

## Technical Cooperation Document

### I. Basic Information for TC

▪ Country/Region:	REGIONAL
▪ TC Name:	Building Climate Resilience in Latin America and Caribbean through Financial Instruments
▪ TC Number:	RG-T3803
▪ Team Leader/Members:	Frisari, Giovanni Leo (CSD/CCS) Team Leader; Braly-Cartillier, Isabelle Frederique (IFD/CMF) Alternate Team Leader; Acosta Stevenson, Keyla Yaritzel (CSD/CCS); Alleng, Gerard P. (CSD/CCS); Alva, Maria Fernanda (CSD/CCS); Anganu, Jaiwattie (IFD/CMF); Ceva Alvarez, Mariana Daniela (CSD/CCS); Chevalier, Ophelie (CSD/HUD); Esquivel Gallegos, Maricarmen (CSD/CCS); Gomez, Juan Carlos (CSD/CCS); Jaen Reynolds, Eduardo (CSD/CCS); Lacambra Ayuso, Sergio (CSD/RND); Lefevre, Benoit Jean Marie (CSD/CCS); Martinez Cotrino, Juan Francisco (CSD/CCS); Mendoza Benavente, Horacio (LEG/SGO); Samayoa, Jorge Omar (CSD/CCS); Schneider Talavera, Christian (IFD/CMF); Sierra Gonzalez, Eduardo (IFD/CMF); Uribe, Maria Camila (CSD/HUD)
▪ Taxonomy:	Research and Dissemination
▪ Operation Supported by the TC:	N/A
▪ Date of TC Abstract authorization:	.
▪ Beneficiary:	Upon demand: national governments, sub-national governments, Public and Private Partnerships from IDB borrowing member countries with priority for CCB and CID countries with high climate vulnerability. The program will support up to 3 beneficiaries among highly vulnerable countries in the order of receiving letter of requests.
▪ Executing Agency and contact name:	Inter-American Development Bank
▪ Donors providing funding:	Strategic Climate Fund(SCX)
▪ IDB Funding Requested:	US\$480,000.00
▪ Local counterpart funding, if any:	US\$0
▪ Disbursement period (which includes Execution period):	36 months
▪ Required start date:	May 2021
▪ Types of consultants:	Firms and Individuals
▪ Prepared by Unit:	CSD/CCS-Climate Change
▪ Unit of Disbursement Responsibility:	CSD/CSD-Climate Change and Sustainable Development Sector
▪ TC included in Country Strategy:	No
▪ TC included in CPD:	No
▪ Alignment to the Update to the Institutional Strategy 2010-2020:	Social inclusion and equality; Productivity and innovation; Economic integration; Environmental sustainability

### II. Objectives and Justification of the TC

- 2.1 The main objective of this Technical Cooperation (TC) is to support public governmental entities (at the national or subnational level) in mobilizing public/private resources to fund climate resilience investments in different sectors in Latin-America and the Caribbean (LAC).

