Ideas for action

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Accelerating green industry investment in Latin America

Recommendations from multi-stakeholder dialogue

alinnea

alinnea

alinnea has been an active player in the climate action ecosystem in Spain since mid-2024. It is part of IE University and is supported by the European Climate Foundation. alinnea specializes in comparative analysis and the search for solutions in the coordination of climate action measures involving different sectors from both the public and private spheres, as well as the social fabric.

Under a framework of multi-stakeholder dialogue, research and action, it seeks to provide solutions to barriers to progress in climate action in a manner that is socially just, economically prosperous and positive for the environment and the protection of biodiversity. Between June and September 2025, Alinnea conducted interviews and working sessions with more than forty strategic actors—from the public and private sectors, multilateral organizations and academia—with the aim of accelerating green industry investments in Latin America. This process allowed for the collection of critical analyses and highly relevant practical experiences.

Based on this dialogue, this report was prepared, offering a detailed analysis of the main challenges facing the region and formulating recommendations aimed at boosting investment in strategic sectors of the green industry in Latin America.

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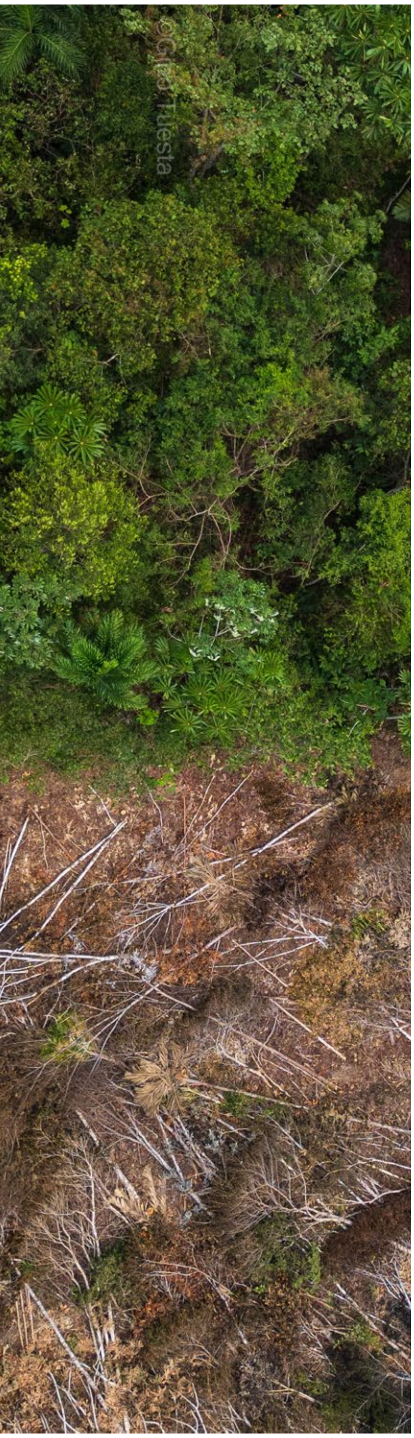


This document presents the conclusions of the Working Group promoted by alinnea, which between June and September 2025 brought together more than forty representatives from the public and private sectors, multilateral organizations and academia. The objective was to identify the main obstacles and opportunities for mobilizing investment in green industry in Latin America and the Caribbean, in a context marked by the COP30 conference in Belém (Brazil) and the urgent need to strengthen the implementation of Nationally Determined Contributions (NDCs).

Latin America and the Caribbean are key regions for global climate action. Although their historical contribution to global emissions is less than 10%[1], today they account for a significant proportion of deforestation and emissions from carbon-intensive sectors. At the same time, it is a "biodiversity superpower" facing the growing impacts of climate change: droughts, floods, biodiversity loss and risks to strategic sectors such as agriculture, tourism and hydroelectric power generation. The region also has a deep green investment gap. Meeting decarbonization commitments would require mobilizing between 3.7% and 4.9% of annual regional GDP until 2030, compared to the 0.5% currently represented by available flows[2]. Consequently, it would be necessary to multiply the investment allocated to climate action by eight to ten times to close this gap.

The Working Group's discussions revealed several critical issues. Insufficient capital and the limited fiscal capacity of states make it difficult to finance the transition, making it essential to attract private investment under conditions of greater certainty. The lack of integration of climate objectives into national economic policies, coupled with institutional fragmentation between levels of government, weakens the coherence of transition strategies. These difficulties are compounded by technological and infrastructure deficits, which are reflected in limited electricity transmission capacity, insufficient energy storage, the lack of regulatory frameworks for

1 C. de Miguel et al. (2024), Financing needs and climate objectives in Latin America and the Caribbean, Project Documents (LC/TS.2024/47), Santiago, Economic Commission for Latin America and the Caribbean (ECLAC).

2 De Miguel et al., Financing needs and climate objectives.

new technologies, and bottlenecks facing strategic projects such as green hydrogen or battery recycling. The lack of citizen participation reinforces the social vulnerability of projects: local communities and SMEs are often left out of the design and implementation processes, which generates resistance and reduces the legitimacy of the transition. Green markets in the region, meanwhile, remain immature, with a lack of bankable projects, a lack of guarantees, and limited development of carbon and biodiversity markets. Finally, heavy dependence on fossil fuel tax revenues is a structural obstacle to sustaining the transition without alternative fiscal mechanisms.

Against this backdrop, the report proposes **five strategic lines of action.**

1. The first is the **harmonization of regulatory frameworks and the creation of common green taxonomies**, together with the institutionalization of governance mechanisms that integrate local communities, indigenous peoples and SMEs into transition plans.
2. The second focuses on the **deployment of innovative financial instruments** that combine public, private and multilateral resources, including sovereign green bonds, bi-regional co-investment funds, shared guarantees and debt-for-nature swaps.
3. The third proposes **investing in critical infrastructure**—electricity transmission, hydrogen logistics, recycling, and storage—and in specialized human capital through training and retraining programs linked to green jobs.
4. The fourth recommends **strengthening climate and financial information systems**, standardizing sustainability reporting, and developing inclusive narratives that reinforce social acceptance.
5. Finally, the fifth highlights the **importance of consolidating bi-regional cooperation between the European Union and Latin America** through climate governance platforms, macroeconomic data observatories and reinforced climate diplomacy around milestones such as COP30.

The upcoming Conference of the Parties in Belém is a decisive opportunity to position Latin America and the Caribbean as a strategic partner in global climate action. This report aims to serve as a roadmap for transforming commitments into effective investment flows and ensuring that the ecological transition in the region is competitive, fair and inclusive. Alinnea is committed to continuing to drive this process forward through multi-stakeholder dialogue, technical support and the creation of strategic alliances that will enable these recommendations to be converted into tangible implementation mechanisms.

Introduction 02

This report brings together the main conclusions of the working group created by **alinnea**, which, based on the contributions of the different participants, has defined a series of proposals and recommendations to boost investment in green industry in Latin America and the Caribbean and contribute to the dialogue between Spain, the European Union and Latin America and the Caribbean on the climate change agenda.

It is hoped that these strategic recommendations will serve as a roadmap towards COP30, contribute more effectively to the fulfilment of the climate objectives set out in the Nationally Determined Contributions (NDCs)[3] and promote investment in green industry.

We would like to express our special thanks to the members of this working group for sharing their ideas, reflections and time with the group, as well as to the experts who shared their valuable knowledge in the bilateral meetings.

3 NDCs are national climate action plans under the Paris Agreement. In them, each country defines its goals and strategies for reducing greenhouse gas emissions, adapting to the impacts of climate change, and mobilizing finance. They are submitted every five years to the United Nations Framework Convention on Climate Change (UNFCCC) and, although they are not legally binding, they guide climate action and must progressively increase their ambition.

The findings, analyses, and conclusions presented in this report are based on publicly available information—obtained from primary sources or from other research cited herein—and considered accurate and reliable. None of the collaborating individuals or institutions shall be held responsible for how the information contained in this document is interpreted, nor for any losses resulting from decisions of any kind made on the basis of this report. Also, thanking or recognizing an organization doesn't mean it endorses the final text.

2.1. Objectives of the working group

This report aims to diagnose the challenges and opportunities facing investment in green industry in Latin America and the Caribbean, with the purpose of identifying the main issues to be resolved, as well as areas of opportunity and development that will boost investment throughout green industrial value chains in the region. The analysis is framed within the context of the implementation of climate policies defined at the national level and incorporated into the NDCs, which constitute the fundamental pillar of the Paris Agreement on climate change.

Although its historical contribution to global greenhouse gas emissions is less than 10%, countries such as Brazil and Mexico are among the largest current emitters.

In the context of the global fight against climate change, Latin America and the Caribbean (LAC) is a region of great importance, not only because of its status as a "biodiversity superpower" and its high forest cover, but also because of the structural challenges it faces: inequality, poverty and climate vulnerability. Although its historical contribution to global greenhouse gas emissions is less than 10%,[4] countries such as Brazil and Mexico are among the largest current emitters, largely due to deforestation, particularly in the Amazon, which significantly increases the region's carbon footprint.[5]

Furthermore, it is a region characterized by disproportionate climate impacts—such as extreme events, loss of biodiversity and the impact on key sectors such as agriculture and tourism—with adaptation responses limited by its climatic and socio-economic heterogeneity, This makes it essential to implement urgent measures that encourage investment in green industry, promoting a just ecological transition that takes into account the

4 Different sources suggest much lower values, ranging from approximately 5% to 8% of the global share. Ali Hasanbeigi and Cecilia Springer, A Roadmap Framework for Industrial Decarbonization in Latin America and the Caribbean (Inter-American Development Bank, 2024), doi.org/10.18235/0013353.
World Bank Group, *World Bank Group Roadmap for Climate Action in Latin America and the Caribbean 2021-2025* (2022), http://documents.worldbank.org/curated/en/099720509072258391.

5 Luis Rodrigo Asturias-Schaub and Luis Alberiko Gil-Alana, "CO_2 Emissions in Latin America: A Time Series Perspective Based on Fractional Integration," *Environmental Science and Pollution Research*, 30 September 2023, https://doi.org/10.1007/s11356-023-29987-4.

particularities of the region and has the support of all actors involved in the value chains, while promoting biodiversity protection and quality employment through more equitable and effective cooperation.

In this regard, it is essential to address the financing gap as the main bottleneck that must be overcome in order to realize climate and just transition commitments in Latin America and the Caribbean (Caribe). Although the countries in the region have established ambitious NDCs, the volume of investment required far exceeds current flows, making it necessary to multiply investments for climate action by eight to ten times based on current figures.[6]

This document focuses on how to transform climate commitments into effective investment flows to accelerate the green industry in Latin America and the Caribbean, integrating the political and economic dimensions in conjunction with the perspectives of the different actors involved in the ecological transition process.

2.2. Methodology

The methodology used to prepare this report consisted of a series of working sessions (following the Chatham House Rules format), complemented by a process of bilateral interviews with relevant actors in the sector to analyze the main challenges and opportunities surrounding the acceleration of investments in the green industry in Latin America and the Caribbean. This process enabled the design of a set of recommendations aimed at boosting investment in climate action.

This work involved the participation of a diverse group of strategic actors from the public and private sectors, multilateral organizations and academia, who took part in three online working sessions. The first session was devoted to conducting a shared diagnosis of the status of climate action plans (NDCs) and their link to investments in green industry. The second session focused on understanding the private sector's vision and defining the main issues and recommendations for accelerating such investments. Finally, the third session served to delve deeper into the challenges and opportunities for financing investments in green industry in the region.

