DECARBOOST
Catalysing Investment to Decarbonise LAC

Opportunities to Finance Decarbonization in Latin America:

Learnings from the DecarBOOST Project

2022 EDITION

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DECARBOOST
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CCAP

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Introduction

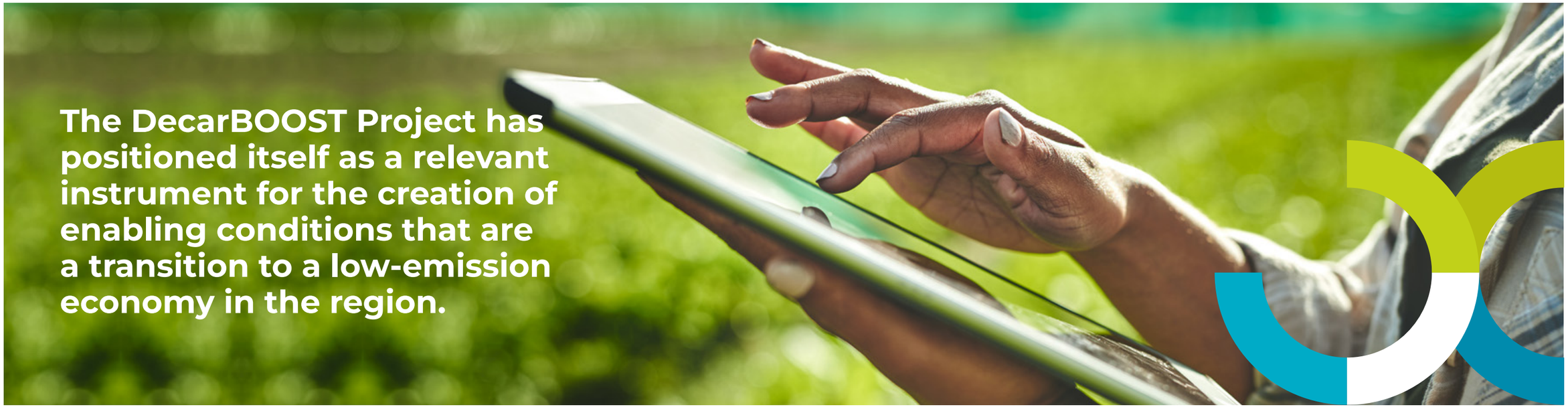
The series on lessons learned and good practices seeks to become a mechanism of knowledge dissemination for the region, annually developed by the DecarBOOST Project with the support of CCAP , and promoted by the Latin American business climate action platform nexos+1. Its annual editions aim at providing strategic information on the reasons to invest in low-carbon development projects in Latin America and finance the decarbonization of developing economies, understanding the opportunities these actions offer, and exchanging experiences through cases and practical guidance on how to do it.

Through its Knowledge Management component, the DecarBOOST Project: Catalyzing Investments to Decarbonize Latin America has been positioning this initiative as a knowledge exchange platform open to learn, generating an open dialogue between stakeholders from the public and private sectors, the academia, and multilateral organizations to understand the issue of decarbonization; and proposing specific work actions that promote climate finance in key low-carbon development investments for countries in the region.

1 CCAP: Center for Clean Air Policy

The DecarBOOST Project

Began in 2020 and lasted until the first quarter of 2023. The project aimed to support three Latin American countries: Argentina, Brazil, and Peru in order to catalyze the transition to a low-carbon society and promote investments consistent with a resilient, low-carbon development. The project provided evidence and proposals to influence policy reform and improve conditions to direct financial flows towards low-carbon, climate-resilient development pathways. In particular, the project does in-depth sector analyses (Argentina and Brazil) and research on Green Economic Recovery options (Peru) to help the public policy reform process and the development of financial instruments and investment portfolios to effectively implement the Nationally Determined Contributions (NDCs) in line with the objectives of the Paris Agreement.



To meet this goal, the first link in the chain has been to analyze the barriers to investment in order to face them and direct funding towards decarbonizing the economy. The second one has been to analyze the financial instruments and regulatory changes that must be made to address some of these identified barriers, specially the regulatory, economic and financial ones. Finally, a third analysis was done including information from the two previous results and turning them into a sector plan, considering specific investment opportunities for both the private and public sectors.

In this scenario, decision makers from the public and private sectors, investors, and the civil society are key stakeholders to help overcome barriers to investment and find effective solutions; thus, their involvement and commitment is key in the process of decarbonizing economies. The main participation strategy of the project has been the constant dialogues organized for the multiple stakeholders, as well as the participatory processes developed in the three countries to prepare studies such as those of barriers and proposals for policies and financial instruments, and, at a regional level, the establishment of a Community of Practice in Investments and Climate for Latin America, a collaborative network where they learn from each other, find inspiration, develop new ideas, and find specific solutions to drive climate transition.

In this way, the DecarBOOST Project has positioned itself as a relevant instrument for the creation of enabling conditions that are a transition to a low-emission economy in the region, with special emphasis on three countries: Argentina, Brazil, and Peru.

Video: The DecarBOOST Project.

12:37 / 21:53

Who is this publication for and what does it include?

The publication **Opportunities to Finance Decarbonization in Latin America: Learnings From the DecarBOOST Project** is aimed at professionals from the public and private sectors, the academia, and multilateral organizations who wish to consolidate their knowledge on finance and investment with a climate approach.

In this second edition, the information, learnings and best practices of the project in the Latin American region have been compiled from different spaces for exchange and meetings organized by the DecarBOOST Project, international negotiations, and its allies during the year 2022; it includes summaries of studies carried out and events on capacity building, such as the ones developed in the Community of Practice on “Investments and Climate”.

Following the logic developed in the first edition of the publication (2021 edition), some guiding questions have been raised, which will be answered in the following chapters of this edition **(2022 edition).**

Key fact messages

What are the barriers hindering climate finance for decarbonization? How can these barriers be overcome?

What investment opportunities are there for decarbonization in Latin America?

How can key stakeholders get involved?

What do specialists and experts propose to contribute to decarbonization in Latin America?

CHAP 01

Current context of decarbonization and climate finance in Latin America

Decarbonizing the economies of the Latin American region is a process that has required public decision makers to learn a new language in terms of concepts, mechanisms, instruments and stakeholders, while facing the impacts of climate change more frequently every year.

The implementation of the Paris Agreement is an important milestone in the operationalization of the climate agenda at a national

Albeit the concept of climate agenda has been on the radar for 31 years, following the adoption of the United Nations Framework Convention on Climate Change (UNFCCC), it was not until the ratification of the Paris Agreement (2014) —with the commitment to reduce temperatures to limit global warming below 1.5 degrees Celsius, in comparison to preindustrial levels when it transformed into tangible and achievable public policy instruments at a national level. Such instruments have specific goals in economic sectors and activities, which influence the economic, social and sustainable development of countries; therefore, the implementation of the Paris Agreement is an important milestone in the operationalization of the climate agenda at a national and —in some cases— subnational level.