- 2.2 The objective described above will be achieved through: (i) assisting interested national and local governments identifying finance transactions suitable for resilience/restoration pipelines/projects/programs; (ii) conducting feasibility analysis of the resilience finance transactions identified; (iii) designing and piloting innovative financial instruments to fund climate resilience investments in different sectors (such as, but not limited to, water and sanitation projects, natural capital and ecosystems, urban and coastal infrastructure); and (iv) strengthening governments' capacities to originate structuring processes and develop appropriate financial instruments while allowing to understand how financial instruments can fund resilience investments and identify pipelines.
- 2.3 The ultimate objective of this TC is to provide countries, states, and municipalities with capacities to structure and manage alternative financial instruments to increase their resilience and reduce their vulnerability to climate change-related risks and/or extreme weather events and protect key infrastructure and ecosystems.
- 2.4 Natural hazards and climate change can affect the economy by destroying or damaging assets, increasing operation and maintenance costs, and reducing revenues and socioeconomic benefits. National and local governments, public utilities, private companies, in particular small- to mid-sized enterprises, are exposed to business continuity risks, while at the same time they are coping with aging and failing infrastructure systems that increase the potential of catastrophic losses.
- 2.5 The LAC region is highly vulnerable to climate change impacts, due to its geography, climate, socioeconomic conditions, and demographic factors. The region is the second-most disaster-prone region in the world (UN Office for Coordination Humanitarian Affairs, 2020). The effects of climate change are unevenly distributed: there is evidence of major impacts on agricultural activities, water resources, biodiversity and forests, tourism, the population's health and the region's cities (Magrin and others, 2014).<sup>1</sup>
- 2.6 In 2015, the Caribbean experienced its highest number of floods since 2006 (nine), twice the 2006-2015 annual average. Six of these nine floods occurred in Haiti in 2016 and 20 of 45 total during the years 2006-2015. In 2016, in the Caribbean, the 546 deaths caused by Hurricane Matthew in Haiti were far above the 2006-2015 annual average of 126 for the region. Likewise, in the same country, the 2016 drought-affected 3.6 million people and 1 million were affected by a long-lasting drought in 2014 and 2015. In Central America, in 2018 two million people have been reported as at hunger risk due to the droughts between 2014-2016, a number higher than the 2006-2015 annual average (1.1 million). In South America, drought disasters affected 27 million people in 2014 in Brazil —with notably 22 million people in Sao Paulo living with only five percent of the city's water capacity.<sup>2</sup>
- 2.7 According to a report by the United Nations' Economic Commission for Latin America and the Caribbean (ECLAC),<sup>3</sup> in a 2.5°C scenario, the economic costs of climate change are estimated at between 1.5% and 5% of the region's gross domestic product

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<sup>1</sup> Magrin, Graciela and others (2014), "Chapter 27. Central and South America", *Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part B: Regional Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, V.R. Barros and others (eds.), Cambridge, Cambridge University Press.

<sup>2</sup> WRI, 2018. <https://www.wri.org/blog/2018/09/help-s-o-paulo-s-complex-water-woes-protect-and-restore-forests>.

<sup>3</sup> Samaniego, J. (2014). *The economics of climate change in Latin America and the Caribbean: Paradoxes and challenges. Overview for 2014.*

by 2050. Furthermore, the very low penetration of insurance in LAC economies at both public and private levels leaves governments and communities exposed to large financial shocks due to extreme weather events.

- 2.8 The current COVID-19 health crisis and the ensuing economic crisis, are already straining governments' fiscal balances and reserves in LAC, leaving them with very little room to face eventual climate-related disasters in the coming future. To this extent, the International Monetary Fund has anticipated that it will consider climate resilience as a priority to extend stimuli and financial green economic recovery packages in the aftermath of the COVID-9 crisis<sup>4</sup> and to manage future risks of both climate disasters and pandemics. For instance, it has been noted that having sound water and sanitation systems and proper urban and coastal infrastructure avoiding habitat loss, over-exploitation, invasive species, and managing changes to sea level, currents, temperature, and water chemistry can not only increase the value of natural capital ecosystems and protect local livelihoods but also protect local business (fisheries, food security, aquaculture, tourism, shipping, biotechnology, etc.). Moreover, it is estimated that nature-based solutions create 39.7 full-time equivalent jobs per US\$1 million invested, or over 10 times the job creation rate of investments in fossil fuels.<sup>5</sup>
- 2.9 Public finance and international multilateral support won't be enough to support the economic recovery and to fund needed climate-resilient investments, with the need to attract capital from financial markets towards sustainable and resilient activities. However, financial instruments designed and labeled to support resilient investments are still scarce —of the global green bond market (US\$190 billion issued in 2019 alone) only three to five percent of the bonds' proceeds has been destined towards climate adaptation and resilience measures.<sup>6</sup>
- 2.10 Until now, the most advanced financial instruments for disaster risk management have been catastrophe bonds (Cat-bonds) which operate, after an event of a disaster (*ex post*), by linking the occurrence of an extreme event and its intensity, with a payment structure that can be calculated parametrically and is not dependent on the physical losses suffered by the event. While key in providing financial resiliency to countries and institutions in the aftermath of an extreme event, Cat-bonds' impact on promoting disaster prevention and investments in resilient assets is more limited.
- 2.11 Differently, the focus of this operation will be towards those instruments that finance interventions before an event occurs (*ex ante*), by channeling investments towards risk mitigation activities that, in turn, might reduce the cost of risk protection, and hence improving the sustainability of the assets. These resilience financial instruments —for example *Resilience Bonds*— may link project finance, conservation objectives, and risk mitigation to create resilient infrastructure systems with reduced expected losses from ecosystem degradation and/or extreme weather events. Therefore, resilience bonds can represent an innovative way to finance both risk mitigation and protection against environmental degradation and natural disasters.
- 2.12 Resilience bonds are still in early stages of development and only a few cases have been piloted globally. So far —to public knowledge— no efforts have taken place in LAC to explore the feasibility and impact of this tool. As there are no resilience bond

