

TC Document

I. Basic Information for TC

▪ Country/Region:	REGIONAL
▪ TC Name:	Assessing SMEs decarbonization transition readiness in LAC
▪ TC Number:	RG-T4099
▪ Team Leader/Members:	Grazzi, Matteo (IFD/CTI) Team Leader; Henriquez Leblanc, Pauline (IFD/CTI) Alternate Team Leader; Cathles, Alison Regan (IFD/CTI); Delgado, C. Raul (CSD/CCS); Genesis Morales (IFD/CTI); Maria Alejandra Galeano (IFD/CTI); Mendoza Benavente, Horacio (LEG/SGO); Radaelli, Vanderleia (IFD/CTI); Sandra Lopez (IFD/CTI); Vargas Cuevas, Fernando Esteban (IFD/CTI); Gonzalez Martinez, Julian; Houliston, Ruth Simone; Meirovich, Hilen Gabriela Meirovich, Hilen Gabriela
▪ Taxonomy:	Research and Dissemination
▪ Operation Supported by the TC:	.
▪ Date of TC Abstract authorization:	15 Jun 2022.
▪ Beneficiary:	Innovation Agencies, Ministries of Industry and Economic Development, Ministries of Economy, Ministries of Environment, Academia and NGOs throughout the region
▪ Executing Agency and contact name:	Inter-American Development Bank
▪ Donors providing funding:	OC SDP Window 2 - Institutions(W2C)
▪ IDB Funding Requested:	US\$400,000.00
▪ Local counterpart funding, if any:	US\$0
▪ Disbursement period:	30 months
▪ Required start date:	October 20 th , 2022
▪ Types of consultants:	Individuals and Firms
▪ Prepared by Unit:	IFD/CTI-Competitiveness, Technology and Innovation Division
▪ Unit of Disbursement Responsibility:	IFD/CTI-Competitiveness, Technology and Innovation Division
▪ TC included in Country Strategy (y/n):	N/A
▪ TC included in CPD (y/n):	N/A
▪ Alignment to the Update to the Institutional Strategy 2010-2020:	Environmental sustainability; Institutional capacity and rule of law; Productivity and innovation

II. Objectives and Justification of the TC

- 2.1 **The need for climate action readiness for Small and Medium Enterprises(SMEs).** Latin America and the Caribbean (LAC) is one of the most vulnerable regions to climate change which not only affects the region's productivity, but also its infrastructure, ecosystems, livelihoods, and human live losses. Facing the urgent response needed for the devastating impacts of climate change, the Paris Agreement (PA), signed by 196 countries in 2015, aims to limit the global average temperature increase between 1.5°C and 2°C above pre-industrial levels by the end of this century. Scientific evidence has warned that to stabilize the temperature increase to 1.5°C, it is required reaching net zero CO₂ emissions by 2050 and halve emissions by

2030.¹ Therefore, PA signatory countries, regions, cities, companies, investors, and academia have joined in making commitments to achieve net zero emissions in their activities by 2050 at the latest.² Furthermore, the intergovernmental body of United Nations, responsible of providing scientific evidence on climate change,³ has provided a series of recommendations for reaching net zero emissions. For example, it urges strategies and actions to: (i) reduce energy demand, including instruments and standards for processes and technologies with high energy consumption, and energy-intensive materials; (ii) accelerate adoption of energy efficiency measures; (iii) increase recycling and inter-industry material synergies; and (iv) extending product lifetimes.⁴ To reach net zero emissions, supply chain Greenhouse Gases (GHG) must be addressed by businesses globally.