Key messages

fact

Decarbonization is the process in which quantitative metrics and goals are set based on climate scenarios to establish a transition plan for the most relevant economic sectors and activities in the countries in order to support the transition to a low-carbon, neutral-carbon, zero-carbon, or even negative-carbon economy in some cases.[2]

2 Based on the IPCC https://www.ipcc.ch/sr15/chapter/glossary/

Since this process is not isolated nor exclusive to governments but involves every stakeholder in the economy of the countries, the main point of decarbonization stands out as the involvement of different multidisciplinary and multi-sector stakeholders. Within this multidisciplinary nature, and derived from several years discussing how to achieve the decarbonization of economies, the imperative role that financial stakeholders need to play is emphasized to create mechanisms and instruments that will help encourage investment in this process.

The discussion on closing the financial gap has made governments involve development financial institutions and banks, as well as stakeholders from the private sector

Thanks to methodologies to track and monitor climate finance flows, one can state that the resources from the public and private sectors have increased; however, they are still incipient compared to the goal agreed in the 19th Conference of the Parties (COP19) in 2009, which was to mobilize 100 billion dollars (USD) annually by 2020. It has also been recognized that this goal was set without technical or methodological support, the funding required being well over 100 billion per year.

The discussion on closing the financial gap has made governments involve development financial institutions and banks, as well as stakeholders from the private sector (investors, financiers, and corporations), assigning them responsibilities to rethink business models including decarbonization risks and opportunities. Part of the discussion focuses specifically on the creation and improvement of financial instruments to leverage and unblock financial flows and private investment, while another part on reevaluating the impact and scope of resource mobilization.

It has been recognized that decarbonization cannot exclusively come from public resource transfers, so article 2.1c in the Paris Agreement mandates aligning all financial flows, both public and private, to ensure financial transactions are consistent with climate action and to discourage asset holders, investment and asset managers, banks, insurance companies, pension funds, among others, from investing in carbon intensive activities.

Main actions that are aligned with decarbonization efforts:

Work with Latin American countries in the use of blended finance mechanisms between concessional and credit resources in order to improve the conditions of investors' participation and risk perception of climate action investments, whether adaptation or mitigation.

Identify sources and new commitments to support developing countries with resources — formally announced in spaces such as the COP—, the so-called international funds for promoting climate investments, such as Green Climate Fund (GCF), Global Environment Facility (GEF), NAMA Facility, Climate Investment Funds (CIF), as well as bilateral and multilateral agreements.

Our region, in turn, requires specific achievements to have the conditions enabling funding decarbonization, for example: generate conditions to attract and increase climate finance flows; guarantee institutional capacity building and techniques on climate finance tools; promote public-private dialogue to encourage investments; include key issues, such as tracking climate finance in national and subnational budgets; as well as manage sector plans on decarbonization in key economic activities, such as energy, agriculture, transport, among others, that align with the transversal vision of decarbonizing countries.

Therefore, initiatives and accompanying key stakeholders of the financial sector, both public (Ministry of Finance, financial regulators, superintendencies, Central Bank, among others) and private (commercial banks, insurance companies, pension funds, asset and investment managers, among others), are becoming more relevant in discussions on climate finance for the region. Countries such as Argentina, Brazil, Colombia, Costa Rica, Chile, Ecuador, Mexico, Panama, Peru and the Dominican Republic (to name a few) are beginning to show signs of public and private financial flow alignment by issuing green, social and blue bonds; creating green protocols for commercial banks; creating public-private platforms for green finances; creating working groups on sustainable finance taxonomies; incorporating climate change into financial risk management; tracking climate budget; among others.

During COP27, the parties openly asked shareholders from multilateral banks to reform their practices and priorities as well as to align and expand financing

The climate finance trend that we are beginning to see in the region may be marked by public-private dialogue to have a better common understanding of decarbonization, and to create financial instruments, tools and solutions to attract investors.

The Sharm el-Sheikh Implementation Plan (November 20th, 2022) adopted during COP27 presented a historical opportunity to bring this public-private dialogue to life, as it emphasized for the first time that mobilizing climate finance will require a transformation from the financial system, including both its structure and processes.

Likewise, during COP27, the parties openly asked shareholders from multilateral development banks and financial institutions to reform their practices and priorities, as well as to align and expand financing through simplified accesses and new, different finance sources.

It is essential governments create and guarantee an appropriate environment to ensure financial flows align with the Paris Agreement

This call for reform also urges to create and roll out unique financial instruments to address the climate crisis, such as grants, guarantees, concessional instruments, instruments unrelated to the public debts of countries, risk mitigation instruments, and instruments to increase the risk appetite, all of them to attract the private sector to invest and finance climate action. The use of risk and concessional financial instruments are also expected to be maximized to drive innovation of new technologies.

In this context, and according to the 5th Biennial Assessment and Overview of Climate Finance Flows carried out by the UNFCCC Standing Committee on Finance, it is essential governments create and guarantee an appropriate environment to ensure financial flows align with the Paris Agreement; develop bankable project portfolios; foster financial deepening (such as providing financial services aimed at individuals and groups); and guarantee procurement regimes with a climate approach; as well as leverage the role of multilateral and national development banks to provide grants that reduce project risks, and provide guarantee instruments to encourage climate finance mobilization.

With the reform of the financial system, together with the public-private dialogue in the region, it is expected that governments, central banks, commercial banks, institutional investors, and other economic stakeholders have enough elements to actually fund the decarbonization of economies. With the display of new technologies, climate finance instruments, clear and concise public policies, finance tracking metrics, and the adoption of a common language, Latin America would have the unique and strategic opportunity to attract investors and increase green technology innovation by catalyzing private investments to finance the transformation and decarbonizations of their priority sectors with a just transition approach[3].

3 The Just Transition Declaration was adopted during COP26, recognizing that all countries and their inhabitants shall benefit from the opportunities offered by the transition to low-carbon economies; that is to say, access to modern technologies, capacity building, funding, and public policy solutions. The Declaration supports the following principles: support for workers; social and community dialogue; stakeholder inclusion; access to local, inclusive and decent work, among others. From 2024 onwards, countries shall report UNFCCC on the concept of just transition in the context of policies and measures to comply with the Paris Agreement.

CHAP 02

Opportunities for decarbonization and its funding in Latin America

This first chapter presents the opportunities identified in the three countries of the DecarBOOST Project after analyzing the Long-Term Strategies (LTS) as an instrument for the implementation of the recent financial decisions taken in the UNFCCC Conference of the Parties.

Climate crisis affects everyone and poses a huge challenge for countries around the world. To face it, we have to act together as a society. This will require continuous action over the next decades, both to reduce emissions as well as to adapt to the effects of climate change and reduce inequality, poverty and unemployment, which has worsened due to the impacts of the COVID-19 pandemic.

Due to the fact that the decarbonization processes of countries are not isolated from other development agendas, such as the social or economic ones, the path to decarbonization is expected to include transversal LTS integrated to the vision of the country in terms of development by 2050.

The publication of the DecarBOOST Project, Challenges and Opportunities for Decarbonization in Latin America: Lessons Learned from the DecarBOOST Project (May 2022), emphasized the importance of projections of transition scenarios, LTS and decarbonization plans from the main economic sectors in order to plan the decarbonization of countries in the region in a transversal and sectoral manner.