In addition, bilateral meetings were held to examine certain barriers in depth to strengthen and refine the final proposals for action.

6 C. de Miguel et al., (2024) "Financing Needs and Climate Goals in Latin America and the Caribbean," Project Documents (LC/TS.2024/47), Santiago, Economic Commission for Latin America and the Caribbean (ECLAC).

Over the course of these three sessions, presentations were given by the following organizations and experts, whom we also thank for their time and work:

* Santiago Lorenzo, CEPAL
* Gabriel Guggisberg Alarcón, Trade Commissioner, ProChile, Madrid
* Fernando Branger, Head of Energy Department, CAF
* María Rotondo, ndependent board member at Telefónica, CECEIS, and Resiter Chile, and professor at IE University
* Germán Eduardo Ortiz, Environmental Senior Manager, Belcorp
* Francisco Pereira, Project Manager en Fortech
* Carine Lacerda and Joana Correia, Clima Sociedade
* Luis Tineo, Banco Mundial
* Jorge Barrigh, Heifer Impact Capital
* Alicia Montalvo, Manager of Climate Action and Positive Biodiversity, CAF

The working group also benefited from the technical support of Germán Ríos, Associate Professor of Economics and Director of the Latin America Observatory at IE University.

Latin America and the Caribbean in the global climate context

03

Latin America and the Caribbean in the global climate context

03

In 2025, the global geopolitical and climate context is marked by a growing fragmentation of the international order. Armed conflicts and geostrategic tensions are eroding the foundations of the current multilateralism, jeopardizing the progress made in the fight against climate change and international cooperation. The war in Ukraine, the conflict in Gaza, and intensifying trade tensions are destabilizing traditional frameworks for global cooperation. In this context, the climate agenda established by the Paris Agreement faces the risk of not being a strategic priority for countries, at a time when efforts to strengthen industrial competitiveness increasingly depend on the deployment of green policies as drivers of economic growth.

These international tensions are echoed in the regional dynamics of Latin America and the Caribbean, where political fragmentation and a lack of strategic coordination limit their capacity for collective action. Ideological fragmentation and lack of consensus hinder regional cooperation, weakening their influence in multilateral forums such as the Regional Group of Latin America and the Caribbean (GRULAC) or the Group of 77 (G-77+China). Although Brazil is emerging as a key player due to its economic and demographic weight, it faces resistance to its regional leadership, partly due to linguistic factors and contradictions in its foreign policy, which combines climate ambitions with its membership of OPEC+ and reduced room for maneuver due to internal opposition. Mexico, for its part, traditionally focused on domestic politics, has begun to gain visibility on the multilateral agenda, especially in global financial negotiations.

Other countries in the region, such as Chile and Colombia, have taken a more active role in the climate and sustainable development agenda, leading forums such as ECOSOC and COP16, respectively. In contrast, Argentina has taken an openly hostile stance towards the global climate agenda, reflecting growing regional polarization. Taken together, these factors make it difficult to build coherent regional platforms that would allow Latin America and the Caribbean to consolidate itself as a bloc with its own voice in international climate and financial governance.

Given this regional scenario, bi-regional alliances take on renewed strategic value. Relations between Latin America and the Caribbean (LAC) and the European Union (EU) are emerging as a key alliance for strengthening joint climate action. Both regions account for a significant proportion of the signatories to the UN climate agreements and a significant share of global emissions. In this context, the EU has committed €45 billion to Latin America and the Caribbean through the **Global Gateway** Investment Agenda, with an emphasis on green infrastructure and strengthening local capacities to move towards a green, digital and just transition.

However, this cooperation faces multiple challenges. The aforementioned geopolitical tensions, setbacks in climate policy resulting from the new US policy, and difficulties in coordination between European institutions and their Latin American partners limit the effectiveness of the collaboration. Even so, there are windows of opportunity for strengthening it, in particular by promoting a shared agenda for eliminating fossil fuels, the strategic use of the **Global Gateway**, and better coordination between governmental, multilateral and civil society actors.

In this regard, the asymmetries in fossil fuel production and consumption capacity between the two regions necessitate a differentiated but convergent roadmap. While the EU is advancing in the decarbonization of its energy matrix through electrification, green hydrogen and the expansion of renewable energy sources ( ), LAC continues to depend, despite its high potential in clean energy, largely on fossil fuel revenues to sustain public spending.

Key events such as the IV EU-CELAC Summit and COP30 could be important turning points. The strategic importance of lithium in the context of the European green transition has also been highlighted, as have the EU's efforts to reduce its dependence on China for the supply of critical minerals. Memoranda of understanding signed with Argentina and Chile have prioritized technology transfer and local battery production. At the same time, the modernization of trade agreements with Mexico and Chile, together with the possible ratification of the MERCOSUR-EU Agreement, reinforce bi-regional cooperation. These treaties not only facilitate trade but also consolidate areas of regulatory and technological cooperation that promote climate dialogue, the exchange of good practices and convergence towards common environmental standards. However, challenges in terms of governance, indigenous community participation and socio-environmental sustainability must be addressed.

3.1. The relevance of COP30 and the NDCs

The year 2025 represents a key milestone for Latin America and the Caribbean in the global climate agenda. For the first time, an Amazonian city—Belém, in the Brazilian state of Pará—will host the 30th Conference of the Parties (COP30) to the United Nations Framework Convention on Climate Change. This summit also coincides with a decisive moment for the fulfilment of climate objectives, as countries must submit their NDCs, first published in 2015, as part of the **global stock** take process.[7]

This juncture is a critical opportunity to reinforce countries' commitment to implementing the Paris Agreement. Moving towards a third generation of NDCs (NDC 3.0)—more ambitious, credible and aligned with long-term decarbonization trajectories—will be crucial to maintaining the viability of the goal of limiting global warming to 1.5 °C.

The Paris Agreement, adopted in 2015, established a global legal framework for climate action, aimed at limiting the increase in global average temperature to below 2°C.

The Paris Agreement, adopted in 2015, established a global legal framework for climate action, aimed at limiting the increase in global average temperature to below 2°C. Its architecture is based on an approach of national sovereignty articulated through NDCs, which set out each country's commitments on mitigation, adaptation and climate finance. Although these are not legally binding, many are supported by national legislation. The five-year review mechanism requires greater progressive ambition. However, the first Global Stock take, concluded at COP28 (2023), warned that current efforts remain insufficient, requiring a 43% reduction in emissions by 2030 and a 60% reduction by 2035 compared to 2019 levels, with the ultimate goal of achieving net-zero emissions by 2050.

7 UN Climate Change—Working together for climate action, https://unfccc.int

In this context, NDCs have established themselves as essential instruments for articulating global objectives with national public policies. NDCs also make it possible to translate commitments into sectoral plans, quantitative targets and financial mechanisms, especially in developing countries, while addressing structural challenges such as access to energy and food security. In their new version, NDCs 3.0 should go a step further, integrating more ambitious, operational targets geared towards mobilizing financial resources.

Developing countries often link climate action to equity, adaptation and development and call for international financial support, as in the cases of Venezuela and Ethiopia.

In recent years, an emerging trend has been towards the integration of climate and biodiversity objectives through nature-based solutions. In addition, the alignment of monitoring, reporting and verification (MRV) systems, capacity building and the design of financial instruments with an inclusive approach are being promoted. However, recent studies identify divergent patterns between countries. Developed economies, such as the US and the EU, tend to present ambitious but poorly detailed targets. In contrast, developing countries often link climate action to equity, adaptation and development and call for international financial support, as in the cases of Venezuela and Ethiopia.

3.2. Current overview of NDCs in Latin America and the Caribbean

As of September 2025, only a small number of countries in Latin America and the Caribbean—Brazil, Uruguay, Ecuador, Saint Lucia, Cuba, and Belize—have officially submitted their third Nationally Determined Contribution (NDC 3.0). In the 2020–2025 cycle, a significant number of countries in the region updated their NDCs, demonstrating a growing commitment to climate action and a trend toward more ambitious goals.

However, the implementation of these commitments still faces significant barriers, including financial constraints, technical and institutional capacity deficits, unmet technological needs, and a lack of coherence in public policies. This situation is exacerbated by the region's high climate vulnerability, which has led to adaptation becoming a central component of NDCs, with an emphasis on key sectors such as agriculture, water resource management, and coastal areas.

From a sectoral perspective, the NDCs reveal general trends that point to a growing prioritization of renewable energy deployment, ecosystem protection, the promotion of resilient agriculture and the drive for sustainable urban development. In terms of renewable energy, 70% of the NDCs submitted in the region contemplate the transition to sources such as solar, wind, and hydroelectric power, making the energy sector one of the

Latin America and the Caribbean is a leader in the incorporation of Nature-based Solutions (NbS), highlighting ecosystems for carbon capture and resilience, with special attention to forests and coastal ecosystems.

fundamental pillars of their mitigation strategies. In the area of forestry and land use, the NDCs emphasize measures for forest protection and sustainable land management, especially in Brazil and Colombia, where these sectors are crucial for reducing emissions. Agriculture, for its part, is consolidating its position as a key sector for both mitigation and adaptation. In this regard, the contributions promote climate-smart agriculture approaches aimed at increasing resilience to climate variability. Finally, the progressive growth of urban areas has led to sustainable urban development becoming a priority on national agendas, with a special focus on clean transport and infrastructure.[8]

On another note, Latin America and the Caribbean is a leader in the incorporation of Nature-based Solutions (NbS), highlighting ecosystems for carbon capture and resilience, with special attention to forests and coastal ecosystems. In addition, the promotion of blue economies and blue carbon is becoming increasingly important in the case of small island developing states (SIDS).

8 UNDP, *Reviewing Climate-Related Human Mobility in Latin American and Caribbean's Nationally Determined Contributions (NDCs) and National Action Plans (NAPs)* (2023), https://www.undp.org/latin-america/publications/reviewing-climate-related-human-mobility-latin-american-and-caribbeans-nationally-determined-contributions-ndcs-and.

However, significant challenges remain that compromise the coherence and credibility of climate commitments. The decarbonization of heavy industry continues to be marginal in most NDCs, with only 30% explicitly addressing it. Added to this is the persistence of contradictory policies, such as the maintenance of fossil fuel subsidies in countries such as Mexico, Venezuela and Bolivia, in open contradiction with the established mitigation targets. In the particular case of Mexico, climate policies have experienced substantial setbacks in recent years, prioritizing the use of fossil fuels and weakening the institutional architecture responsible for climate action. This situation is particularly worrying given the magnitude of its carbon footprint. Furthermore, reliance on previous policies and the questionable use of forest accounting have contributed to the country's emissions continuing to rise, despite international commitments.[9]

In this context, international support mechanisms play a key role in closing implementation gaps.

Various institutions—such as ECLAC, UNEP, and UNDP through its **Climate Promise 2025** initiative—are providing technical assistance, capacity building, and innovative financing tools to accelerate climate action in the region. Below is a detailed analysis of the NDC 3.0s already submitted, together with a comparative overview of current commitments in Latin America and the Caribbean.[10]

9 "Mexico", Climate Action Tracker, 12 December 2022, https://climateactiontracker.org/countries/mexico.