- 2.2 LAC Micro, Small, and Medium-sized Enterprises (MSMEs) represent 99.5% of the region's enterprises, generating 61.1% of jobs, but only 24.6% of total productivity.⁵ Although MSMEs individually generate a marginal amount of GHG emissions, taken together they are responsible for a very significant amount. They consume more than 13% of the global energy production.⁶ The OECD estimates that SMEs account for 60% to 70% of the GHG emissions of the industrial sector.⁷ Also, recent studies in the UK find that SMEs contribute between 43% to 53% to GHG emissions of the country's industrial sector. While 60% of SMEs report some awareness of key net-zero concepts, 53% are not ready to prioritize decarbonization in their activities and processes yet, and 56% report no actions. Finally, only 3% of the surveyed SMEs had measured their carbon footprint and prepared emissions reductions strategies.⁸
- 2.3 Energy and emission intensive industries are often characterized by a few large and dominant production companies with a value chain that relies on suppliers with typically low levels of investment in Research and Dissemination (R&D).⁹ Less competitive and lower productivity suppliers, especially SMEs, with lower capacity to innovate and adapt to a changing environment, will need support and incentives to engage in the decarbonization process. Incentives can originate via Business-to-Business (B2B) transactions, whereby there can be financial and non-financial incentives (i.e., closer collaboration with lead firms can lead to knowledge transfer and upskilling opportunities), but there can also contractual

¹ IPCC, 2018. [Global Warming of 1.5°C](#). An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways. Intergovernmental Panel on Climate Change.

² Signatory countries pledge commitments through Nationally Determined Contributions and Long-Term Strategies under the United Framework Convention on Climate Change. And non-state actors have pledged net zero emission through the [Race to Zero](#) campaign launched in 2019. These actors represent around 25% of global CO₂ emissions and 50% of GDP globally.

³ The Intergovernmental Panel on Climate Change (IPCC).

⁴ IPCC, 2018. Global Warming of 1.5°C, [Chapter 2](#). Mitigation Pathways Compatible with 1.5°C in the Context of Sustainable Development.

⁵ Saget, Catherine, Vogt-Schilb, Adrien y Luu, Trang (2020). [Jobs in a Net-Zero Emissions Future in Latin America and the Caribbean](#). Inter-American Development Bank Group and International Labour Organization.

⁶ IEA, 2015. [World Energy Outlook 2015](#). International Energy Agency.

⁷ OECD, 2021. [No net zero without SMEs: Exploring the key issues for greening SMEs and green entrepreneurship](#). Organization for Economic Cooperation and Development.

⁸ British Business Bank, 2021. [Smaller businesses and the transition to net zero](#). The reported figures are based on the results of a UK-wide nationally representative survey on SMEs decarbonization strategies, an innovative instrument which constitutes an important reference for this project.

⁹ Nilsson et al. (2021). An industrial policy framework for transforming energy and emissions intensive industries towards zero emissions, *Climate Policy*, 21:8, 1053-1065, DOI: 10.1080/14693062.2021.1957665.

incentives and consequences, and policy support for smaller players as they navigate this new landscape will be crucial.^{10,11}

- 2.4 It can be a struggle for lead firms in fragmented supply chains to get the data they need from suppliers, even though decarbonizing supply chains would be advantageous for reducing emissions, some initial steps may cost very little and yield economic benefit along the supply chain.¹² Clear targets, common standards and data and information flows between different actors are crucial for decarbonizing along value chains. Transparency in this area is not sufficient, pointing to the need for more information about how to best support diverse SMEs in decarbonization and whether policy attention ought to consider focusing on reshaping existing markets to meet climate objectives, rather than, or in conjunction with creating and shaping new markets.¹³
- 2.5 The transition of SMEs to a net zero emissions and climate resilient economy is not only necessary to reduce emissions, but also to improve their resource efficiency and adaptive capacity with a view to both reducing production costs and increasing productivity gains, as well as gaining the possibility to access sophisticated markets and engaging in greener, higher value chains in a competitive matter.
- 2.6 **Objective.** Given this context and considering the contribution of SMEs to LAC's economy and the lack of information on this matter in the region, the general objective of this Technical Cooperation (TC) is to improve the knowledge of LAC policymakers to design, implement and monitor strategies aimed at reducing GHG emissions produced by SMEs and strengthening their climate resilience in the region. This will be pursued through the design, application, analysis, and dissemination of the results of a survey on SMEs decarbonization transition and climate resilience readiness.
- 2.7 **Beneficiaries.** The TC will directly benefit LAC policy-making institutions, such as Ministries of Industry and Productive Development; Ministries of Science, Technology and Innovation; Ministries of Environment and Sustainable Development; Ministries of Economy and Finance, and Innovation Agencies, among others. Moreover, the results will also indirectly benefit the regional academia, civil society, and private sector - particularly SMEs.
- 2.8 **Strategic Alignment.** The TC is aligned with the development challenge of Productivity and Innovation of the Second Update to the IDB Group Institutional Strategy (2020-2023) (AB-3190-2) as it will increase the competitiveness and productivity of SMEs by enabling the environment for enhancing green innovative process, products and services aligned with the Paris Agreement's objectives. It is also aligned with the cross-cutting themes of: (i) Climate Change and Environmental Sustainability; and (ii) Institutional Capacity and the Rule of Law, as it will generate valuable and nonexistent information on SMEs that will expand LAC institutional capacities to design and implement policies that will support emissions reductions and