There are 57 LTS that have been submitted to the UNFCCC, seven (7) of which come from countries in the region: Argentina, Colombia, Costa Rica, Chile, Guatemala, Mexico, and Uruguay.

Graphic: Overview of LTS in the region

Caption:

- The country does not have an LTS (11)
- LTS is under development (9)
- The country has posted its LTS on UNFCCC's website (7)

Source: Long-term strategies portal for 27 countries in the region. Developed by LEDS LAC.

LTS are relevant public policy frameworks for decarbonization because they determine guidelines in terms of regulatory, institutional, legal and financial frameworks to plan long-term risks and opportunities brought by climate change from a carbon emission neutrality approach. In terms of investment, they provide a clear sign to markets in order to align financial flows to the vision of countries towards carbon-neutral and climate-resistant development, and, as a result, the market would respond to the decarbonization guidelines at a sector and economic activity level.

To turn this ambition into specific actions, countries must have defined roadmaps to reach their transformations, clearly establishing priority areas, specific activities and investments that allow the identification of the required resources and costs, the participation of the public and private sectors, and the benefits, but also considerations that need to be taken into account for a just transition.

Studies carried out by the IDB identified that LTS have multiplying economic, social, and environmental impacts on the countries of the region. For instance, by 2050 carbon neutrality in Peru will provide accumulated net benefits of USD 140 000 million, which will turn into transformations of the energy, transport, agriculture, forestry, waste, other land uses, and industry sectors. On the other hand, the National Decarbonization Plan of Costa Rica will provide economic benefits amounting to USD 41 000 million by 2050, whereas in Chile it is estimated that carbon neutrality will increase the gross domestic product (GDP) up to 5.2% by 2050.

Since the implementation of the DecarBOOST Project in Argentina, Brazil, and Peru, the barriers to decarbonization, the financial instruments proposed and the regulatory changes for using them have been studied. Likewise, an investment portfolio was developed, as well as an investment plan per economic sector.

The decarbonization of economies should be marked by the following opportunities that are presented in the region:

- **Countries that develop decarbonization roadmaps have a step-by-step implementation guide towards decarbonization,** that is to say, specific actions in sectors and economic activities, aligned with regulatory, normative, institutional and financial instruments of each country, providing a guideline to identify the necessary resources and costs for their implementation. Likewise, key stakeholders in the public and private sectors are identified for their execution, as well as the direct and indirect beneficiaries of this transition, all of which has a timeframe of at least 30 years.

- **Sectoral transformation is key to actually decarbonize the economy,** since it identifies the granularity of the actions at an economic activity level. This, in turn, identifies technologies, financial instruments, and necessary regulatory changes for its transformation.

- **Financial instruments for decarbonization shall be created together with stakeholders from the public and private** sectors in order to provide clear signs to capital markets and investors seeking to align their operations to zero-carbon goals in key sectors of the economic development, and in economic activities that have the potential to encourage innovation and create quality jobs.

- **To improve the use of concessional non-refundable financial resources from cooperation, climate funds and climate finance mechanisms.** The challenge of the region in terms of climate finance is marked by the stagnation of financial resource provision. Only 17% of the total annual global climate finance was allocated to the 34 countries of Latin America and the Caribbean[4]. Therefore, countries in the region shall become more efficient with the scarce resources and seek tools to catalyze public and private investments that are ideal to make the transition to carbon neutrality. The use of concessional resources will seek to improve the risk appetite of public investors, or mitigate investment risks in key economic sectors.

4 OECD (2022), Aggregate Trends of Climate Finance Provided and Mobilised by Developed Countries in 2013-2020, Climate Finance and the USD 100 Billion Goal, OECD Publishing, Paris, https://doi.org/10.1787/d28f963c-en.

CHAP 03

How to catalyze investments to decarbonize Latin America?

3.1. Outcomes from the DecarBOOST Project in Argentina, Brazil, and Peru

The following subchapters present relevant information on the project outcomes in the three targeted countries, the solutions proposed to overcome the identified barriers, as well as the investment opportunities prioritized and developed in the three countries to catalyze investments and contribute to decarbonization in Latin America.

Case study

Country approach: Argentina

country approach

National context

At the end of 2020, Argentina presented its second Nationally Determined Contribution (NDC) with an absolute and unconditional goal towards 2030, which later, in 2021, became more ambitious: not to exceed 349 million tons of carbon dioxide equivalent. In addition, the national government pledged to achieve carbon-neutral development by 2050, thus contributing to sustainable development. To achieve this, it presented its Long-Term Strategy at COP27, focusing its efforts on sectors that generate more emissions.

Video: DecarBOOST Project in Argentina

2:12 / 3:53

Achieving carbon neutrality in Argentina requires a structural transformation of the economy and changes in the behavior patterns of its society.

One of the critical dimensions for development towards carbon neutrality is the financial one.

Project outcomes

The project has addressed critical sectors such as Energy and Transport; Agriculture, Forestry, and Other Land Use (AFOLU), responsible for 90% of the country's greenhouse gas emissions.

Within the framework of the project implementation, the Torcuato Di Tella Foundation has developed a series of actions:

- Analysis of existing mitigation options and proposal of new options (go to key messages for details).
- Identification and characterization of different barriers that could hinder the implementation of the proposed actions. Five types of barriers: (1) economic, (2) financial, (3) technical, (4) political and cultural, and (5) institutional and legal.
- Development of a customized methodological approach to prioritize mitigation options according to three criteria: **1) mitigation capacity, 2) transformational potential, and 3) implementation feasibility.** The mitigation options were then grouped into sets of mitigation options, which were also prioritized for an in-depth study.
- Information identification and development for six investment opportunities in the priority sectors. In Energy and Transport, the following sets were prioritized: electromobility and fuel substitution, electricity generation from renewable sources, and energy efficiency. In AFOLU, the prioritized sets turned out to be: agricultural crops, livestock systems, and cultivated forests.
- Technical-economic feasibility assessment for the most relevant mitigation sectors.
- Proposals for political and economic-financial measures and instruments to address and remove existing barriers.

Key *fact* messages

It is possible to achieve the decarbonization of the economy by 2050, with the available technologies for mitigation and absorption of greenhouse gas emissions, for the sectors analyzed.

The transformations identified represent a challenge in terms of capital investment needs and the development of financial and public policy instruments.

For the transformations identified, it is necessary to reallocate a significant part of the current investment flows to less carbon-intensive sectors and practices.

Proposal of new measures based on the analysis carried out by DecarBOOST Argentina.

AFOLU:

- Carbon content in soils – biochar
- Urea volatilization inhibitors
- PGPR technologies (plant growth-promoting rhizobacteria)
- Carbon content in soils, in grazing lands with natural and implanted pastures
- Silvopasture (with implanted forest species)
- Mechanical works to replace the burning of grasslands and savannahs
- Sequestration from paper manufacturing, construction, furniture, and other harvested wood products
- Increased growth rate (incorporation of genetics) – species and regions

Energy and Transport

- Green hydrogen: hydrogen generated by low-emission renewable energy.
- Bioenergy with Carbon Capture and Storage (BECCS): A carbon removal technique that relies on two technologies.