10 UNDP, The Challenges of Climate Mitigation in Latin America and the Caribbean: Some Proposals for Action (2023), https://www.undp.org/latin-america/publications/challenges-climate-mitigation-latin-america-and-caribbean-some-proposals-action.
"Follow-up on Nationally Determined Contributions in Latin America and the Caribbean," NDC-LAC: Regional Platform for Climate Action in Latin America and the Caribbean, accessed 2 September 2025, https://ndc-lac.org/es.

Table 1.
Analysis of NCD 3.0 submissions by Latin American and Caribbean countries as of September 2025

Country	NDC submission date			GHG emissions target (in $MtCO_2e$)		Notes	Climate neutrality by 2050?
	1st	2nd	3rd	Unconditional	Conditional		
Argentina	Nov 2016	Nov 2021	Expected in mid-2025	359	n/a	Equivalent to a 21% reduction in emissions compared to the historical peak reached in 2007.	Yes
Bolivia	Oct 2016	Apr 2022		n/a	n/a	Allows emissions to increase by 139% above 2010 levels by 2030.	No
Brazil	Sept 2016—Updated Nov 2023	n/a	Nov 2024	1.200	n/a	Reduce emissions by 59% to 67% by 2035, compared to 2005 levels.	Yes
Chile	Feb 2017—Updated Apr 2020	n/a	Draft under consultation Scheduled for May 2025	95	85	Peak emissions in 2025; GHG emissions budget of 1,100 $MtCO_2eq$for 2020–2030 and 490 $MtCO_2eq$ for 2031–2035 (**draft NDC**).	Yes
Colombia	Julio 2018—Updated Dec 2020	n/a	For COP30	169	n/a	51% reduction by 2030 compared to the BAU scenario.[11]	Yes[12]
Costa Rica	Dec 2020						
Cuba	Sep 2020		Feb 2025				
Ecuador	Mar 2019	n/a	Feb 2025	n/a	n/a	7% reduction by 2035 compared to 2010 levels relative to BAU (and 8% conditionally).	No
El Salvador		Jan 2022					
Guatemala	2015	May 2022					
Honduras	May 2021						
Jamaica	Jul 2020						
Mexico	Sept 2016—Updated Nov 2022	n/a	For COP30	762	710	22% reduction by 2030 compared to BAU scenario[13] (and 35% conditionally).	No
Nicaragua	Dec 2020						
Panama		Jun 2024					
Paraguay	Oct 2016—Updated Jul 2021	n/a		22.7	21.3	10% reduction by 2030 compared to BAU (and 20% conditionally)	No

11 Reference scenario.
12 In December 2024, the country published its "Estrategia Climática de Largo Plazo de Colombia—E2050".
13 With national resources contributing at least 30% and 5% with international cooperation and financing planned for clean energy.

Country	NDC submission date			GHG emissions target (in $MtCO_2e$)		Notes	Climate neutrality by 2050?
	1st	2nd	3rd	Unconditional	Conditional		
Peru	July 2016—Updated Dec 2020	n/a		112.8	96.7	30% reduction compared to BAU (and 40% conditionally).	Yes
Uruguay	Oct 2016	Dec 2022	Dec 2024	0.2	0.2	The targets are specific limits for each gas, not reductions for the entire economy.	Yes
Venezuela	Feb 2018—Updated Nov 2021	n/a		109.1	109.1	20% reduction compared to BAU on a conditional basis.	No

3.3. Climate finance mechanisms and the green industry

Latin America and the Caribbean has a diverse set of climate finance mechanisms. Development banks are the central pillar of this architecture: multilateral banks—such as the Inter-American Development Bank (IDB), CAF, the Development Bank of Latin America and the Caribbean, and the World Bank—channel concessional and non-concessional financing for mitigation and adaptation projects, while national banks, such as BNDES in Brazil, play a crucial role in supporting energy infrastructure, transport, and water management projects.[14]

At the same time, there has been significant growth in the issuance of thematic bonds—particularly green, social, and sustainable bonds—which have established themselves as debt instruments for raising private capital. Countries such as Chile, Brazil and Mexico have led sovereign and corporate issuances, mainly targeting renewable energy, mobility and infrastructure projects. Although Latin America and the Caribbean remain minor players on the global stage, the regional green finance market has shown gradual growth in recent years, with green bonds establishing themselves as a key tool for financing projects aligned with climate action. Between 2014 and 2019, Brazil (£5.8 billion), Chile (£3.1 billion) and Mexico (£1.4 billion) led the issuance of these types of instruments, mainly targeting renewable energy, sustainable infrastructure and low-carbon transport. However, the region's share of the global green bond market remains marginal (around 2%), due to the shallow capital markets, high investor risk aversion and the absence of harmonized green taxonomies. Even so, sustainable debt issuance in the region has doubled in the last decade, and green sovereign bonds—initiated by Chile in 2019 and followed by Colombia and Uruguay—have marked a turning point in governments' commitment to sustainable finance.

Interest in green industry in the region has grown significantly, driven by abundant natural resources, pressure from the climate agenda, and global demand for sustainable practices.

Interest in green industry in the region has grown significantly, driven by abundant natural resources, pressure from the climate agenda, and global demand for sustainable practices. Sectors such as solar, wind and hydroelectric power, sustainable agriculture, electric mobility, green transport and the circular economy have attracted investments estimated at £15-20 billion in 2023, concentrated in a small group of countries (Brazil, Chile, Mexico, Colombia and Argentina), with the energy sector predominating (60%). Multinational companies such as AES, BYD, Enel Green Power, Siemens Gamesa and TotalEnergies, together with global ESG funds (BlackRock, Brookfield, European funds), have become key players, while international financial institutions such as the IDB and CAF channel significant resources (5 billion from the IDB between 2020 and 2023; approximately £2 billion annually from CAF).

14 De Miguel et al., *Financing needs and climate goals.*

In addition to these instruments, there are multilateral climate funds—including the Green Climate Fund, the Adaptation Fund, and the Global Environment Facility (GEF)—which channel international resources for mitigation, adaptation, and just transition. However, LAC's access is limited: its status as middle-income economies reduces its eligibility for concessional financing.[15] In 2020, climate finance flows to the region barely reached $22.9 billion, equivalent to 0.5% of regional GDP, compared to the 3.7–4.9% per year required to meet the 2030 targets.

Latin America is, in fact, the region that absorbs the least green investment globally in comparison with its potential and the climate commitments made by its countries.

Latin America is, in fact, the region that absorbs the least green investment globally in comparison with its potential and the climate commitments made by its countries. Furthermore, these flows are not distributed equitably: they are overwhelmingly concentrated in three or four economies—mainly Brazil, Mexico, Chile, and Colombia—which have a more developed institutional structure and large-scale national development banks capable of structuring and issuing green financial instruments.

This high geographical concentration is due to several factors: the existence of more advanced regulatory frameworks and green taxonomies, greater technical capacity to prepare bankable projects, and a more mature local financial ecosystem. These entities offer a capacity for leverage and resource mobilization that most countries in the region do not have, creating a structural asymmetry in access to climate capital. In contrast, smaller countries or those with nascent financial markets face greater difficulties in attracting green investment due to the lack of local guarantee mechanisms, less regulatory predictability, and the limited presence of specialized financial intermediaries.

In addition to geographical concentration, there is an equally marked sectoral concentration. In Latin America, nearly half of climate investment goes to the renewable energy sector, followed at a distance by transport, agriculture and water. In the case of Chile, for example, the attraction of foreign capital is concentrated almost exclusively in renewable energy, with no comparable progress in sectors such as agriculture or transport, where Colombia has diversified its climate action. Brazil presents a more balanced pattern: in addition to clean energy, it channels financing towards agriculture, transport, hydrogen and water resilience. In regional terms, this concentration means that key sectors for adaptation, such as sustainable agriculture and water management, remain lagging behind.

15 Ibid.

In the area of market instruments, several Latin American countries have introduced carbon taxes (Chile, Mexico, Colombia, and Argentina) and have designed national or subnational carbon market schemes that are still in their infancy, with the potential to generate additional revenue and send price signals consistent with decarbonization. Although the rates of these taxes are below recommended levels and their coverage is partial, these mechanisms have generated revenue to finance national green funds, energy transition programs and environmental education, demonstrating that fiscal policy can serve not only to discourage emissions, but also as a domestic source of climate finance.[16]

In addition, financial innovations of growing relevance are emerging: **blended finance**, which combines concessional public resources with private investment to reduce risks; results-based loans, such as the IDB CLIMA program, which lowers the cost of credit after verification of mitigation or resilience targets; blue bonds, aimed at ocean conservation; and carbon credits, which seek to integrate local producers into international offset markets.

Overall, the regional climate finance architecture is expanding, but deep gaps remain in its distribution, access and scale.

16 The International Monetary Fund (IMF) estimates that, in order to meet the Paris Agreement targets, the price of carbon should be between USD 50 and USD 75 per ton by 2030, while in Latin America current taxes rarely exceed USD 5–10 per ton, reflecting the gap between regional practice and international standards and C. de Miguel et al. (2024) "Financing needs and climate goals in Latin America and the Caribbean," Project Documents (LC/TS.2024/47), Santiago, Economic Commission for Latin America and the Caribbean (ECLAC) and CAF, RED 2024. Renewed energies: a just energy transition for sustainable development.

3.4. Bilateral cooperation programs and debt-for-climate swaps

In addition to multilateral and market instruments, the region has bilateral cooperation programs that channel financial resources and technical assistance from developed countries. International cooperation initiatives also play an important role. Of particular note is the European Union's **Global Gateway** program, designed to mobilize investment in green infrastructure, clean value chains and just transition projects in the region, in line with the objectives of the European Green Deal. Similarly, mechanisms such as debt-for-climate swaps have begun to be explored as alternatives to alleviate internal fiscal constraints and, at the same time, direct resources towards environmental programs.

Spain, through the Spanish Agency for International Development Cooperation (AECID), has played an important role by creating funds for water, sanitation and climate change projects, as well as by launching the Ibero-American Facility for Resilience, Adaptation and Sustainability (FIRAS), designed to strengthen the climate resilience of countries in the region. Germany, through cooperation implemented by GIZ and the KfW development bank, leads the International Climate Initiative (IKI), with interventions in Chile, Colombia and Brazil focused on energy transition, forest protection and urban adaptation.

Finally, the United States maintains initiatives such as the Energy and Climate Partnership of the Americas (ECPA) and programs by USAID and the Development Finance Corporation (DFC), aimed at energy efficiency, low-carbon transport and community resilience.

Alongside this traditional cooperation, the region has begun to trial innovative debt-for-climate swap schemes, which allow external liabilities to be restructured in exchange for allocating the freed-up resources to environmental projects. In 2021, Belize restructured $553 million in sovereign debt through the **Blue Bond for Ocean Conservation**, freeing up some $180 million for marine conservation and protected area management. In 2022 and 2023, Barbados negotiated with the IDB and **The Nature Conservancy** (TNC) to convert nearly £150 million in debt into investments aimed at climate resilience and marine ecosystem protection. The most significant case is that of Ecuador, which in 2023 carried out the largest debt-for-nature swap to date: $1.6 billion restructured, generating more than $450 million for the conservation of the Galapagos Marine Reserve over 18 years. Other countries, such as Paraguay and Argentina, have explored similar schemes linked to forest protection, although these have not yet been implemented on a large scale.