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<sup>4</sup> IMF Managing Director's Opening Remarks at the Petersberg Climate Dialogue XI.

<sup>5</sup> Edwards, P.E.T. et al. (2013). "[Investing in nature: Restoring coastal habitat blue infrastructure and green job creation](#)".

<sup>6</sup> CBI, 2018. [Why making infrastructure climate-adapted and resilient will help meet the SDGs](#).

programs in LAC, there is a lack of hard data and technical guidance. This can act as a barrier to the design of the bond and the governance behind it. Decision makers and investors require access to actionable information and knowledge that enables the formulation of policies and programs or projects supportive of the bond objectives.

- 2.13 Along with other Multi-lateral Development Banks, IDB has developed “[A Framework and Principles for Climate Resilience Metrics in Financing Operations](#)”, which sets principles and core concepts and focuses on systems of measurement to define and report on the contribution of financing activities towards climate resilience objectives. At the same time, market practitioners from the Climate Bonds Initiative have developed the [Climate Resilience Principles](#), which guide issuers of green bonds for the integration of resilience in the use of funding. These principles clearly show both that there is interest to identify activities that contribute towards climate resilience and a commercial appetite for resilience activities in capital markets. Both sets of principles will be taken into consideration/applied to design the resilience finance transactions developed under this TC whenever appropriate.
- 2.14 Since 2017, the Climate Change Division of the IDB (CSD/CCS) has been executing the TC “*Sustainable Islands Platform Initiative*” (SIsP) (ATN/MC-16236-RG, ATN/OC-16237-RG). This operation seeks to support LAC islands adopt blue and circular economy approaches and mobilize public and private investment as blended finance. The platform promotes collaborative actions to build on existing initiatives and capacity to strengthen institutional capacity, build domestic private sector markets and solutions, and facilitate investments that support blue and resilient economy. This operation will build upon the experience gained and lessons learned so far in the SIsP.
- 2.15 The IDB’s Natural Capital Lab (NCL) and Natural Capital Cluster work across the Bank to mainstream biodiversity, financial innovation, and mechanisms to treat nature as an asset —creating value and business cases for nature. The initiative manages funds from the United Kingdom to support blue carbon, which includes projects that could leverage this TC. Also, the NCL has worked to incubate models to insure coral reefs as green infrastructure and is developing financial models for the IDB to support nature-based solutions for disaster risk management and resiliency.
- 2.16 CSD/CCS is currently executing the regional TC ‘Climate Change and Sustainable Landscapes’ (RG- T2928). This TC has sought to overcome the inability to attract private finance for NBS —needed to reconcile the economic and environmental objectives of natural resources use with the delivery of climate-resilient development and climate mitigation and biodiversity co-benefits— highlighting the need for innovative project structuring models as well as financing mechanisms and instruments that would monetize natural capital and resiliency components typical of the NBS approach. This proposed TC will build upon the experience gained and lessons learned so far under TC RG-T2928 and seek for synergies between both operations, in particular in the identification of potential sectors, as well as counterparties, that could provide eligible pipelines for resiliency bonds.
- 2.17 On July 3<sup>rd</sup> 2020, the Pilot Program for Climate Resilience (PPCR) Sub-Committee of the Climate Investment Funds (CIF) endorsed the “*Building Resilience through Financial Instruments*” Concept Note submitted by CSD/CCS. This TC builds on said Concept Note and further develops its content to guarantee PPCR funding approval.
- 2.18 Accordingly, the TC is aligned to the PPCR objectives as the program aims to: (i) pilot and demonstrate ways in which climate risk and resilience may be integrated into core development planning and implementation by providing incentives for scaled-up action