Stakeholder involvement

A fundamental characteristic of the DecarBOOST Project in Argentina has been the dialogue with key public and private stakeholders. Between 2020 and 2021, dialogue was held with more than 350 stakeholders, including representatives of the public sector, companies, chambers, associations, academia, among others. The year 2022 was characterized by the organization of and participation in a large number of events, with an exponential attendance record compared to previous years: more than 2122 people participated in at least one event in which the results of the DecarBOOST Argentina team were presented. Among the events in 2022, a side event stands out at COP27 in Sharm el-Sheikh, Egypt, as well as a side event held during the C40 World Mayors Summit in Buenos Aires, Argentina, in October 2022.

The goal of this participatory process was to shed light on the most relevant climate action issues, as well as to contrast the findings of the project in Argentina with the vision of decision makers.

DecarBOOST Argentina participated in meetings within the framework of the National Cabinet of Climate Change to:

- Deliver inputs for the LTS.
- Exchange opinions on funding to enable the analysis and proposal of instruments in order to accelerate the transition.
- Provide information for the determination of national positions on critical issues of international climate negotiation.

Case study

Country approach: Brazil

country approach

National context

Brazil's NDC target covers the entire economy and aims to reduce GHG emissions by 37% in 2025 and by 50% in 2030 (the target increased from 43% to 50% after COP26), compared to the emission levels in 2005.

Since 2015, Brazil has updated its initial NDC, submitted to the UNFCCC in 2015. These updates have made changes to the base year value of the country's GHG emissions, as a result of the updates in the national inventory. It is known that, in seven years (2015-2022), the absolute limit of GHG emissions for the entire economy of the country increased by 22% by 2025, and by 7% by 2030, even after increasing the reduction commitment to 50% of emissions by 2030.

Project outcomes

The project covered the main sectors in terms of greenhouse gas emissions in the country: Agriculture, Forestry, and Land Use Change (AFOLU); Energy supply; Transport; Industry and final disposal of solid and liquid waste.

Video: The DecarBOOST project in Brazil

As an integrating product of these studies and proposals, the document **"A Decarbonization Strategy for a 2050 Net-Zero Carbon Brazilian Economy: Enablers and Sectoral Mitigation Plans"** was developed, covering the following issues:

- A technical summary covering the background on the Brazilian context; scenario design; modeling methodology; mitigation actions, objectives and milestones for the five main GHG emission sources in the economic sectors of Brazil: AFOLU, Transport, Industry, Energy, and Waste; overview of barriers to mitigation actions, instruments to overcome them, and investment opportunities in each sector; and the investment requirements for a deep decarbonization scenario.
- A detailed proposal for a key enabler to achieve an economic goal of net-zero GHG emissions by 2050: a carbon pricing policy.
- Five sectoral mitigation plans proposed: Agriculture, Forestry, and Other Land Use (AFOLU), Transportation, Industry, Energy Supply, and Waste, detailing mitigation actions, barriers, and policy instruments to overcome them, including annexes with illustrative proposals of selected instruments and investment opportunities.
- The complete document with everything the listed above.

This Decarbonization Strategy is aligned with the general goal of the Paris Agreement: to achieve net-zero GHG emissions by 2050. It includes additional mitigation actions for current policies, together with the main barriers identified and the most relevant instruments that would remove these obstacles to implementation. These barriers, policy proposals and some examples of investment opportunities are detailed in five Sectoral Mitigation Plans: AFOLU, Transportation, Industry, Energy, and Waste. The proposal for a carbon pricing system also stands out as a key enabler of this transition and a cross-cutting economic policy tool, providing a signal to the market of a long-term stable framework for decarbonization.

The Strategy aims to build bridges between investors and resources, and contribute to the transformation of the market. This transformation may happen by expanding the level of deployment of the technologies available, highlighting the barriers and the need for specific instruments. In addition, the selected investment opportunities will be useful for economic agents interested in implementing emission mitigation and/or compensation projects, as well as valuable for financial institutions.

Stakeholder involvement

DecarBOOST Brazil held a series of meetings, including 288 stakeholders from different key sectors for decarbonization in the country, such as subnational governments, the academia, civil society, the private sector, among others, to collect contributions on the products and topics worked on under the project. Finally, at the end of the project, in order to receive feedback, the first version of the Decarbonization Strategy was sent to all the stakeholders involved. The document included the main findings of the sectors studied (AFOLU, Energy, Industry, Transport, and Waste) with a cross-sectional analysis of the Finance sector, which adds a component that is gaining more and more relevance in research and markets.

Case study

Country approach: Perú

country approach

Video: EL proyecto DecarBOOST en Perú

2:12 / 3:53

National context

Peru has a national commitment to mitigate greenhouse gases and implement actions to adapt to climate change by 2030 as part of the Paris Agreement. Out of this commitment, 20% was unconditional and 10% was conditional on international cooperation. However, in the last NDC update, the government increased its target to a 40% reduction, in which 30% is unconditional and 10% is additional, meaning conditional.

Project outcomes

DecarBOOST Peru prioritized five mitigation actions that directly contribute to decarbonization and the implementation of the NDC, considering a post-pandemic green recovery and, in this way, contributing directly to public policies:

These five actions are the following:

- Incorporation of green criteria for public investment.
- Promotion of low carbon investments and exploration of a mechanism to set its price, thus strengthening the Peru Carbon Footprint platform.
- Promotion of the incorporation of green criteria to increase climate finance.
- Implementation of remote working.
- Implementation of best practices from the private sector related to renewable energy.

The project has supported, together with the Ministry of Environment, the development of a **National Climate Finance Strategy** to enable the implementation of the most ambitious version of the NDC, in addition to contributing to the incorporation of green criteria for public investment through the incorporation of the environmental sustainability indicator in the National Plan for Sustainable Infrastructure for Competitiveness, and promoting the adoption of an internal carbon price in private investment, as well as the development of projects that reduce emissions.

Finally, it seeked to contribute to the country's energy policy by working on a proposal together with the Ministry of Energy and Mines (MINEM) for a national plan on energy transition, emphasizing renewable energies such as solar energy and green hydrogen.

Stakeholder involvement

The DecarBOOST Project worked hand in hand with the main public and private stakeholders involved in climate action in Peru, including the ministries of Environment and Energy and Mines; the Green Finance Working Group and the Permanent Driving Group (GIP in Spanish) from the private sector for NDC implementation.

In the process of socialization and validation of the proposals for regulatory changes and investment opportunities identified by DecarBOOST in Peru, there have been meetings with more than 370 stakeholders from the public, private, academic and civil society sectors. Presenting the proposals to the Permanent Driving Group from the private sector for NDC implementation (GIP-NDC) was key for subsequent specialized meetings with representatives of private companies from the Energy and Transport sectors.