Analytical framework and priority sectors

04

Analytical framework and priority sectors 04

The notion of green industry, coined and promoted by the United Nations Industrial Development Organization (UNIDO), is the starting point for the reflection and analysis carried out in this study. The approach is based on the structural transformation of production processes and investment patterns towards climate-neutral trajectories, in which economic growth is linked to environmental protection and social welfare. Thus, green industry involves the "greening of industry" through clean technologies for the use of energy, water and materials, the reduction of emissions and waste, and the incorporation of corporate social responsibility principles into industrial management.[17]

The role of green industry in Nationally Determined Contributions (NDCs) is fundamental because it connects the climate agenda with the decarbonization of the economy by transforming countries' industrial fabric. In the case of Latin America and the Caribbean, where the challenge of decarbonization revolves around the investment gap, high dependence on carbon-intensive sectors and fossil fuel revenues, social inequalities and fragile governance, the promotion of green industry is presented as a vehicle through which these obstacles can be overcome in a holistic manner.

In this sense, its role can be broken down into four distinct levels. First, green industry is presented as a pillar of mitigation in carbon-intensive sectors. The region's NDCs include explicit commitments to reduce emissions in areas such as cement, steel, chemicals and mining, activities that account for a large part of greenhouse gas emissions. Electrification with renewable energies, the incorporation of green hydrogen, the application of carbon capture, use and storage technologies, and the implementation of circular economy schemes are emerging as key solutions for transforming sectors historically perceived as highly damaging to the environment.

17 United Nations Industrial Development Organization (UNIDO). *Green Industry Initiative*. 2024. Available at: https://www.unido.org/our-focus/cross-cutting-services/green-industry/green-industry-initiative.

Secondly, green industry is closely linked to the notion of a just transition, a principle that is increasingly visible in NDCs. Industrial restructuring must be accompanied by job training, social investment and protection mechanisms that safeguard communities dependent on polluting industries. In this sense, the creation of green, quality jobs is directly linked to the objectives of social inclusion, poverty reduction and productive diversification.

A third aspect is its role as a driver of technological innovation and international competitiveness. Promoting investment in clean technologies and efficient processes allows countries in the region to integrate productive modernization objectives into their NDCs in line with global digital and energy transformation. This factor is also particularly relevant in view of the deployment of instruments such as the European Union's Carbon Border Adjustment Mechanism (CBAM), which requires Latin American exporters to comply with low-carbon standards if they wish to maintain their presence in European markets.

Finally, the viability of these commitments is closely linked to sources of financing. A significant portion of the climate goals set out in the NDCs are conditional on access to financing that requires international support mechanisms to develop innovative financing tools that accelerate the green industry and, consequently, climate action in the region.

In short, the green industry plays a dual role in the NDCs. It is a means, providing the technologies, processes and innovations necessary to move towards decarbonization and resilience. But it is also an end, consolidating itself as a strategic sector for sustainable economic development, capable of attracting investment, generating employment and projecting Latin America and the Caribbean into global value chains aligned with the green transition.

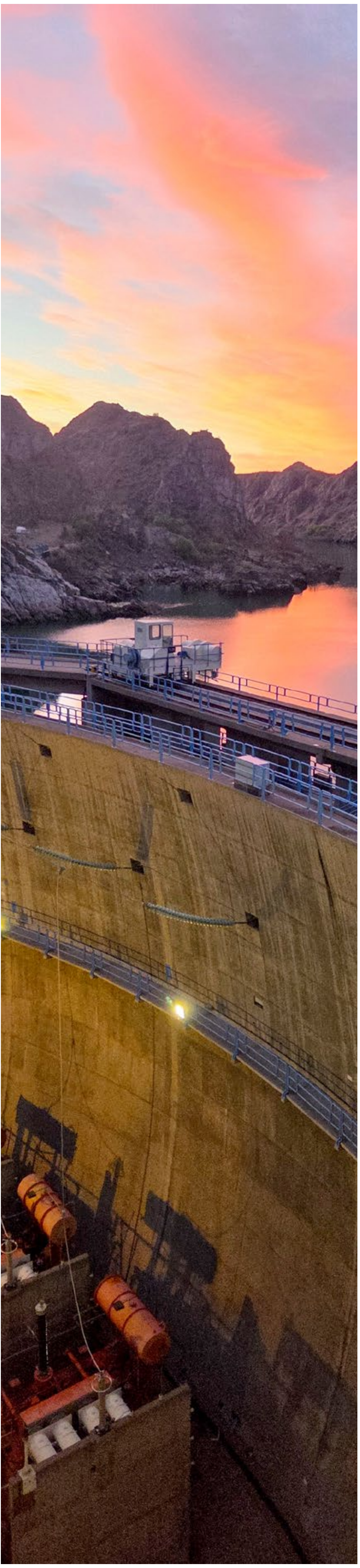
If we examine the NDCs of Latin America and the Caribbean by country, we see a clear differentiation in technologies. Brazil stands out for its commitment to green hydrogen, bioenergy and the decarbonization of the steel industry; Chile integrates mining, cement and hydrogen into its Just Transition Strategy; and Colombia combines industrial electrification with social measures aimed at workers and communities. For their part, Argentina, Peru and Mexico prioritize renewable energy, sustainable transport and energy efficiency, although in the latter case subsidies for fossil fuels persist. Finally, Uruguay is moving towards neutrality in 2050 with an emphasis on renewable energies (hydropower, wind, solar and biomass), while Ecuador, Paraguay and Venezuela are making more general commitments that are heavily dependent on external financing.

The region's priority sectors reflect clear trends towards the expansion of renewable energy—included in 70% of commitments—forest and soil protection, agriculture and sustainable urban development.

The region's priority sectors reflect clear trends towards the expansion of renewable energy—included in 70% of commitments—forest and soil protection, agriculture and sustainable urban development. The region also stands out for incorporating nature-based solutions, with a particular emphasis on forest and coastal ecosystems, as well as the blue economy of small island states. However, it is worth noting the limited progress made in decarbonizing heavy industry, which is referred to in only 30% of NDCs.

The lack of progress on this issue is particularly significant, given that industries such as steel, aluminum, cement and pulp and paper account for around 29% of global CO_2 emissions and around 20% of regional emissions, posing a critical challenge to climate goals. If current trajectories continue, these emissions could increase by between 23% and 70% by 2050, driven by urban expansion and growing demand for construction materials.[18]

18 Inter-American Development Bank (IDB), *Roadmap Framework for Industrial Decarbonization in Latin America and the Caribbean: Analysis of NDC Implementation and Emitting Sectors in LAC*, 2024, https://publications.iadb.org/en/roadmap-framework-industrial-decarbonization-latin-america-and-caribbean.



In this regard, there are various decarbonization pathways to consider, and they require accelerated deployment. Clean hydrogen is emerging as a substitute for fossil fuels in steel and aluminum production, as well as in the manufacturing of cement clinker. Carbon capture, use and storage (CCUS) offers significant reduction potential in steel and cement, although costs are still high and applicability is limited in other sectors. Electrification and the use of renewable energies, particularly in aluminum electrolysis using hydroelectricity, can substantially reduce emissions in this sector. Added to this are circular economy and recycling strategies—capable of reducing emissions by up to 71% in recycled steel compared to primary production, and 19% in aluminum—as well as improvements in energy efficiency in cement kilns and cellulose refining processes, with potential savings of 10 to 25% in energy consumption.[19] Among the examples of transformation, it is worth highlighting that in the steel sector, Ternium has started pilot production with green hydrogen in Mexico and Argentina, with the goal of reducing its emissions by 20% by 2030.

In cement, Votorantim in Brazil is moving forward with carbon capture projects that could prevent the emission of 1.5 million tons per year.

In mining, Codelco has begun to electrify its fleet of trucks in Chuquicamata, while Vale is experimenting with hydrogen palletization plants as part of its commitment to achieve neutrality by 2050.[20]

19 Economic Commission for Latin America and the Caribbean (ECLAC), *Financing Needs and Climate Goals in Latin America and the Caribbean*, 2024 https://cdi.mecon.gob.ar/bases/docelec/az6940.pdf?utm.

20 Business cases collected in sector reports and specialized press (BloombergNEF 2024; Global Cement Report 2024; Reuters 2024; Vale Sustainability Report 2024); BloombergNEF, *New Energy Outlook 2024*, https://about.bnef.com/insights/clean-energy/new-energy-outlook/#download-report-summary; Reuters Institute, *Digital News Report 2024—Executive summary*, https://reutersinstitute.politics.ox.ac.uk/es/digital-news-report/2024/dnr-resumen-ejecutivo; Global Cement, *Alternative Fuels Special Issue*, 2021, https://www.proids-online.com/products/reports/alternative-fuels-special-issue-2021; Vale, *Sustainability Report—Indonesia*, 2024, https://vale.com/indonesia/sustainability-report.

RESULTS PER SESSION

Session 1: 05

Climate action plans (NDCs) and their link to green industry investments

RESULTS PER SESSION

Session 1: 05

Climate action plans (NDCs) and their link to green industry investments

The first session of the working group, dedicated to analyzing the role of the public sector in green industry investment and its link to NDCs, featured a series of presentations that explored several key issues in depth. These included an analysis of the climate vulnerability of Latin America and the Caribbean, the growing investment gaps needed to meet decarbonization commitments, and the risks associated with biodiversity loss and hydroelectric dependence. Governance challenges in aligning NDCs with national economic strategies were also discussed. Likewise, the need to strengthen private sector participation and the support of multilateral organizations, such as ECLAC and CAF, in the design of financial, regulatory and international cooperation instruments was highlighted.

Based on these premises, the urgency of a structural transformation in Latin America and the Caribbean was highlighted in order to address the climate crisis, characterized by high regional vulnerability, insufficient green investment and a persistent disconnect between economic strategies and climate commitments. The region faces growing risks associated with climate change and biodiversity loss, along with fiscal constraints that require greater involvement from the private sector. In addition, the need to establish stronger sustainability standards and improve institutional coordination was underscored. To achieve a just and competitive transition, it is essential to articulate effective regulatory frameworks, diversify the energy matrix, and use technical and financial instruments that ensure coherent action at all levels of government.

In this context, Chile stood out as a benchmark in climate planning, backed by a framework law and a long-term strategy structured around its NDC, with clear adaptation and mitigation goals that incorporate the principles of just transition and a gender approach. The country has established intermediate targets for 2035, assigns responsibilities at the regional and community levels, and is advancing innovative financial instruments, such as green bonds, along with a rapid expansion of electromobility. Through territorial monitoring mechanisms and the identification of strategic sectors, Chile seeks to achieve climate neutrality and resilience by 2050, consolidating its model as a benchmark in the region.

At the same time, it was noted that, at the regional level, installed capacity is well below what is needed to meet decarbonization targets. This requires increasing electricity generation, expanding transmission infrastructure and correcting investment deficits. The heterogeneity of energy matrices and the absence of a common regulatory framework hinder policy convergence, while risk perception and lack of guarantees limit the attraction of external capital, even with the backing of multilateral banks. Added to these challenges are bottlenecks in strategic projects such as green hydrogen and battery recycling, which face both infrastructure and governance constraints. Finally, the need to rethink electromobility from a comprehensive urban planning perspective was emphasized, with a view to avoiding new congestion and ensuring a real impact on emissions reduction.