¹⁰ World Business Council for Sustainable Development (WBCSD), (2021). [Reaching net zero: incentives for supply chain decarbonization](#).

¹¹ Nilsson et al. (2021). An industrial policy framework for transforming energy and emissions intensive industries towards zero emissions, *Climate Policy*, 21:8, 1053-1065, DOI: 10.1080/14693062.2021.1957665.

¹² World Economic Forum (2021). [Net-Zero Challenge: The supply chain opportunity](#).

¹³ Mazzucato, M. and C.C.R. Penna. (2016). Beyond market failures: the market creating and shaping roles of state investment banks *Journal of Economic Policy Reform*, 2016 Vol. 19, No. 4, 305–326, <http://dx.doi.org/10.1080/17487870.2016.1216416> and Mazzucato, M. (2016). From market fixing to market-creating: A new framework for innovation policy. *Industry and Innovation*, 23(2), 140–156. <https://doi.org/10.1080/13662716.2016.1146124>

strengthen climate resilience among SMEs. According to the [joint methodology of Multilateral Development Banks](#) approach on climate finance tracking, 100% of total IDB funding for this operation will result in climate change mitigation and adaptation activities such as dataset creation, capacity building and information dissemination for LAC SMEs transition to a net-zero and climate-resilient economy. Furthermore, this TC is consistent with the Innovation, Science, and Technology Sector Framework Document (GN-2791-13) through the Line of action 1 (operating guidelines) and 6 (knowledge agenda), as this TC will raise awareness of climate impacts on SMEs operations and innovative strategies to increase productivity and competitiveness in the process of transitioning to a global decarbonized economy. In fact, the TC will expand LAC institutional capacities to design and implement policies that will support emissions reductions and strengthen climate resilience among SMEs by gathering, analyzing and providing non-existent information about LAC's SMEs on these topics. The TC is also aligned with the objective of contributing to public policies and institutions that are more effective, efficient, and transparent of the Ordinary Capital Strategic Development Program (W2C) (GN-2819-14).