Key *fact* messages

In regards to the proposal of the Climate Finance Strategy (CFS):

CFS is the implementing arm of the National Climate Change Strategy, which is currently being updated. It addresses four important issues:

- Estimate the funding gaps for the NDC.
- Identify sources of funding for the implementation of the NDC measures.
- Make progress and identify lines of action to guide funding.
- Provide supporting elements, such as climate finance monitoring[5].

Since 2017, the system of Municipal Savings and Credit Banks of Peru has begun to incorporate social, environmental and climate aspects, both from the scope of credit risk and business portfolio generation. The information on gaps and best practices provided by the project is extremely important to accelerate the learning curve and the implementation process. During 2022, the design of a microcredit specifically aligned to the NDC of Peru began and it is expected to be an international benchmark, especially in the microfinance sector[6].

5 Testimony of Milagros Sandoval, General Director of the Climate Change and Desertification Directorate, Ministry of the Environment (DGCCD/MINAM).

6 Testimony of Ana Lucía Pinto, Head of the Department of Projects and Technical Cooperation, of Peru's Federation of Savings and Credit Banks.

3.2.
Proposals for solutions to overcome barriers that hinder climate finance

What are the barriers hindering climate finance for decarbonization? How can these barriers be overcome?

For countries to successfully implement their Nationally Determined Contributions (NDCs) and increase the ambition over time, as required by the Paris Agreement, a key priority is to increase the flow of financial resources for low carbon investments by creating policies, instruments, mechanisms, and measures to overcome the different barriers that currently hinder climate finance.

How have barriers been identified and classified in Argentina, Brazil and Peru?

To address the identification and classification of barriers, each country prioritized sectors and topics.

Argentina determined three sectors: Energy, Transport (which were analyzed jointly), and AFOLU; and classified five types of barriers: economic, financial, technical, political and cultural, and legal and institutional.

Brazil did its analysis based on work done in six sectors: AFOLU; Finance, Transport, Industry, Energy, and Waste; and classified the barriers as economic/financial (E/F) and regulatory/institutional (R/I).

Peru the identification of barriers was based on potential greenhouse gas (GHG) mitigation actions related to green economic recovery; and they were classified according to the type of failure they correspond to (market, government,innovation,regulation and information failures).

Key *fact* messages

The project analysis focused on non-structural barriers (those that can be overcome through proposals for policy changes or innovative instruments in key sectors) that hinder long-term investments with low carbon emissions.

Barriers identified and proposed solutions

Among the main barriers identified for climate investments in Argentina, Brazil and Peru (in addition to those specific to each sector) are:

- High initial costs in the implementation of new technologies
- High technological and financial risk in innovative projects, which leads to high interest rates
- Inappropriate laws and regulations (for example, in power generation and energy efficiency fields)
- Lack of an appropriate institutional framework to encourage the participation of public-private partnerships; among others.

Many mitigation actions are not competitive in the market, yet. On the one hand, innovations typically lack the necessary scale to reduce unit costs in the initial implementation phase. On the other hand, the negative externalities of GHG emissions do not have a full price in the market. The economic competitiveness of mitigation actions is further hindered by the capital costs they must bear. The cash flow profile of these investments generally implies higher initial costs than conventional technologies, which will be recouped thanks to lower operating costs (for example, with the use of fossil fuels). ROI time is usually longer than for financial investments (for example, projects in the forestry sector), and perceived risks are higher due to the novelty of the technologies and the often small and medium size of those proposing.

Credit for long-term investment is limited by the imperfections of financial markets and depends heavily on public funding and multilateral development banks. Public financial institutions lack the capacity to foster public-private partnerships to implement mitigation actions through smart financial mechanisms (for example, public guarantee funds, green bonds[7]). All of these factors contribute to how difficult it is for mitigation actions to access capital under the required conditions (reasonably low interest rates and long payback periods).

7 https://www.tandfonline.com/doi/full/10.1080/17583004.2018.1507413

Brazil

Two key high-level ideas stem from the barrier analysis conducted by the DecarBOOST Project in Brazil:

1

The current low enforcement of the Forest Code and its deforestation restrictions and compensation requirements must be reversed to reduce the annual rate of deforestation and encourage forest restoration with native species. Law enforcement and strengthening command-and-control strategies are the essential policy instruments to achieve these objectives, depending first of all on strong political will to support them. Additionally, an economic instrument that generates demand to offset GHG emissions (such as carbon pricing) can provide the financial support to overcome the high initial costs and long payback periods of forest restoration projects.

2

Carbon pricing must be adopted in Brazil to encourage low carbon investments in the productive sector and help the country meet its NDC targets. Carbon prices should start low and increase slowly in order to be as horizontal as possible. In this way, exposed sectors will be protected, offsets will be allowed, and carbon revenues will be used to stimulate job creation and reduce poverty (fiscal neutrality). A Cap & Trade system is more applicable to industrial sectors, while a carbon tax seems to be more suitable for the Transport sector.

Argentina

In the case of DecarBOOST Argentina, some of the proposals for political and economic-financial measures and instruments to address and remove existing barriers are described below:

1

Energy and Transport: To address the economic-financial barriers of the priority sets (electromobility and fuel substitution, electricity generation from renewable sources, and energy efficiency), the availability of concessional funding appears to be one of the most suitable instruments to mobilize resources on the necessary scale, specially via blended finance. Likewise, the creation of energy service companies is particularly effective to promote energy efficiency. These mechanisms must be accompanied by processes of capacity building and strengthening and supplier development as part of the consolidation of industrial value chains.

2

In the Agriculture, Forestry, and Other Land Use sector, there is emphasis on multiple mitigation possibilities, including afforestation and reforestation, and increasing soil carbon content in grazing lands. Access to concessional funding, the use of payment by results mechanisms, and fiscal incentives can be decisive in stimulating significant investments and promoting new business models. For this reason, it is also crucial to attend to the infrastructure needs for the optimization of the value chains of the agricultural complex, and R&D support emerges together with dissemination and training as substantial elements to optimize the competitiveness and efficiency of business models.

The analysis carried out —specially the interviews and dialogues held— shows that there is a lot of room to increase the consistency of incentives within the sectors analyzed, as well as at the national level. In addition, other means to improve the decision potential for the implementation of existing mitigation options are related and include: clear market signals; data availability and quality; sector regulations and appropriate legal frameworks; innovative financial instruments to promote long-term low-carbon investments, capacity building measures and plans targeted at specific sectors, activities, entrepreneurs, technicians, and workers; and simple administrative processes.

Peru

The analysis carried out —specially the interviews and dialogues held— shows that there is a lot of room to increase the consistency of incentives within the sectors analyzed, as well as at the national level. In addition, other means to improve the decision potential for the implementation of existing mitigation options are related and include: clear market signals; data availability and quality; sector regulations and appropriate legal frameworks; innovative financial instruments to promote long-term low-carbon investments, capacity building measures and plans targeted at specific sectors, activities, entrepreneurs, technicians, and workers; and simple administrative processes.

Internal carbon pricing should be considered as a transitional measure to continue the carbon pricing agenda until structural barriers are resolved

The green reactivation that the DecarBOOST Project in Peru seeks to promote can be understood as a set of measures that generate income, employment and growth opportunities, aligned with medium- and long-term environmental objectives. This seeks to significantly improve the resilience of economies and societies in the face of increasingly rapid and challenging environmental challenges.