5.1. Common barriers, preliminary proposals and opportunities for collaboration

5.1.1. GREEN INVESTMENT GAP, LIMITED FISCAL CAPACITY OF STATES AND LIMITED CAPITAL ATTRACTION

The structural gap in green investment in Latin America and the Caribbean is one of the most significant obstacles to progress in the energy and climate transition. Estimates suggest that meeting decarbonization commitments would require allocating around 5% of regional GDP until 2030. However, total average investment in the region barely reaches 19% of GDP, a level that is well below more competitive regions, such as Southeast Asia, where it ranges between 30% and 35%. At this clearly disadvantaged starting point, the limited fiscal capacity of states, heavily constrained by social demands in education, health and food, significantly restricts the scope for allocating public resources to the ecological transition.[21] Attracting foreign capital also faces multiple obstacles associated with the perception of risk in the region and the lack of guaranteed mechanisms that provide certainty to private investors. Even multilateral development banks, called upon to play a key role in reducing these uncertainties, have limited coverage capacity, creating a financial gap that prevents the scaling up of transformative projects.

In addition, the fossil fuel economy continues to be perceived as more secure and stable than sustainable alternatives, partly due to the absence of clear standards and adequate regulatory conditions, which discourages the channeling of capital towards low-carbon solutions.

5.1.1.1. Response

To overcome these limitations, it is necessary to transform the investment logic and make the climate transition perceived as a safer and more profitable option than continuing with the fossil fuel model. This involves the creation of innovative financial instruments such as sovereign green bonds, thematic bonds linked to climate objectives, and sustainable financial products designed for households and businesses.

It is also necessary to expand the use of exchange rates and financial risk hedging mechanisms that reduce uncertainty for international investors and facilitate investment in mitigation and adaptation. The establishment of clear and consistent regional green taxonomies will make it possible to classify which projects qualify as sustainable, providing greater confidence to private capital.

21 De Miguel et al., *Financing needs and climate goals.*

Finally, it is essential to train regulators and public policy makers in risk analysis, green taxonomies and sustainable finance, so that the financial system is oriented towards low-carbon investments. In the same vein, the adoption of advanced analytical tools that integrate climate impacts into economic models—such as integrated assessment models—makes it possible to project physical and transition impacts, identify sectors with comparative advantages, and anticipate vulnerabilities. The use of indicators such as planetary boundaries at the national level and the development of climate stress tests in central financial institutions will strengthen decision-making, offering greater certainty to public and private actors.

5.1.1.2. Opportunity for collaboration

One concrete avenue for cooperation is to coordinate efforts between governments, multilateral development banks, the private sector, and investment funds to expand guarantees for climate projects. The establishment of regional green investment platforms could serve as a meeting point to mobilize resources, share risks, and attract external capital.

Bi-regional collaboration (between the European Union and Latin America and the Caribbean) would also make it possible to design joint financial products and share regulatory experiences that increase confidence in transition markets. In addition, the creation of regional observatories for climate-related macroeconomic data and analysis would provide comparable indicators, integrated assessment models and climate stress test results that would strengthen public planning and investor confidence.

5.1.2. LACK OF INTEGRATION OF CLIMATE OBJECTIVES INTO PUBLIC AND PRIVATE SECTOR ECONOMIC POLICIES

At the institutional level, the misalignment between the climate commitments reflected in the NDCs and national economic policies is one of the most structural gaps. While climate objectives set out a roadmap for decarbonization and adaptation, economic development strategies in many countries still fail to integrate them effectively, preventing these goals from being translated into public budgets, financial instruments or sectoral investment plans.

This disconnect is reinforced by fragmentation between different levels of government, both nationally and sub-nationally, which limits the ability to implement coherent policies across the territory. Although some countries have made progress in establishing robust regulatory frameworks, significant delays persist in regional coordination, particularly due to the absence of a common regulatory framework for energy, such as that which exists in the European Union.

Added to this are corporate dependencies, which condition transition plans and slow down the adoption of sustainability standards or mandatory disclosure of climate risks. Finally, it should be noted that many NDCs were conceived as aspirational documents at the international level and not as binding roadmaps for private investment, which limits their ability to guide the deployment of capital towards strategic sectors.

5.1.2.1. Response

Addressing these limitations requires strengthening climate governance through the effective integration of climate and economic agendas. Finance and economy ministries must participate in the design and monitoring of NDCs, ensuring that climate targets are reflected in budgets, development plans and sectoral policies.

The adoption of climate change framework laws and long-term strategies ensures institutional continuity and reduces vulnerability to changes in government, as well as facilitating the issuance of financial instruments such as green sovereign bonds. In addition, NDCs need to be transformed into instruments that transcend their aspirational nature and become effective roadmaps for investment. To this end, they must incorporate more robust economic content to facilitate financial planning, as well as the explicit inclusion of key infrastructure—such as transmission and distribution networks—within their plans. This evolution would make it possible to provide clearer guidance to the private sector, align climate action with investment decisions, and leverage the emerging role of non-electric renewable energies as vectors of productive development in the region.

At the same time, the incorporation of international sustainability standards and mandatory disclosure of climate risks increases transparency and makes it easier for both companies and investors to plan with certainty under adverse scenarios.

Likewise, the creation of robust emissions inventories and traceability systems that provide clear information on the sources and magnitude of emissions associated with imported goods (scope 3) will facilitate the integration of these variables into national climate policies.

5.2.2.2. Opportunities for collaboration

The creation of regional climate governance platforms provides a fundamental space for cooperation. These platforms could coordinate regulatory efforts, harmonize legal frameworks, share experiences in public policy and offer mechanisms for joint monitoring of climate progress. Bi-regional cooperation can focus on building a common energy framework that brings coherence to transition investments and reduces regulatory fragmentation between countries.

5.1.3. TECHNOLOGICAL, INFRASTRUCTURE AND REGULATORY CONSTRAINTS

In terms of technology and infrastructure, limited progress in their development is a major obstacle to meeting decarbonization targets. Currently, installed clean generation capacity is insufficient, and it is estimated that it would need to increase sixfold to meet climate neutrality targets by mid-century.

This deficit is exacerbated by deficiencies in electricity transmission and distribution systems, where losses are, in many cases, equivalent to the progress made with the expansion of non-conventional renewable energies.

Added to this are regulatory bottlenecks, as the legal frameworks of many countries do not yet cover emerging technologies such as green hydrogen, artificial intelligence applied to energy management, or second-life batteries. Strategic projects for the region, such as hydrogen development, face additional barriers stemming from a lack of enabling infrastructure—ports, railways, and transmission networks—as well as complex administrative and regulatory processes in environmental and social matters.

The implementation of sustainable projects also requires the coordination of a wide range of actors, including local governments, manufacturers, energy distributors, financial institutions, and communities, which increases complexity and delays completion times. At the same time, the fragmented governance of battery recycling reveals another technological and management weakness that limits the possibility of consolidating circular value chains.

Finally, the emergence of new energy demands, such as those generated by the rapid expansion of data centers or the growth of electromobility, is not being sufficiently incorporated into the planning of electricity systems, creating risks of saturation and future imbalances.

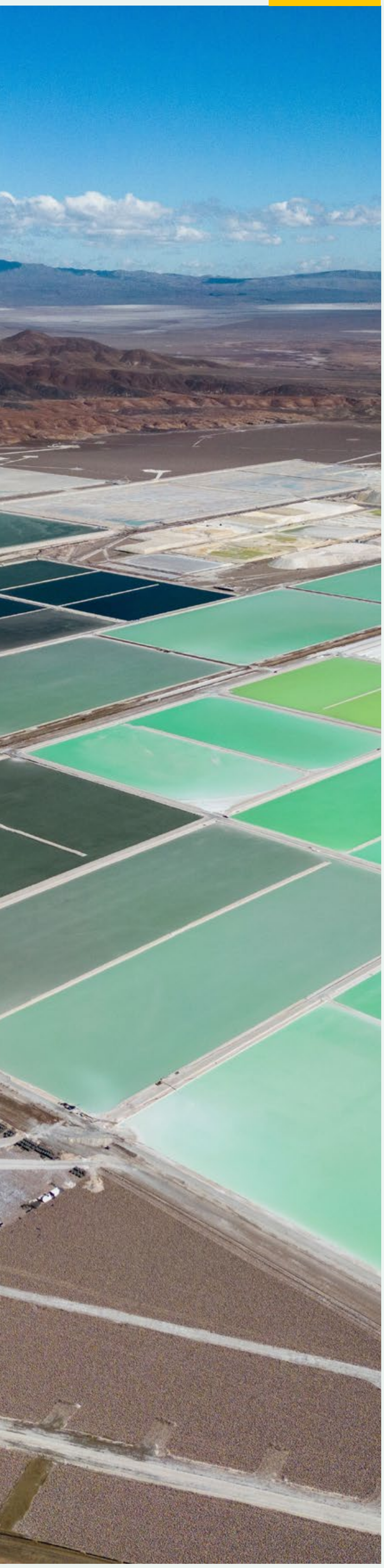
5.1.3.1. Response

It is a priority to accelerate solar, wind and geothermal energy projects, accompanying them with energy storage systems that ensure stability in supply. Similarly, the electricity transmission and distribution network must be expanded and modernized to reduce losses and enable the massive integration of renewables, as well as the production of green hydrogen. Updating regulatory frameworks to include new technologies such as green hydrogen, carbon capture and storage, and second-life batteries is essential.

In this regard, it is urgent to address the regulatory bottlenecks that hinder the deployment of emerging technologies, such as hydrogen, given that many legal frameworks do not yet contemplate them and hinder their commercial and industrial use. Overcoming these regulatory limitations must be accompanied by decisive investment in electricity and road infrastructure, which are essential components for both the energy transition and the development of sustainable mobility.

Likewise, more robust governance is required for recycling and circular economy systems to ensure the recovery of critical minerals and reduce dependence on new extraction. In addition, the implementation of sustainable projects requires the coordination of multiple actors—local authorities, manufacturers, energy distributors, financiers, and communities—which increases the complexity of execution.

Added to this is the growing pressure from data centers, whose significant energy demand is not yet sufficiently considered in the planning of electricity systems. Integrating both distributed generation needs and this new demand into regional planning from the outset would make it possible to anticipate imbalances, optimize installed capacity and promote joint energy efficiency solutions.



5.1.3.2. Opportunities for collaboration

A clear opportunity for cooperation lies in promoting regional shared infrastructure projects, such as hydrogen corridors or electricity interconnection networks that integrate several countries. Academic and business collaboration in applied research can facilitate technology transfer in strategic areas.

Furthermore, the creation of regional battery recycling and critical mineral management programs would consolidate circular value chains, while promoting local employment and technological resilience. In this regard, a joint initiative could be promoted involving regional recycling centers specializing in second-life batteries, with the participation of technology companies, universities and multilateral organizations. This initiative would facilitate the recovery of lithium, cobalt and nickel, ensure environmental standards and generate new sustainable production chains.

In this regard, it is essential to strengthen the relationship between technology, academia and the private sector. The energy transition requires aligning business strategies with national climate commitments, promoting innovation in areas such as artificial intelligence and second-life batteries to improve the efficiency of the energy system. Academia must play a central role in applied research, the development of new solutions and technological certification, which requires building a regional university strategy that accompanies the transition with local knowledge and training capacity.

Similarly, multi-stakeholder coordination platforms can be established to bring together local governments, manufacturers, energy distributors, financiers and communities in order to accelerate project implementation and reduce delays resulting from institutional and regulatory fragmentation. A practical example would be the creation of a regional platform for green hydrogen projects, involving national governments, local authorities, energy companies, equipment manufacturers, financial institutions and communities. This platform could coordinate everything from initial studies to obtaining environmental licenses, building ports and transmission lines, and channeling multilateral financing, thereby reducing implementation times and maximizing transparency and social acceptance.