- 2.9 **Complementary with other projects.** This TC will be coordinated with ongoing activities and efforts of: (i) [ATN/OC-18153-RG](#) “Promoting Innovation to Accelerate the Circular Economy in LAC” to enhance policymakers’ capacity to design, implement, monitor, and evaluate policies aimed at promoting the circular economy in the region; (ii) Competitiveness, Technology and Innovation division (IFD/CTI) and Climates Change and Sustainability division (CSD/CCS) Regional Policy Dialogue and programmatic series for green innovation with production, science and technology, industry ministries and innovation agencies; (iii) [ATN/OC-17401-RG](#); [ATN/MC-17402-RG](#) “Consolidate the presence of NDC Invest® in the Region” to deepen knowledge and capacities in gaps, best practices, lessons learned, tools and instruments relevant to climate action; (v) [ATN/OC-18176-RG](#) “Support to the Implementation of Long Term Strategies (LTS) in LAC” to advance from LTS design to implementation, delivering evidence and enhancing capacity required to inform policy and institutional reforms that enable financing for implementation of LTS, seeking to integrate climate and development objectives ; and (vi) [RG-O1649](#) “ECOMICRO – Green Finance for MSMEs and Low-Income Households: The EcoMicro Program” under the EcoMicro Facility IDB Lab has partnered with 30 LAC financial intermediaries (including numerous Caribbean countries) to advance green finance, allowing MSMEs to decarbonize their operations. This TC will have access to the EcoMicro learnings and network to facilitate dissemination of the survey tool. Moreover, the decarbonization solutions identified by the survey can potentially be financed by the IDB “LAC Lab’s Green Innovation Hub (GreenHub) 1.0” (in preparation), which focusses on accelerating climate technology to promote decarbonization and circular economy solutions for LAC MSMEs and industry. The TC is coordinated and aligned with several ongoing advisory projects of IDB Invest linked to promoting circular economy in MSMEs, such as: (i) [ATN/CF-18042-RG](#) “Sustainable and Inclusive Private Sector Initiative” which aims to mobilize sustainable private investment and strengthen the sustainability of the private sector in the region; (ii) [ATN/OC-17736-RG](#) “Micro Small and Medium Enterprise (MSME) Support Facility”; (iii) the recently approved [ATN/MC-19446-RG](#) “Net Zero Support Program for the private Sector of Latin American and the Caribbean” that aims to support LAC private sector in developing and implementing strategies for becoming Net Zero in accordance with science-supported targets; and (iv) the upcoming SME Climate Hub which intends to work along We Mean Business to activate and extract lessons for scale-up the deployment of the SME Climate Hub tools -including Climate Fit.

III. Description of components and budget

- 3.1 **Component 1. SMEs decarbonization survey (US\$275,000).** This component will finance the design and implementation of a survey on SMEs decarbonization transition and climate resilience readiness in LAC. It will include: (i) the development and testing of an innovative survey instrument¹⁴ based on relevant international best practices; (ii) the definition of an appropriate sample frame, statistically representative of the major economic sectors in each country where the survey is applied; and (iii) the collection of data on SMEs business characteristics and performance, innovative activities, use of digital technology, business management practices and decarbonization and climate resilience strategies. The resulting dataset - the first of its kind in the region - will create awareness and knowledge for LAC policymakers on challenges and opportunities that SMEs face in the transition towards a net zero emissions economy. The survey dataset will also provide important and practical insights into emerging areas of demand for specific decarbonization solutions. The countries of study will be at least 4, and they will be selected based on the following criteria: (i) availability, reliability, and consistency of data for the analysis; (ii) carbon intensity of SMEs and its climate vulnerability; and (iii) climate commitments.
- 3.2 **Component 2. Analytical research and capacity building (US\$38,000).** This component will promote the production of analytical research based on the dataset collected through the application of the SMEs decarbonization strategy survey. Specifically, it will finance: (i) a set of studies which will exploit the dataset to perform different econometric exercises, to explore the relation between the demographic and socioeconomic characteristics of the firms and their decarbonization and climate resilience strategy, as well as the complementarities between digital technology adoption, innovation performance and demand for new innovation areas, and decarbonization and climate resilience strategies; and (ii) a regional academic workshop on SMEs decarbonization and climate resilience strategies. The project will get insights from the participant researchers on the produced analytical research and identify specific needs and actions to support SMEs advancing on their readiness to incorporate decarbonization and climate resilience strategies in their operations.
- 3.3 **Component 3. Communication and Dissemination. (US\$47,000).** This component will support the dissemination strategy of the project. The activities funded by this component include: (i) the presentation to the public at large in a regional virtual conference on SMEs and decarbonization of the main results of the survey and the analytical studies financed by the TC ; (ii) two policy dialogues (one for Latin America and for the Caribbean) will be organized to discuss with policymakers the policy frameworks, instruments, and incentives needed to promote climate action among SMEs based on the survey's main results and analysis; and (iii) the collected data will be included in an interactive web platform, which not only will help to disseminate the results of the project, but that will also allow policymakers, innovators, and researchers of the region to have an easy access to the data, visualize them in a user-friendly way, and perform customized queries. This integral strategy will contribute positioning the Bank as a key knowledge provider on the topic and the partner of choice to advance on the transition to a net-zero emissions economy and climate-resilient development pathways.
- 3.4 **Administration and Execution.** The general administration of the project will be facilitated by the hiring of a consultant to provide technical assistance the project team