In the case of promoting remote working, a ruling grouping bills 1046/2021-CR and 1292/2021-CR for a new Remote Working Law has already been approved. This has positive aspects, such as the right to digital disconnection, or compensation for internet and energy costs paid by the employer. Regarding the promotion of renewable energies, it is necessary to establish a binding schedule in which tenders for new RER projects will be called through the regulations of Osinergmin or the Ministry of Energy and Mines, and the projected entry of projects to achieve the set goal. For distributed generation, the main policy recommendation corresponds to the approval and publication of the distributed generation regulation, which takes in to account the sale and injection of surplus energy generated.

In the case of incorporating green criteria in private funding, it is appropriate to promote the publication of a supreme decree or equivalent norm of the Economy sector to enable temporary incentive structures for private funding. Regarding the incorporation of green criteria in public investment projects, the proposed solution for this barrier corresponds to the publication of a supreme decree or equivalent norm of the Economy sector to incorporate them in the General Guide for the identification, formulation and evaluation of investment projects from Invierte.pe and sector prioritization criteria from the MEF for public investment.

Finally, with respect to the promotion of the internal carbon price, multiple solution alternatives are recommended, such as the implementation of additional certificates in the Peru Carbon Footprint platform of the Ministry of the Environment (MINAM) for companies that demonstrate the effective application of the internal carbon price. Notwithstanding the aforementioned, the internal carbon price must be considered as a transitory measure to continue with the carbon price agenda until the structural barriers faced by the carbon tax or the emission cap mechanisms are resolved.

Conclusions

The studies carried out in these three countries show us coincidences in the barriers the region needs to overcome in order to clarify regulatory aspects; generate better incentives for investment to favor GHG reduction; design and implement innovative financial instruments to promote long-term low-carbon investments; improve technical capacities and challenges and the technological innovation that the energy transition requires; and finally develop a greater and better information flow for decision-making, both for policies and public and private investment.

3.3.
Investment opportunities for decarbonization in Latin America

Investment Opportunities Video

12:37 / 21:53

In order to obtain funding for the decarbonization of Latin America by 2050, as demanded by the Paris Agreement, it is important to identify low-carbon investment opportunities in priority sectors of each country so that financial stakeholders can direct their capital and generate clear strategies to catalyze the necessary resources towards these decarbonization opportunities. In this sense, the DecarBOOST Project has identified and created a portfolio of investment opportunities that promote the decarbonization of their economies in priority sectors for each implementing partner country.

Within the framework of the project, a total of twenty low-carbon investment opportunities have been identified, six of which have been prioritized for Argentina, nine for Brazil, and five for Peru.

In general, sectors in the region, such as Energy, Transport, AFOLU, and Industry are the ones that will have a greater impact in the reductions of emissions, and will demand greater climate investments to generate the required transformation. In particular, opportunities in Argentina, Brazil, and Peru are oriented towards sectors such as AFOLU, Energy, and Transport, which are crucial to decarbonize.

Key messages

fact

In Argentina, according to the latest greenhouse gas (GHG) inventory published in 2020, energy represents 51.3% of GHG emissions in Argentina, with an accumulated annual growth rate of 1.3% in the last decade. The decarbonization of the energy sector requires actions that broadly influence two variables: the energy intensity of the national economy, and the GHG intensity of energy consumption.

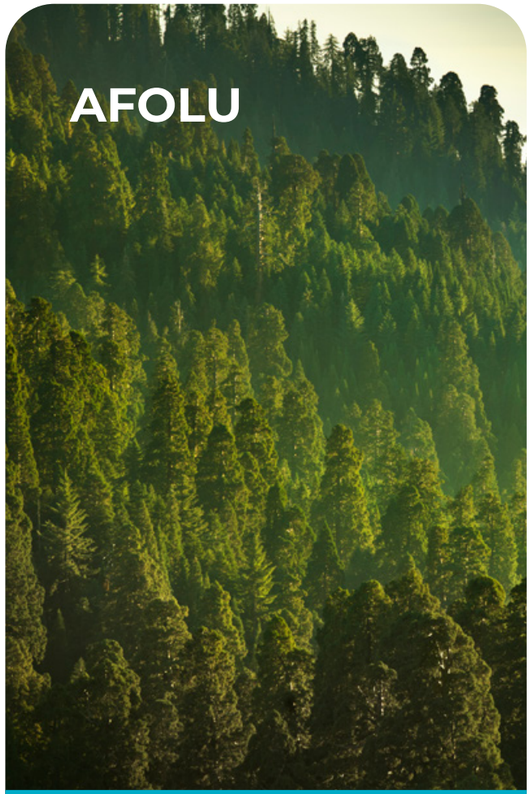
According to the third national GHG inventory (2016), the AFOLU sector represented 37% of the total GHG emissions in Argentina. The mitigation actions proposed for the sector focus on: extensive agriculture, livestock production, and planted forests.

Out of the three priority sectors (Energy, Transport, and AFOLU), six investment opportunities were identified, three of which correspond to the Energy and Transport sectors as a whole, and three to the AFOLU sector.

Argentina

The prioritization methodology in Argentina took three dimensions into account: mitigation potential, transformation capacity, and technical-economic feasibility. The priority sets are detailed below:

- Charging infrastructure for electromobility
- Power generation with sources that do not emit GHG
- Development of an energy-efficient industry (ESCO)



- Carbon capture in the soil from the surface increase of planted forests
- Carbon capture and reduction of emissions due to best practices in agricultural and livestock soils
- Reduction of the intensity of emissions in bovine livestock and agricultural crops

Brazil

In the case of Brazil, five sectors were selected to analyze the mitigation opportunities in each of them. Out of these priority sectors (Energy, Transport and AFOLU, and Industry and Waste), nine investment opportunities were identified, two of which correspond to each of the sectors, with the exception of the Energy sector, where a single investment opportunity was identified in addition to what has already been implemented in the country.

The evaluation of opportunities in Brazil is based on modeling studies of mitigation scenarios carried out, which consider the economic and social implications.