Similarly, regional cooperation focused on regulatory harmonization and investment in shared critical infrastructure—such as electrical interconnections and sustainable transport corridors—would reduce legal bottlenecks, attract greater private investment, and accelerate the adoption of emerging technologies.

5.1.4. DEFICIT IN CITIZEN PARTICIPATION

The energy transition process cannot be analyzed in isolation from the social and territorial conditions that surround it. The deficit in citizen participation is a significant barrier, as it reduces the social legitimacy of energy transition projects and hinders their implementation.

In addition, consideration must be given to the gap between citizens stated preferences—who in surveys often express a preference for sustainable options—and their actual consumption behavior, which continues to be determined by purchasing power and the lack of adequate alternatives. The aspiration to purchase a private vehicle continues to predominate among the population in the absence of efficient and accessible public transport systems.

In cities, the rapid expansion of electromobility also poses new challenges: if it is not integrated into holistic urban transport planning, it can lead to 'green congestion' that reproduces current problems without having a real impact on emissions.

At the territorial level, there are also significant inequalities in the capacity of municipalities and regions to implement climate policies. Some countries, such as Chile, show how the decentralization of responsibilities without adequate resources creates implementation gaps that, in practice, can widen internal inequalities in access to the benefits of the transition. Added to this is the vulnerability of communities and ecosystems to risks associated with water scarcity, biodiversity loss and an increase in the frequency of extreme events, which reinforces the need for policies that combine energy efficiency with social inclusion.

Furthermore, the lack of accessible financial products, such as green mortgages or loans for clean technologies in the home, limits the ability of households to actively participate in the transition process.

5.1.4.1. Response

Citizen participation processes in the planning and implementation of NDCs are essential, as well as a key component in facilitating the implementation of energy projects with legitimacy and social acceptance.

Integrating climate action into urban environments. In cities, electromobility must be integrated into holistic planning that includes mass public transport, urban redesign and space management to avoid new congestion. In addition, the decentralization of climate responsibilities must be accompanied by financing and capacity building for local governments, preventing territorial inequalities from deepening.

Overcoming these barriers also requires the design of inclusive financial products that make it easier for households to adopt clean solutions, such as green mortgages or soft loans for energy technologies in the home. These tools make it possible to overcome the obstacle of high initial costs and democratize access to sustainability.

At the same time, just transition policies must be implemented that incorporate criteria of gender equality, social inclusion and protection of vulnerable communities, as in the case of Chile's NDC.

5.1.4.2. Opportunities for collaboration

One opportunity for cooperation lies in the creation of territorial exchange networks that allow for the sharing of experiences in sustainable urban planning, local financing, and integrated mobility.

Joint work between municipalities, universities and companies can generate solutions adapted to each context, while regional funds can support pilot projects on electromobility and community resilience in medium-sized and small cities.

5.1.5. SYSTEMIC RISKS ARISING FROM CLIMATE CHANGE

There are environmental and climatic barriers that create a complex backdrop for the transition. The heavy dependence on hydroelectric power as the main component of the regional energy matrix, which until now has been a comparative advantage over other regions, is increasingly threatened by growing variability in precipitation patterns. This poses the risk of a return to the use of more polluting fossil fuels in times of drought or water stress.

Added to this is the magnitude of the systemic risks arising from both climate change and biodiversity loss. These processes exacerbate pre-existing structural vulnerabilities and directly threaten food security and social stability.

The latest climate projections reinforce this adverse scenario: the probability of limiting global warming to 1.5 °C is progressively decreasing, while the most plausible scenarios range between 2.8 and 3 °C. This outlook increases the urgency of overcoming the barriers described above, as otherwise there is a risk of irreversible impacts on ecosystems, critical infrastructure, and particularly the most vulnerable communities.

In this context, the energy transition in Latin America and the Caribbean must not only face economic, institutional and technological constraints, but is also taking place against an increasingly vulnerable environmental backdrop, which multiplies the demands for policies capable of ensuring long-term resilience and sustainability.

5.1.5.1. Response

Diversification towards renewables other than hydroelectricity is essential to reduce vulnerability to water variability. Promoting the accelerated deployment of other renewable energy sources such as solar, wind and hydrogen not only reduces exposure to droughts and water stress but also generates jobs and attracts new investment in high-potential sectors.

Integrating ecosystem-based adaptation strategies is equally important. The restoration of forests, wetlands and mangroves strengthens resilience and generates multiple social and economic benefits.

At the institutional level, climate commitments must be linked to long-term strategies to design resilient policies under conditions of uncertainty. These policies should include the climate financing mechanisms mentioned above, as well as technology transfer programs.

Finally, institutional and multilevel governance capacities must be strengthened to ensure coordination between national and local governments and communities. Integrating climate risk management into economic and social development plans will reduce the negative impacts of climate change on ecosystems, critical infrastructure, and vulnerable communities.

5.1.5.2. Opportunities for collaboration

There are ample opportunities for cooperation on joint projects for biodiversity conservation, sustainable water management and restoration of key ecosystems. These initiatives can be integrated into climate action plans, generating synergies between adaptation and mitigation.

Regional and international collaboration can also focus on developing early warning systems and shared climate risk management mechanisms, increasing the capacity to respond to extreme events.

Session 2:

Private sector perspective, main challenges and recommendations for accelerating investment in green industry in Latin America and the Caribbean

Session 2: 06

Private sector perspective, main challenges and recommendations for accelerating investment in green industry in Latin America and the Caribbean

The second session of the working group, dedicated to the role of the private sector in the sustainable transition, discussed experiences and challenges in strategic sectors such as telecommunications, waste management and the circular economy, the cosmetics industry, electronic recycling and climate finance. The presentations highlighted the need for companies to take a more active role in decarbonization, facing growing pressures from digitalization, energy efficiency, climate resilience and the adoption of circular models.

In telecommunications, the debate focused on the progressive increase in data traffic and infrastructure costs, as well as the technological migration to fibre networks, which consume 80% less energy than copper networks. The urgency of incorporating climate risk management protocols to respond to extreme events was also highlighted, emphasizing that European best practices—such as the total closure of copper networks in Spain—should be exported in a coherent manner to Latin America and the Caribbean, avoiding regulatory fragmentation.

Waste management and the circular economy were presented as areas with high potential for innovation but marked by structural barriers: obtaining permits, social acceptance, supply risk and financial constraints. Examples such as the recovery of marine by-products or electronic recycling plants show opportunities to generate local added value and green jobs, although their scalability depends on hybrid financial schemes that integrate producers, recovery operators and development banks.

The cosmetics industry, through the experience of a regional direct sales company with extensive experience, demonstrated how the private sector can structure solid sustainability strategies around the circular economy, emissions reduction and women's empowerment, taking advantage of regulatory incentives in countries such as Colombia. However, the difficulty of consolidating homogeneous frameworks in the region persists, particularly with regard to the calculation and reporting of scope 3 carbon footprints.

With regard to electronic waste and batteries, the experience of a pioneering technology recycling company illustrated how the sector faces simultaneous international restrictions (Basel Convention), competition from the informal sector and the absence of specific financing for reverse logistics. It was noted that the European implementation of the **Battery Passport** reinforces the need to integrate Latin America and the Caribbean into global value chains for critical minerals, with more stringent traceability and sustainability criteria.

Finally, the case of a national climate finance platform that brings together the financial sector, companies and regulators around standardized methodologies (ACT) was analyzed. This experience, linked to the country's preparations for COP30, shows how the active participation of the private sector is essential to close the climate investment gap, estimated at between 3.7% and 4.9% of annual regional GDP.

6.1. Common barriers, preliminary proposals and opportunities for collaboration

6.1.1. FINANCIAL CONSTRAINTS IN THE TRANSITION TO SUSTAINABLE TELECOMMUNICATIONS, THE CIRCULAR ECONOMY AND THE ABSENCE OF STANDARDIZED INDICATORS

The financing gap was an obstacle that was further explored during the second session of the working group. The replacement of telecommunications infrastructures such as the switch from copper to fibre optics, which reduces energy consumption by 80%—requires large investments that often exceed the borrowing capacity of companies in the sector.

Added to this limitation is the capital-intensive nature of circular economy projects, such as waste recovery or electronic recycling plants, which require long-term supply commitments to be viable, but are often developed without these guarantees, increasing financial risks.

Access to bank credit remains limited: only companies with established relationships with financial institutions can access soft loans, while most depend on international cooperation and multilateral funds, which are valuable mechanisms but insufficient to cover the scale of needs.

In consumer sectors, such as cosmetics, the absence of standardized and verifiable long-term indicators hinders access to green financing, as investors perceive a high degree of uncertainty.

The lack of specific financial mechanisms for reverse logistics and the circularity of critical materials widens the gap, leaving the region lagging the speed with which other economies are integrating their value chains into the global transition. Added to this are the difficulties in structuring vehicles that combine public and private investment, which limits the mobilization of capital towards transformative projects. Although highly liquid sovereign wealth funds are mentioned as possible catalysts, their participation requires guaranteeing adequate returns not only in financial terms, but also in emotional and reputational terms, to legitimize their role in the transition.

6.1.1.1. Response

Overcoming these limitations requires the deployment of innovative financial instruments adapted to the regional reality. In telecommunications, regulatory and fiscal mechanisms must be implemented that recognize the energy savings of fibre optics and facilitate the recovery of infrastructure investments.

In the circular economy, co-investment models that integrate producers and recyclers into project capital can reduce uncertainty and ensure stable supply contracts.

The cosmetics and consumer goods industry can expand its access to green financing by standardizing scope 3 carbon footprint methodologies and publishing verifiable commitments that build trust among banks and investors. At the regional level, the adoption of uniform green taxonomies and the consolidation of instruments to hedge against financial and exchange rate risks are essential to attract external capital and reduce the perception of risk.

It is also necessary to design mixed financial vehicles that combine public and private investment, facilitating the participation of sovereign wealth funds as catalysts. To this end, adequate remuneration must be guaranteed, not only in financial terms, but also in terms of social legitimacy and reputation, so that their involvement reinforces confidence in the transition.

6.1.1.2. Opportunities for collaboration

EU-LAC bi-regional cooperation offers an ideal framework for articulating green investment platforms that mobilize resources from development banks, multilateral funds and private capital towards strategic projects.

One concrete avenue would be the creation of EU-LAC co-investment funds with shared guarantees, which are necessary to accelerate the incorporation of high-impact green industry and circular economy projects.

Similarly, European experience in green bonds, just transition mechanisms and innovative climate finance can be transferred to Latin America and the Caribbean to broaden the available financing base. Convergence in sustainable taxonomies will facilitate the comparability of projects and reduce regulatory fragmentation, increasing the confidence of international investors and accelerating the closing of the climate investment gap in the region.

In this regard, bi-regional cooperation can promote pilot schemes where Latin American and European sovereign wealth funds co-invest in transition projects, combining public guarantees and shared ESG metrics, which would allow for the rapid scaling up of initiatives with high transformative impact.

6.1.2. PERMITTING, LEGAL UNCERTAINTY AND LACK OF REGULATORY HARMONIZATION

The fragmented and, in many cases, obsolete regulatory framework is a major obstacle to private sector action. In telecommunications, the expansion of fibre networks faces so-called "permitology", a web of municipal and local authorizations that delays the replacement of obsolete infrastructure and makes projects more expensive.

