.<sup>5</sup> Finally, the TC is aligned with the Sustainable Energy and Climate Change Multi-Donor Fund (MSC) as it enhances cutting edge knowledge which will foster mitigation and adaptation practices for a sustainable development.

### **III. Description of activities/Components and Budget**

- 3.1 **Component 1. Increase awareness and understanding of Sustainable Landscapes Approaches (US\$500,000).** This component aims at mainstreaming the

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<sup>4</sup> Better informed decisions makers can push forward new policies and incentives that enhance the impacts of nature based solutions and green infrastructure, optimizing the use of their resources and generating opportunities to move forward their NDC agendas.

<sup>5</sup> Indicator N° 25 of the Country Development Results Indicators of the CRF 2016-2019.

concept of sustainable landscape approaches and solutions amongst public and private audiences. It intends to inform decision makers about sustainable landscape approaches at the national and sub-national levels. The sustainable landscapes approach will build upon existing initiatives in the bank to ensure cross fertilization of lessons learned and ensure mainstreaming of the understanding of SLA.

- 3.2 Mainstreaming will be achieved through analyses, research, capacity building, new tools, or new approaches for the planning, design and implementation of integrated approaches to the sustainable management of natural resources and landscapes (*inter alia*, forests, fisheries, ecosystems, wetlands, reefs, water, biodiversity and degraded lands). Activities may include the analysis and sharing of information on land use subsidies, market pricing and incentive reforms; analyses of investment frameworks; analyses of institutional capacity and policies; in addition to traditional approaches to integrated land use management.
- 3.3 **Component 2. Enabling private sector engagement in Sustainable Landscape Approaches (US\$300,000).** This component will finance the identification of business cases for Nature Based Solutions (NBS) and their translation into business opportunities for the private sector. The deliverables will facilitate the engagement of small to medium scale private sector companies in sustainable landscape approaches: (i) case studies of private sector engagement; (ii) building cost-benefit based business cases for engagement; (iii) institutional barriers and incentives for private sector engagement; (iv) effective institutions for private sector engagement; (v) financial risk, green bonds and financial markets; and (vi) understanding supply chains and sustainable landscapes.
- 3.4 **Component 3. Outreach and dissemination (US\$150,000).** Activities focused on internal and external audiences to promote the results of the work from the operation and promote increased understanding of the sustainable landscapes approach and increase dialogue across sectors active within landscapes and between the public and private sectors. The SLA trainings and monographs will be targeted towards an expected target audience that will include ministries of finance, public works and planning, as well as private infrastructure firms who seek to understand the opportunities of investing and/or including sustainable landscape considerations in their portfolio.
- 3.5 The total estimated cost of the operation is US\$1,187,500, out of which US\$950,000 correspond to financing from the Sustainable Energy and Climate Change Multi-Donor Fund (MSC). The remaining US\$237,500 correspond to the local counterpart financing, which will be provided in-kind by technical staff from the ministries of participating countries and includes time they will contribute by the counterpart staff and office space.

Indicative Budget

Component	IDB/Fund	Counterpart	Total
1. Increase awareness and understanding of Sustainable Landscapes Approaches	500,000	125,000	625,000
2. Enabling private sector engagement in Sustainable Landscape Approaches	300,000	75,000	375,000
3. Outreach and dissemination	150,000	37,500	187,500
<b>Total</b>	<b>950,000</b>	<b>237,500</b>	<b>1,187,500</b>

#### IV. Executing agency and Execution Structure

- 4.1 Given the nature of this operation and the cutting-edge orientation of the deliverables to be developed, the IDB will act as the executing agency. Its regional coverage will require to manage and foster possible synergies and complementarities with Bank

operations and research programs. The Climate Change Division will coordinate with other Departments and Divisions and establish partnerships with academia and governments.<sup>6</sup>

- 4.2 The Bank will hire individual consultants, consulting firms and non-consulting services in accordance with current Bank procurement policies and procedures.

## **V. Major Issues**

- 5.1 There are no major foreseeable risks in the operation. However, one risk relates to the lack of publicly available environmental-social and climate data that has the desired level of quality for the studies to be carried out. Consequently, the studies could take longer to complete and be costlier than originally expected. This risk will be mitigated through: (i) the use of the latest methodologies and statistical tools to manage and effectively use limited amounts of data under high uncertainty; and (ii) the involvement of national hydro-meteorological institutes through sectorial ministries participating in the proposed studies, so that they can also collaborate with their specific national expertise and provide quality-reviewed hydro-climatological information/data.
- 5.2 Additional risks are related to the identification of consulting firms that have both the capacity to engage with policymakers and undertake the required technical work, as well as the private sector reticence to take climate change and landscape conservation actions. To mitigate them, respectively, potential experienced candidates are being identified, and partners are being engaged to work with private sector stakeholders.

## **VI. Exceptions to Bank policy**

- 6.1 There are no exceptions to the Bank policies regarding this operation.

## **VII. Environmental and Social Strategy**

- 7.1 Per the Environment and Safeguards Compliance Policy of the IDB (OP-703), the operation has been classified as 'Category C' (see the [Safeguards Screening Form](#) and the [Safeguards Policy Filter](#))

## **VIII. Required Annexes:**

- [Results Matrix](#)
- [Terms of Reference](#)
- [Procurement Plan](#)

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<sup>6</sup> Given the nature of the operation (research and dissemination), letters of request are not a requisite for approval. Non-objection letters, however, will be requested prior to the initiation of project activities in countries where activities will be implemented.

CLIMATE CHANGE AND SUSTAINABLE LANDSCAPES

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CERTIFICATION

I hereby certify that this operation was approved for financing under the **Sustainable Energy and Climate Change Multi-Donor Fund (MSC)** through a communication dated December 23, 2016 and signed by Felipe Caicedo (ORP/GCM). Also, I certify that resources from said fund are available for up to **US\$950,000** in order to finance the activities described and budgeted in this document. This certification reserves resource for the referenced project for a period of four (4) calendar months counted from the date of eligibility from the funding source. If the project is not approved by the IDB within that period, the reserve of resources will be cancelled, except in the case a new certification is granted. The commitment and disbursement of these resources shall be made only by the Bank in US dollars. The same currency shall be used to stipulate the remuneration and payments to consultants, except in the case of local consultants working in their own borrowing member country who shall have their remuneration defined and paid in the currency of such country. No resources of the Fund shall be made available to cover amounts greater than the amount certified herein above for the implementation of this operation. Amounts greater than the certified amount may arise from commitments on contracts denominated in a currency other than the Fund currency, resulting in currency exchange rate differences, represent a risk that will not be absorbed by the Fund.

Original Signed

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Sonia M. Rivera

Chief

Grants and Co-Financing Management Unit

ORP/GCM

4/21/2017

\_\_\_\_\_  
Date

Approved:

Original Signed

\_\_\_\_\_  
Juan Pablo Bonilla

Manager

Climate Change and Sustainable Development Sector

CSD/CSD

04/24/2017

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Date