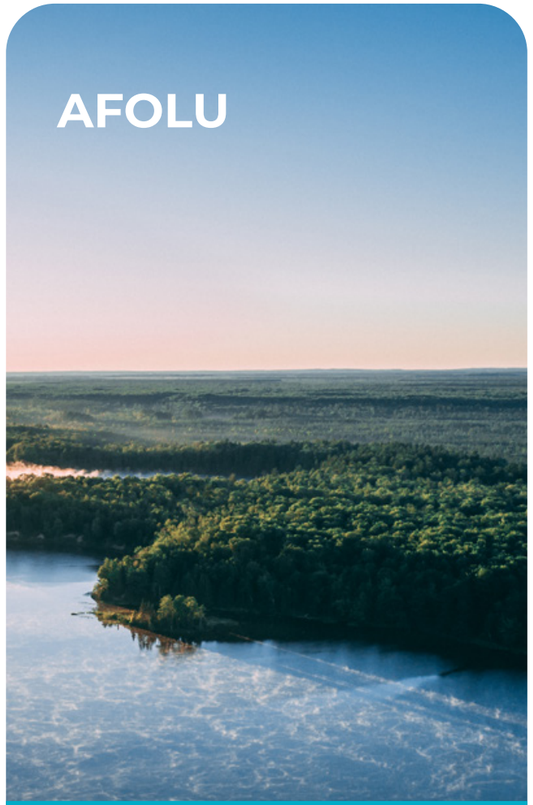
There are two selection criteria for opportunities:

Feasibility:

Acceptability and operational aspects

Merit:

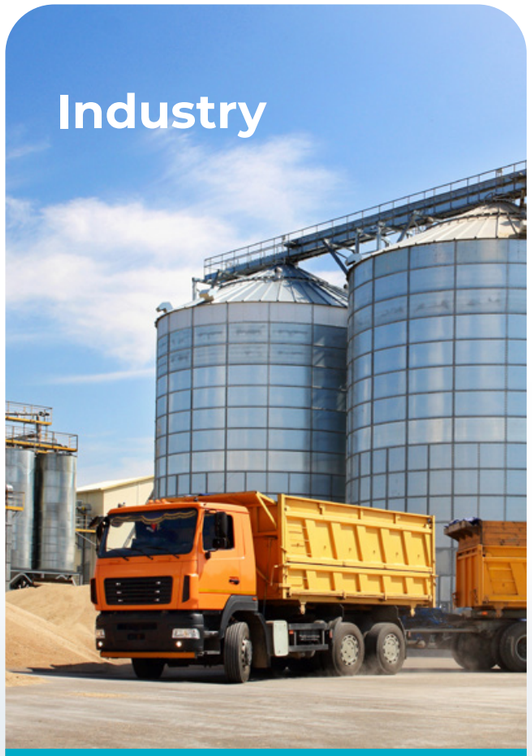
Potential for avoided GHG emissions, cost of implementation, and co-benefits of related mitigation actions.



- Restoration of native forest in the Amazon and Atlantic Forest biomes, Brazil
- Reforestation with commercial species to supply biomass for the production of pellets, briquettes, and chips [as an alternative fuel for boilers, promoting energy generation with lower carbon emissions]

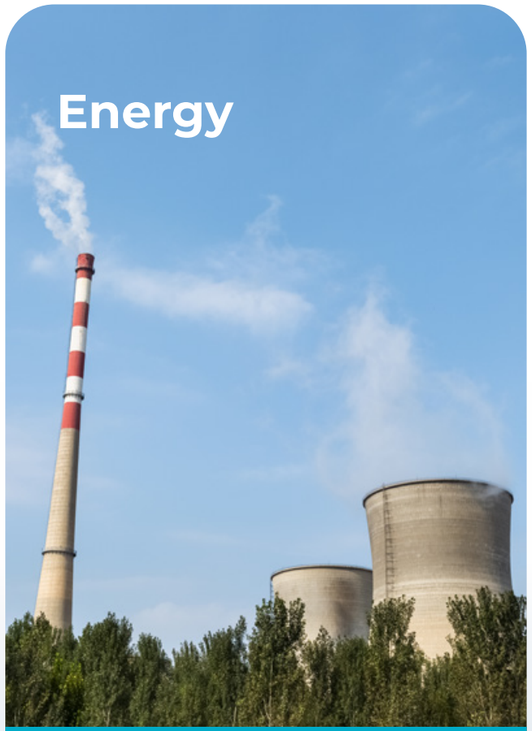
Transport

- Planning and procurement of electric buses in two urban areas
- Action plan for sustainable freight transport with a pilot project in the urban area



Industry

- Energy efficiency in the industrial sector
- Use of waste as an alternative energy source in the cement industry



Energy

- Thermoelectric generation with biogas from bagasse and other residues from ethanol and sugar production [these residues can be used to generate electricity].

Waste

- Landfill Gas Capture (LFG) and Flame Destruction Systems (or improvements and extensions to existing landfills)
- Biomethane for industrial use [enrich biogas to use it as fossil natural gas in refineries as a clean energy source, in this case, biogas of plant source].

Peru

In the case of Peru, a transversal theme was selected to prioritize investment opportunities, emphasizing three areas (Transport, Energy, and Finance). Along these lines, five opportunities were identified to encourage low-emission investments in the private sector, three of which are related to renewable energy, one to carbon pricing, and the last one to remote working.

Green economic recovery in Peru is understood as an economic activity in the context of climate change, which considers the lessons learned from the crisis caused by the COVID-19 pandemic, to reduce emissions and promote actions for the decarbonization of its economy.

- Hybrid microgrids for isolated areas
- Green Hydrogen Forklifts
- Solar panels for companies

- Accelerator for carbon credit projects

- Decentralized coworking spaces

These investment opportunities in Peru provide values of percentage profitability and reduction of GHG emissions. Such is the case of coworking spaces, in which three size scenarios were evaluated: small (100 m^2), medium (300 m^2) and large (1000 m^2), resulting in profitability from 188% to 607% and a reduction from 6.91 $MtCO_2eq$ to 170.48 $MtCO_2eq$.

Conclusions

Low-carbon investment opportunities have been identified from dialogues with key stakeholders from governments, the private sector, the academia and the organized civil society, and they have been deeply studied through the development of a specific technical and economic feasibility analysis carried out by DecarBOOST partners.

These opportunities aim to reduce GHG emissions in the three countries by presenting data on key aspects such as: mitigation potential, investment cost, transformational capacity, and associated co-benefits. Furthermore, these opportunities have been identified not only for existing markets, but also to create new ones.

Investment proposals provide the necessary information to know where to invest as a priority and how to fund those investment priorities. In addition, the joint effort of the public and private sectors is essential to fund the investment opportunities identified in the framework of the DecarBOOST Project and required for decarbonizing the economies of the three countries.

CHAP 04

Stakeholder involvement in funding decarbonization in Latin America

4.1.
What do specialists and experts propose to contribute to finance decarbonization in the region?

Thanks to the active participation of members, allies, panelists and participants of the Community of Practice (CP) on Investment and Climate, the knowledge transfer, both theoretical and practical, was documented, including: life experiences, lessons learned, opportunities for improvement, and best practices that stakeholders (public and private) have experienced to contribute to fund decarbonization in Latin America.

Based on the inductive approach of the CP, specialists and experts who work every day on decarbonization measures suggest the need for a common framework, both institutional and legal, in order improve the enabling conditions of climate finance; in other words, a public agenda in line with both the private and multilateral agenda, with very clear decarbonization goals for 2030 that are documented in the Nationally Determined Contributions (NDC) or the Long-Term Strategies (LTS) towards 2050.

Public-private dialogue is and will remain imperative to advance decarbonization funding: the role of the public sector as the guiding arm of decarbonization, and the role of the private sector as the executing arm of climate finance. Therefore, it is important to define (from a public and private standpoint) the transparency of climate finance; that is to say, to determine and measure the performance of public and private investors in decarbonization.