In waste management, obtaining environmental permits is slow and uncertain, creating legal uncertainty for recovery projects, which require short deadlines and operational certainty to be financially viable. The private sector also identified the urgent need to streamline authorization processes, highlighting that the digitization of procedures can be a transformative tool. However, it was stressed that this digitization must be accompanied by a comprehensive improvement of administrative frameworks, avoiding it becoming mere technological bureaucratization without solving the underlying problems.

At the regional level, ESG regulations are progressing unevenly: while some countries, such as Colombia, have specific tax incentives and circulars, in others the requirements are still in their infancy, creating legal uncertainty for companies operating in different markets.

The picture is further complicated by international restrictions, such as the Basel Convention, which prevents the cross-border transport of used batteries and limits the possibilities for a regional circular economy. At the same time, the European Union is imposing increasing obligations on companies that want to integrate into its value chains, such as the requirement to report impacts, risks and opportunities (IROs) or the future application of the **Battery Passport**. These obligations, which have no equivalent in Latin America and the Caribbean, create a regulatory gap that limits the competitiveness of companies in the region. In Brazil, political sensitivity in strategic sectors such as oil, gas and transport has slowed the publication of individualized results from the **Climate Finance Hub**, reducing transparency and weakening the private sector's ability to demonstrate progress to international actors.

An additional challenge is linked to the lengthy processing times for critical infrastructure, such as high-voltage power lines, which can take up to a decade to obtain authorization. This regulatory delay creates uncertainty for investors, slows down the roll-out of energy transition projects and weakens the ability to respond to decarbonization commitments.

6.1.2.1. Response

Overcoming these limitations requires progress in harmonizing and modernizing regulatory frameworks at the national and bi-regional levels. In telecommunications and waste, the digitization of permits and the creation of one-stop shops can reduce transaction times and costs, providing certainty for investors.

However, this digitization must be accompanied by comprehensive administrative reforms that modernize institutional frameworks, eliminate duplication and strengthen transparency, so that the streamlining of processes is real and not merely a technological change.

In terms of ESG, the region needs to consolidate regional standards that ensure consistency between countries, reduce fragmentation and allow companies to operate with comparable metrics.

In the area of electronic waste and batteries, international agreements should be explored to adapt the restrictions of the Basel Convention, promoting controlled circuits that ensure environmental traceability without blocking the circulation of strategic materials.

The institutionalization of climate and corporate sustainability reporting platforms can strengthen transparency, reducing exposure to political volatility and increasing the confidence of banks and investors. Similarly, it is urgent to reform the processing procedures for critical infrastructure, such as high-voltage power lines, shortening deadlines that can currently extend up to a decade. The digitization of permits and the creation of one-stop shops would significantly reduce this bottleneck.

6.1.2.2. Opportunities for collaboration

EU-LAC cooperation opens a privileged space to promote a bi-regional regulatory framework for sustainability. This could be structured around three axes: the creation of common ESG standards and green taxonomies that enable the integration of sustainable value chains; the establishment of mechanisms for the mutual recognition of environmental permits and certifications, which reduce red tape and accelerate the implementation of sustainable projects; and the negotiation of regulatory agreements that facilitate the controlled circulation of batteries and critical materials, in line with the European **Battery Passport**.

In this process, European experience in digitizing environmental procedures and one-stop shops can be transferred to Latin America and the Caribbean as a lever for institutional improvement, ensuring that the streamlining of authorizations is accompanied by structural reforms in administrative governance.

In addition, European experience in corporate transparency and climate reporting can be transferred to Latin America and the Caribbean, strengthening corporate accountability and the ability to attract international financing for projects aligned with the just transition.

This cooperation can also promote technical assistance programs that support governments in modernizing their regulatory frameworks, especially in streamlining permits for electricity transmission and renewable energy infrastructure, a critical area for accelerating compliance with NDCs.

6.1.3. TECHNOLOGICAL AND INFRASTRUCTURE CONSTRAINTS

Technological and infrastructure constraints are another bottleneck for the private sector's energy transition. In telecommunications, although fibre optics offer energy savings of 80% compared to copper, their deployment remains incomplete and uneven. High installation costs, coupled with fragmented authorization processes at the local level, are delaying the replacement of obsolete networks that continue to generate high energy consumption and CO_2 emissions.

In the circular economy, innovation projects—such as the use of biotechnologies to degrade plastics or the recovery of marine by-products—face difficulties in terms of scalability, technical feasibility and industrial acceptance, limiting their impact beyond experimental pilots.

In electronic waste, the lack of infrastructure for shredding, advanced separation and recovery of critical minerals forces the export of recycled materials to other continents, wasting the potential to generate local added value. Although technology is available to recycle batteries and electronic devices, Latin America and the Caribbean have not yet deployed the necessary capacities and infrastructure to do so at scale, limiting the region's integration into global circular economy chains. The lack of digital traceability and technological certification also prevents these materials from being integrated into global supply chains, where the demand for transparency is growing.

Furthermore, critical telecommunications and energy infrastructure is exposed to a growing risk of disruption from climate disasters, such as floods or storms, highlighting the vulnerability of assets that are essential for operational continuity. Without a decisive investment in resilience and digitalization, these limitations will continue to constrain the ability of Latin American companies to competitively insert themselves into the global transition. 2024 was the year with the most recorded climate disasters, intensifying the urgency of integrating risk management into business strategies. The discussion even introduced the concept of a "climate blackout" as a possible systemic disruption to anticipate, highlighting the need to review insurance, quantify damage and strengthen institutional response channels, such as the 112 and 900 emergency networks.

6.1.3.1. Response

To overcome these obstacles, it is essential to combine the accelerated adoption of proven technologies with the consolidation of applied innovation schemes. In telecommunications, governments must facilitate the progressive replacement of obsolete networks with fibre optics, accompanied by resilience plans that reinforce the protection of critical infrastructure against climate disasters.

In the circular economy, it is essential to institutionalize public-private innovation platforms that allow the effectiveness of emerging technologies to be validated before they are scaled up, reducing the perception of risk for investors.

In electronic waste, the creation of regional centers specializing in advanced separation and recovery of strategic minerals, with digital traceability systems, can lay the foundations for a competitive recycling industry capable of integrating into global chains. The development of local capacities for recycling batteries and electronic devices must become a strategic priority, with joint investments in infrastructure and technical training to formalize processes that are currently scattered throughout the informal economy.

The incorporation of digital tools, artificial intelligence and predictive monitoring solutions, both in telecommunications and critical infrastructure, will also make it possible to anticipate failures and optimize asset management, reducing exposure to climate and financial risks.

At the same time, both the public and private sectors must commit to technological innovation programs geared towards transition, allocating resources to research, intrapreneurship incubation[22] and scaling up solutions that enable the structural decarbonization of green industry. In this regard, promoting intrapreneurship and valuing internal talent within companies can become a driver of green innovation, fostering locally developed technological solutions that are better adapted to the region's productive contexts.

Alongside these measures, it is essential to strengthen climate insurance schemes, develop more accurate methodologies for quantifying damage, and establish response protocols that reduce recovery time after a disaster.

22 Intrapreneurship is the set of initiatives and activities that a person develops within a company or organization—in line with or complementary to their job—to promote their own or collective projects that generate value, foster innovation and contribute to improving the organization's competitiveness.

6.1.3.2. Opportunities for collaboration

The creation of joint innovation consortia between the EU and LAC, bringing together companies, universities and research centers in strategic sectors such as green telecommunications, battery recycling and sustainable cosmetics, can consolidate technology transfer platforms, accelerate the scaling up of solutions and strengthen regional value chains aligned with the ecological transition.

Secondly, European technology transfer in the areas of digital traceability, certification of recycled materials and resilient infrastructure standards can accelerate the region's capacity to meet global sustainability requirements. Likewise, the design of joint programs for resilient critical infrastructure, financed with multilateral funds and private capital, would enable Latin America and the Caribbean to reduce their climate vulnerability and, at the same time, competitively insert themselves into the global transition towards low-carbon value chains. In this context, the creation of a bi-regional network of battery and electronic device recycling plants, with European standards of traceability and circularity, would be key to consolidating local capacities and reducing dependence on exports to Asia.

In this context, cooperation could include the development of bi-regional early warning systems, shared climate insurance schemes and coordinated emergency response protocols, with a view to anticipating systemic disruptions such as those associated with a possible 'climate blackout'.

In addition, EU-LAC cooperation can promote R&D consortia in green industry, with joint financing and knowledge transfer, ensuring that innovation is the central driver of technological transition and not a marginal component. In this process, the EU can share experiences in incubating green intrapreneurship, open innovation programs and training specialized technical talent, strengthening the link between business innovation and sustainability.

6.1.4. MARKET DISTORTIONS AND COMPETITION

The functioning of the market in strategic sectors reveals dynamics that hinder efficiency and sustainability. In telecommunications, more than half of data traffic is concentrated in a small number of large companies that externalize infrastructure costs to end users, creating a perverse incentive scheme where the necessary investments fall exclusively on network operators.

The absence of regulatory mechanisms requiring the reporting of **Total Cost of Ownership** (TCO) reinforces competition based solely on the initial price, without considering criteria such as sustainability, energy efficiency or the recyclability of equipment.

In the field of electronic waste, the predominance of the informal sector—which manages around 42% of Waste Electrical and Electronic Equipment (WEEE) compared to 8% in the formal sector—distorts the market by offering low-cost services with serious environmental and social impacts. Much of the recycling of batteries and electronic devices takes place in this informal sector, which represents a significant barrier to scaling up, prevents the traceability of critical minerals and weakens the formalization of circular value chains. These dynamics affect the competitiveness of companies that comply with environmental regulations and standards. This phenomenon is compounded by the fragmentation of small national markets, such as Costa Rica's, which limits the viability of industrial-scale business models.
Finally, the massive export of recycled materials to Asia reflects a structural loss of regional added value: instead of becoming inputs for local industrial chains, critical minerals end up being processed on other continents, weakening the opportunity for Latin America and the Caribbean to position themselves as key players in the global circular economy.

6.1.4.1. Response

Correcting these distortions requires redesigning market incentives so that sustainability is perceived as the most profitable and competitive option.
In telecommunications, the introduction of regulatory frameworks that apply the **Fair Share** principle—requiring large data generators to contribute to network costs—would balance responsibilities and ensure the financial sustainability of the system.

Mandatory reporting of TCO indicators in technology procurement would promote competition geared towards efficiency and circularity, gradually replacing the logic of initial price as the sole criterion.

In the field of electronic recycling, it is necessary to gradually formalize the informal sector through training, certification and just transition programs that integrate workers into formal value chains, reduce environmental impacts and improve competitiveness.

The formalization of battery recycling is a critical issue, as its current informality not only affects the traceability of strategic materials, but also limits the region's ability to access global supply chains that require environmental certifications. For small-scale markets, the regionalization of recycling and recovery plants would generate economies of scale and reduce unit costs, increasing the financial viability of projects.

6.1.4.2. Opportunities for collaboration

The creation of bi-regional green trade platforms promote the exchange of recycled materials under traceability and sustainability standards, preventing the loss of added value outside the region.

In telecommunications, the transfer of EU regulatory experiences on **Fair Share** and TCO can serve as a basis for adapting similar mechanisms to the Latin American context.