¹⁴ The survey will be developed in the language (s) of the countries where it will be applied.

in the implementation of the activities of the TC. This consultant will support the team by performing a range of activities, such as: preparing background studies and dissemination material on the results of the project; coordinating the organization of the events and workshops and supporting the selection process of consultancy firms and consultants, among others.

- 3.5 **Budget.** The total budget for this TC is US\$400,000, to be financed with resources of the Ordinary Capital Strategic Development Program for Institutions (W2C).

Indicative Budget

Activity/Component	Description	IDB/Fund Funding	Total Funding
Component 1 SME Decarbonization survey	Questionnaire	\$25,000	\$275,000
	Survey implementation	\$250,000	
Component 2 Analytical research and capacity building	Set of econometric studies on SMEs decarbonization strategies	\$30,000	\$38,000
	Workshop on SMEs decarbonization and climate resilience strategies	\$8,000	
Component 3 Communication and Dissemination	Regional conference	\$5,000	\$47,000
	Policy dialogues	\$12,000	
	Interactive web platform	\$30,000	
Administration and Execution	Coordination, implementation and monitoring of the TC	\$40,000	\$40,000
Total		\$400,000	\$400,000

IV. Executing agency and execution structure

- 4.1 The Bank will execute the TC as this is a Research and Dissemination TC originated by the Bank's initiative. The IDB through IFD/CTI, in coordination with CSD/CCS will be responsible for the direction, supervision, and coordination of this TC. The Unit of Disbursement Responsibility will be IFD/CTI. Given the experience of CTI in the topics included in this project, this unit will be responsible for the procurement and supervision of the products. The TC will have a disbursement period of 30 months. All activities to be executed under this TC have been included in the Procurement Plan and will be contracted in accordance with Bank policies as follows: (a) AM-650 for Individual consultants; (b) GN-2765-4 and Guidelines OP-1155-4 for Consulting Firms for services of an intellectual nature and (c) GN-2303-28 for logistics and other related services. Before this TC executes activities in beneficiary countries, the Bank will obtain non objection letters from the respective official liaison of each country.

V. Major issues

- 5.1 There are no major risks associated with the implementation of this TC. However, the success of the survey application will depend on the SMEs response rates, as firms are increasingly becoming more reluctant to allocate time to data collectors and share information. To mitigate this risk and increase the buy-in of respondents, the hired consulting firm will be required to design and implement an awareness strategy to communicate to respondents the goals and key benefits to participate, such as the ability for firms to benchmark decarbonization strategies and to increase resilience to

climate change and improving competitiveness and productivity. Finally, to mitigate the risks linked to the on-going COVID-19 global health crisis (or another large-scale crisis which will preclude large face-to-face activities), all the planned in-person activities included in Component 2 and Component 3 could be delivered on-line depending on the current public health conditions.

VI. Exceptions to Bank policy

- 6.1 No exceptions to Bank policy are envisioned.

VII. Environmental and Social Strategy

- 7.1 This TC will not finance feasibility or pre-feasibility studies of investment projects or associated environmental and social studies, which is why it does not have applicable requirements of the Bank's Environmental and Social Policy Framework (ESPF).

Required Annexes:

[Results Matrix - RG-T4099](#)

[Terms of Reference - RG-T4099](#)

[Procurement Plan - RG-T4099](#)