and initiating transformational change; (ii) strengthen adaptive capacities at the national levels to mainstream climate resilience into development planning; (iii) scale-up and leverage climate-resilient investment, building on other on-going initiatives; and (iv) enable learning-by-doing, as well as sharing lessons at the national, regional and global levels.<sup>7</sup>

- 2.19 The TC is consistent with the Second Update to the Institutional Strategy (AB31902), and is aligned with the development challenges of: (i) productivity and innovation, as it will assist borrowing member countries to create climate-smart solutions for adaptation and environmental sustainability, as well as increase overall resources mobilization, and promote technology adoption and innovation; (ii) social inclusion and equality, as it will promote resilient infrastructure among those who are most vulnerable to climate change; and (iii) economic integration, since the ultimate objective of the operation is to enable: (a) resilient and climate-smart investments in different sectors; (b) growth and development opportunities; and (c) initiatives to mainstream climate change and environmental sustainability across the region. Also, the operation is aligned with the cross-cutting theme of climate change and environmental sustainability, as it will support countries' access to financing for the development of adaptation projects in different sectors (energy, agriculture, forestry and other land use, natural resources management, biodiversity, and infrastructure, among others). In this sense, the operation also aligns with the IDB Group Corporate Results Framework, 2020-2023 (GN-2727-12).
- 2.20 Per the IDB Group's Climate Change Action Plan 2021-2025, this TC will support early identification of climate risks and opportunities as it "is essential to (...) effectively incorporate climate change mitigation and adaptation opportunities, particularly resilience measures in response to climate-related risks, into project design".

### III. Description of Activities/Components and Budget

- 3.1 **Component 1. Identification of potential resilience/restoration projects/programs in different sectors and design of pilot transactions (US\$380,000).** This component entails the provision of support to public sector entities at the national and sub-national level (such as ministries of finance, provinces, municipalities, and/or a state-owned entity) to identify and structure financial solutions that could channel resources to resilience/restoration projects that can impact/improve climate sustainability of infrastructure, ecosystem services and/or tourism activities. The identification and selection of such eligible projects will be performed according to international standards and best practices in capital markets (ICMA green bonds principles, CBI Climate Resilience Principles).
- 3.2 This component includes two consultancy services to support the technical design and the legal structuring of financial instruments (such as resilient bonds, swaps, and insurance-linked products) for the mobilization of private investment capital (through credit, insurance, and capital markets) for their financing in priority sectors. The structuring process will include: (i) the identification of a pipeline of eligible projects and metrics to assess and report resilience impacts; (ii) external verification (when required by market's best practices); and (iii) marketing material to support investors' engagement.

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<sup>7</sup> <https://climatefundsupdate.org/the-funds/pilot-program-for-climate-resilience-2/>.