Public-private dialogue is and will remain imperative to advance decarbonization funding

To that end, financial monitoring, reporting and verification (MRV) systems and a clear definition of what is and what is not sustainable investment are key points to implement transparency and align financial flows to achieve the goals of the Paris Agreement, discourage funding and subsidies to high-carbon emission sectors.

Consequently, having a common language will be key to know what the necessary economic activities and sectors are for decarbonization, as well as to homogenize the understanding of what the financial instruments and mechanisms for climate action are, but, above all, to analyze and reassess which instruments or mechanisms have a greater impact, not only on decarbonization but also on the just transition of countries in the region.

From the product development and expertise exchange among the stakeholders who were part of the DecarBOOST Project, useful and practical knowledge was generated for government decision makers in government, particularly in the ministries of Planning, Environment, and Finance. In turn, development agencies, development banks (both national and multilateral), climate funds, and cooperation agencies will also be able to check the information from the studies and proposals to identify the financial instruments and mechanisms that apply to investment opportunities in priority sectors in Argentina, Brazil, and Peru.

Likewise, stakeholders of the private sector can use the information to clarify what decarbonization is and how to fund the carbon neutrality goals and commitments they have planned, understanding the climate action goals in the region, but, above all, which sectors and activities have greater business opportunities.

The continuous dissemination of knowledge and experience exchange help not only to understand the situation of opportunities and gaps in climate finance, but also to accelerate the process to replicate climate finance mechanisms and instruments that have a greater impact in terms of transparency, environmental and social benefits, and transaction costs. Therefore, it is important to recognize the need to continuously update the information and products generated by the project, thus supporting the financial implementation of decarbonization in Latin America.

Key *fact* messages

On the participatory processes of DecarBOOST countries

DecarBOOST Argentina

DecarBOOST Argentina designed and implemented a strategy to involve stakeholders over the three years the project was implemented. The strategy had four stages:

1. Map key stakeholders
2. Review representativeness or degree of influence
3. Alidation and supplementation (internally)
4. Expansion (externally)

The purpose of this strategy was to have a participatory process to allow validation, feedback, and capacity building of the stakeholders involved.

During the first stage, a review of the existing materials was performed to identify the stakeholders involved in technical documents related to climate change. The second stage consisted in reviewing the level of representativeness or influence of the stakeholders identified to ensure actual representation of the different positions of the production structure of Argentina, including different sectors. The third stage was a validation and supplementation of the initial identification of stakeholders. Finally, the fourth stage consisted in expanding the diagnosis with discussions that came up in the validation and socialization spaces, understanding the involvement of stakeholders as a live process within the project.

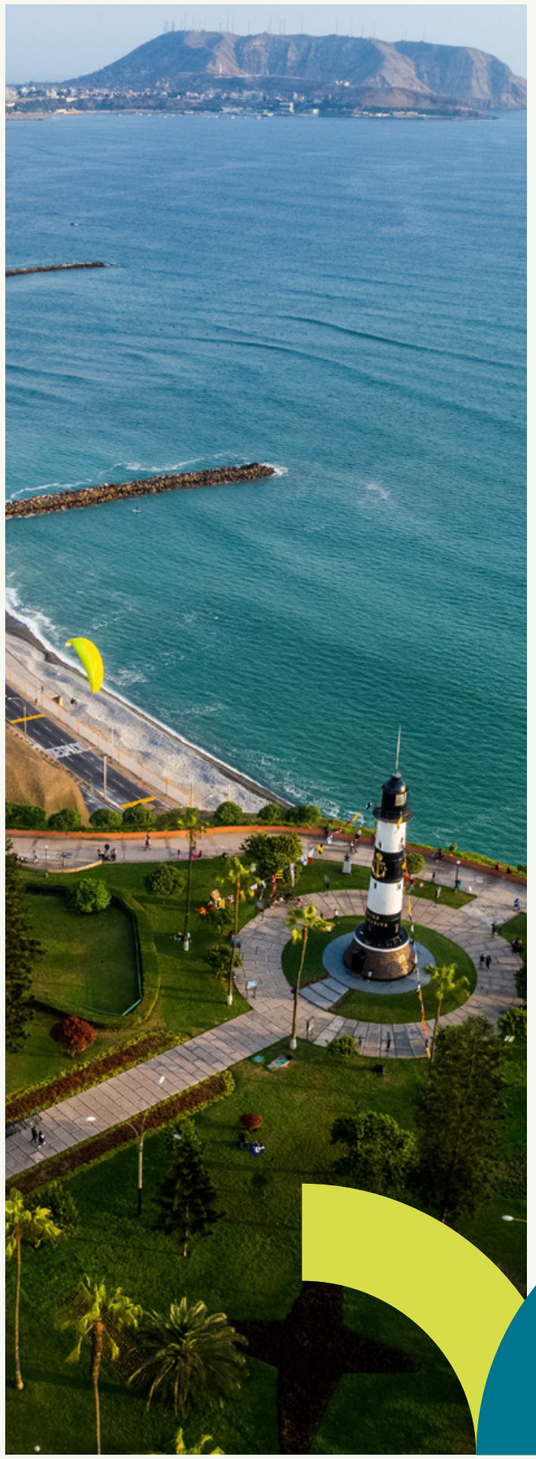
DecarBOOST Brazil

Selected five key stakeholders to reduce emissions in the country. As a result of this selection, a search was done for reference companies, institutions, and organizations in each sector selected to contact and invite them to participate in themed events and encourage more colleagues of the same field to join. Working groups were brought together for each sector with seminars, general and sectoral workshops related to different national and international projects carried out by Centro Clima.

At this stage, the aim was to ensure the diversity of representatives to offer a broad vision of each sector. Therefore, participants included government institutions, private companies, labor associations (unions), the academia and research institutions, some NGOs and institutions from the civil society, and specific agents per sector, such as bankers for the financial sector and rural landowners for the AFOLU sector.

The stakeholder involvement strategy in Brazil was carried out through active invitation, asking about the different studies developed by the project, and satisfaction surveys and feedback, in addition to bilateral meetings with deeper, more specific discussions on some issues of the sector. It was key to let the stakeholders involved know about the benefits of this involvement, which included:

1. To participate in an attractive project with visibility and the possibility to contribute, recognizing their contribution and authorship.
2. The opportunity to join other key stakeholders, from whom they can learn different points of view, share experiences, and best practices about their sector.



DecarBOOST Peru

As part of the participatory process, encouraged the participatory construction and consultation of the products of the project with key stakeholders of the country, specially initiatives and spaces that group unions and public-private associations in subjects related to climate change and finance. Moreover, it organized and participated in online and in-person spaces to discuss issues and products related to those covered by the project, in close partnership with the Ministry of Environment and the Federation of Municipal Savings and Credit Banks of Peru (FEPCMAC), among others.

This process allowed them to contribute to the identification of mitigation measures, setting a green recovery roadmap, identification of barriers and their solutions to increase investment flows, as well as inputs to develop a Climate Finance Strategy.

Opportunities to Finance Decarbonization in Latin America:

Learnings from the DecarBOOST Project

2022 Edition

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