- 3.3 Priority sectors for the identification of opportunities will include urban and coastal infrastructure (e.g., reef restoration, coastal protection, critical urban infrastructure); water and sanitation services in water-stressed areas (water catchment and conservation, climate-smart irrigation); biodiversity and natural ecosystem protection (forestry preservation and canopy increase, animal species conservation); resilient agriculture and livestock management. Considering the significant experience of the IDB Group in these sectors, this activity will leverage existing dialogues at national and municipal level focused on sustainable infrastructure (Red de Ciudades from HUD), as well as resiliency and natural disaster risk (for examples the Blue Spot Methodology for Transport in Dominican Republic).
- 3.4 **Component 2. Capacity building, raising awareness, and mainstreaming climate resilience (US\$100,000).** This component includes two consulting services for the provision of support to the replication of pilot transactions in LAC countries through a training program designed for prospective issuers, and dissemination and communication material for the dissemination of ideas. This program will take place either in an in-person or a virtual format to support awareness about the potential for such instruments and create capacities in the region to identify suitable pipelines, originate structuring processes, and develop appropriate financial instruments that can mobilize private investments. The awareness-raising will consider the alignment of these instruments with the newly launched Climate Resilience Principles for Green Bonds, and other existing taxonomies and standards for resiliency, such as the Sendai Framework with Disaster Risk Reduction and the IDB Adaptation Taxonomy, as well as the general requirements needed for the structuring of these instruments, their issuance, and how to report on their impact.
- 3.5 Any knowledge products/reports generated under this component will be shared through webinars, training sessions or public events in the countries with the highest level of vulnerability in the region. The training program will be executed with the Climate Bonds Initiative which has already provided well received training to IDB personnel and clients in the past, and that continues to innovate and lead the green and sustainable bond markets, with the preparation of the Climate Resiliency Principles that have just been translated in Spanish as well.
- 3.6 The total cost of this operation is US\$480,000, which will be financed with resources from the Strategic Climate Fund (SCX).

Indicative Budget (in US\$)

Activity/Component Description	IDB/Fund Funding	Total
<b>Component 1.</b> Potential resilience projects in different sectors	380,000	380,000
<b>Component 2.</b> Mainstreaming climate resilience	100,000	100,000
<b>Total</b>	<b>480,000</b>	<b>480,000</b>

#### IV. Executing Agency and Execution Structure

- 4.1 This TC will be administered and executed by the Climate Change Division of the IDB (CSD/CCS) in coordination with the Connectivity and Financial Market Division (CMF) and the relevant IDB Country Offices, departments, divisions and IDB Invest as appropriate. The IDB Group has significant experience in the design and structuring of financial instruments for low carbon and resilient investments (such as green bonds), that would be combined with existing resources and instruments available within the Bank to identify climate vulnerabilities and design effective solutions: Green Bond Transparency Platform, Disaster Risk Reduction Methodology, Country Risk Reports, Resiliency Indicators. The program will have a duration of 36 months, that



would allow an initial phase of awareness raising and dialogue between the IDB and the potential beneficiaries. We expect that the engagement with each beneficiary would then last around 12- 18 months, considering the innovative nature of the financial instruments to be piloted, and furthermore the current high uncertainty in the region for the effect of the COVID-19 pandemic.

- 4.2 The Bank will follow its procurement policies and guidelines related to contracting processes: (i) individual consultants will be hired according to the guidelines established in policy AM-650; (ii) consulting firms of an intellectual nature will be hired according to the “Policy for the selection and contracting of consulting firms for operational work carried out by the Bank” (GN 2765-4) and its Operational Guidelines (OP-1155-4); and (iii) other non-consulting services in accordance with the “IDB Institutional Procurement Policy” (GN 2303 28). Activities will be monitored and reported annually according to the IDB Technical Cooperation Monitoring and at the end of the operation lifespan.
- 4.3 Letters of interest and the corresponding letter of non-objection will be obtained before any specific consultancy and in-country assessment is commissioned, including the request for the execution of the technical cooperation by the Bank.

## **V. Major Issues**

- 5.1 The main risk associated with this TC is the lack of engagement or ownership from beneficiary entities over the course of the project which could occur because of a reversal of market conditions, or because of institutional reasons. This is particularly true given the duration of the TC which increases the risk of having changes in governments and, therefore, in national/local strategies towards issuing resilient bonds. To mitigate this risk, each project will be divided into phases, ensuring that each phase only kicks off once the full support of the beneficiary institutions’ boards of directors or finance vice-presidencies has been formalized.

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

- 6.1 This operation does not entail exceptions to any Bank policy.

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

- 7.1 Per the Environment and Safeguards Compliance Policy of the Bank (OP-703), the operation has been classified as “Category C”, thus no environmental assessment studies or consultations are required (see the [Safeguard Screening Form](#) and the [Safeguard Policy Filter](#)).

### **Required Annexes**

[Request from the Client - RG-T3803](#)

[Results Matrix - RG-T3803](#)

[Terms of Reference - RG-T3803](#)

[Procurement Plan - RG-T3803](#)