In electronic waste, technical cooperation programs and preferential financing could promote the formalization of the sector and open up access to European markets for certified recycled materials.

Finally, European commitments to guarantee the purchase of recycled strategic materials in Latin America and the Caribbean would provide a concrete incentive for the region to strengthen its industrial capacities in the circular economy and reduce its dependence on extractive models.
In particular, the creation of a bi-regional certification mechanism for battery recycling, inspired by the European **Battery Passport** model, would enable Latin America and the Caribbean to integrate into global value chains, ensuring competitiveness, traceability and sustainability.

6.1.5. SOCIAL RESISTANCE AND COMMUNITY ACCEPTANCE

The social legitimacy of sustainable projects is a critical factor for their implementation, and in Latin America and the Caribbean this faces multiple challenges. In waste management, local communities often resist the installation of recovery plants due to perceived impacts such as odors, waste transport or environmental risks, which fuels territorial conflicts and delays their implementation. In electronic waste, around 30% of devices remain stored in homes due to citizens' lack of knowledge about their proper disposal, which limits flows to formal recycling.

The strong presence of the informal sector in material recovery reinforces this resistance: polluting practices such as burning cables to extract copper generate environmental and health externalities that directly affect vulnerable communities, consolidating the negative perception of recycling activities. In consumer sectors such as cosmetics, the purchasing power gap restricts access to sustainable products: although consumers stated preference leans towards responsible alternatives, their actual purchasing power limits their expansion. In telecommunications, obtaining permits to deploy networks also reflects the need to generate greater community acceptance, linked to concerns about territorial and urban impacts. Taken together, these social resistances show that the green transition cannot be designed solely from a technological and financial perspective but requires an inclusive narrative that places communities and consumers at the center.

This outlook is reinforced by the recognition that social resistance is part of the structural challenges that limit the implementation of sustainable projects in the region. Overcoming these challenges requires participatory planning processes that reinforce communities' confidence in the economic, social, and environmental benefits of the transition.

6.1.5.1. Response

Overcoming this resistance requires integrating the social dimension into the planning of sustainable projects. In waste management, it is essential to design early community consultation processes, accompanied by mechanisms to mitigate local impacts, such as the use of closed plants or controlled transport systems.

In the field of electronic waste, mass awareness campaigns and the creation of accessible return systems can mobilize the flow of devices towards formal recycling, while promoting the progressive integration of informal workers through training, certification and green employment programs.

In consumer sectors, access to sustainable products can be democratized through soft loans, tax incentives and collaborative economy schemes, such as the reuse and refilling of packaging.

In telecommunications, the simplification of permits must be accompanied by clear communication strategies that highlight the benefits of new networks in terms of energy efficiency, emissions reduction and climate resilience, building trust between local authorities and citizens.
Across the board, participatory planning and multi-stakeholder dialogue spaces should become the norm for the design of sustainable projects, reducing social conflict and ensuring that the benefits are perceived as tangible by communities.

6.1.5.2. Opportunities for collaboration

EU-LAC cooperation can help to overcome this resistance by strengthening public education and awareness programs, drawing on European experience in circular economy, e-waste recycling and responsible consumption campaigns.

The creation of bi-regional just transition programs would enable the integration of informal workers into emerging sectors of the green economy, reducing social inequalities and strengthening the acceptance of projects.

Likewise, the formation of EU-LAC sustainable municipality networks would open a space for the exchange of good practices in community waste management, the deployment of green infrastructure and the promotion of sustainable lifestyles, fostering the territorial legitimacy of the climate transition.

6.1.6. EMERGING CLIMATE GOVERNANCE, LACK OF VERIFIABLE METRICS AND RESISTANCE FROM THE FOSSIL FUEL INDUSTRY

The integration of sustainability into corporate governance remains one of the most notable weaknesses of the private sector in Latin America and the Caribbean. Despite significant progress in some areas, such as the reduction of direct emissions in the consumer and service sectors, structural gaps remain that prevent the consolidation of long-term corporate strategies. In the cosmetics industry, for example, substantial reductions have been achieved in scopes 1 and 2 thanks to energy efficiency and the use of renewable energies, but there are no consolidated methodologies or verifiable commitments in scope 3, which covers most of the carbon footprint in the value chain. This gap undermines the credibility of climate targets and reduces investor and consumer confidence.

In telecommunications, the lack of transparency on the **total cost of ownership** of equipment and networks limits corporate decision-making geared towards energy efficiency, durability and material circularity. In the e-waste recycling sector, dependence on one-off contracts with manufacturers and exposure to the volatility of international prices for critical minerals make it difficult to consolidate resilient, diversified and competitive business models.

Furthermore, traditional players in carbon-intensive sectors such as oil, gas and transport remain reluctant to commit to the transition, delaying the adoption of credible corporate roadmaps aligned with national climate commitments. These limitations are exacerbated by growing pressure from regulators, banks and insurers demanding more comprehensive ESG reporting, creating tensions between companies' internal capacity to collect and manage information and external demands for transparency and comparability. In this scenario, corporate governance on climate issues remains an emerging and fragmented area, threatening to leave Latin American companies lagging international competitors that already integrate sustainability into the core of their business strategy.

Brazil, in this regard, is at a key moment in its strategic planning to advance its green agenda. The value of creating spaces for multi-stakeholder dialogue has been emphasized, allowing relevant actors to define together which specific activities should be implemented. This participatory planning is seen as an enabling condition for a more efficient and legitimate transition, reinforcing the need for inclusive and shared governance.
It is also extremely important for companies to play an active role in climate adaptation plans. The experience of the European Climate Adaptation Plan (ECAP), scheduled for 2026, is an example of how to institutionalize this participation.

6.1.6.1. Response

Addressing these weaknesses requires a transformation of corporate governance towards sustainability as a strategic principle, rather than as an isolated function of social responsibility. In consumer sectors, such as cosmetics, it is essential to standardize methodologies for measuring Scope 3 emissions and establish verifiable commitments that strengthen the credibility of climate goals.

In telecommunications, the mandatory adoption of LCA criteria in technology procurement processes would ensure that energy efficiency, durability and circularity of equipment are central elements in decision-making. For e-waste recycling, diversifying revenue streams through long-term supply contracts, environmental services or recycled material certifications would increase the resilience and stability of business models. In carbon-intensive sectors, the adoption of decarbonization roadmaps validated with international methodologies, such as ACT (**Assessing Low Carbon Transition**), would enable progress towards credible commitments that facilitate access to finance and reduce reputational risks.

Similarly, companies need to integrate themselves into national and regional climate adaptation plans, ensuring that their internal strategies are aligned with long-term public policies. This would not only strengthen the legitimacy of adaptation plans, but also enable the anticipation of physical and regulatory risks.

The Brazilian experience shows that participatory planning and multi-stakeholder dialogue are essential tools for building legitimacy and reducing fragmentation. For companies, getting involved in these spaces represents an opportunity to align their strategies with national transition plans, anticipate regulatory changes, and position themselves as strategic partners in the development of climate roadmaps. Extending this model to the whole of Latin America and the Caribbean would be a way to strengthen coherence between public policies and corporate strategies, sharing good practices and consolidating adaptation as a central pillar of business strategy.

Finally, sustainability must permeate all organizational levels. Mandatory sustainability training programs for boards of directors—already established in European companies—offer an example to be replicated in the region. Rather than a cost, this investment in training is conceived as a strategic tool to mitigate risks, transform corporate culture and turn sustainability into a long-term competitive asset.

6.1.6.2. Opportunities for collaboration

Bi-regional cooperation can be a key catalyst for strengthening sustainable corporate governance. Firstly, through joint training programs on ESG metrics, climate risk management and carbon footprint, aimed at executives and sustainability managers.

Secondly, through the creation of bi-regional reporting and transparency platforms that standardize information and reduce methodological fragmentation, facilitating comparability between companies and sectors. The transfer of European experiences in the development of green taxonomies and sustainable governance frameworks can increase the credibility of Latin American companies in international markets. Finally, the establishment of preferential financing schemes linked to the strength of climate governance would generate a virtuous circle in which companies most committed to sustainability would have access to better credit conditions, thus reinforcing the integration between corporate strategy, competitiveness and just transition.

EU-LAC cooperation can promote the creation of bi-regional climate adaptation plans that explicitly include the private sector in their design and implementation, taking the European ECAP as a reference. This would allow for the sharing of good practices in climate risk management, strengthen coherence between business strategies and public policies, and generate greater confidence in the resilience of the transition.

In addition, cooperation can promote the creation of bi-regional executive training and mandatory sustainability programs for boards of directors, replicating European experiences in leading companies. This would help to consolidate sustainability as an integral part of corporate culture and reinforce the legitimacy of climate commitments.

Added to this is the opportunity to promote bi-regional multi-stakeholder green planning forums, bringing together companies, governments, development banks, civil society and academia. These spaces would allow for the exchange of participatory methodologies, strengthen the social legitimacy of transitions and ensure that national agendas incorporate the voice of the private sector and civil society. In this way, EU-LAC cooperation would not only harmonize standards, but also consolidate trust among diverse actors, an essential condition for moving towards a just and inclusive transition.

RESULTS PER SESSION

Session 3: 07

Financing green industry investments in Latin America and the Caribbean

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Financing green industry investments in Latin America and the Caribbean

The third session of the Working Group on Latin America and the Caribbean focused on climate finance as a critical component for achieving the objectives of the 2030 Agenda and the goal of limiting global temperature rise to 1.5 °C, in accordance with the Paris Agreement. This session was designed to create a space for reflection focused on the magnitude of available flows, the existing gap in the region, and the enabling conditions necessary to mobilize transformative investments.

First, the importance of international financial architecture was highlighted, with special reference to the role of the World Bank, which allocates an average of $35 billion annually to projects with climate benefits. Of that total, 70% is directed towards mitigation—particularly energy transition—and 30% towards adaptation, with the explicit goal of achieving 50–50 parity. This distribution reflects an effort to balance emissions reduction with the need to strengthen resilience to the impacts of climate change, in line with multilateral commitments.

Latin America and the Caribbean face three major challenges in the energy transition: responding to the climate emergency by reducing emissions, the need to ensure efficiency to sustain economic growth, and improving quality of life by facilitating access to basic services and productive opportunities. This transition must be addressed in both energy production and financing mechanisms, focusing not only on the sphere of energy production, but also on the design and strengthening of financing mechanisms.

In this context, the region has an estimated climate finance gap of US$20 billion per year, revealing a significant gap between international commitments and the availability of effective resources. Despite technological advances in renewable energy generation, Latin America and the Caribbean continue to be net consumers of green technology rather than producers, which limits the attraction of private capital.

The session also highlighted the importance of enabling environments and bankability strategies: clear regulatory frameworks, investment attraction policies, trained human capital and credible investment methodologies capable of generating confidence among investors. It was also emphasized that there has never been such a volume of resources seeking projects in fertile sectors such as regenerative agriculture, watershed management and productive conservation, which requires improving the technical quality and governance of initiatives, as well as integrating local communities and producers in the implementation to ensure social legitimacy and economic sustainability.

Finally, the emerging opportunities in nature-based solutions, voluntary carbon markets and the role of CAF in green financing were highlighted, as well as the urgency of promoting innovative instruments that do not exacerbate inequalities and strengthen productive value chains in the region.

7.1. Common barriers, preliminary proposals and opportunities for collaboration

7.1.1. TECHNOLOGICAL DEPENDENCE, MULTILATERALISM AND IMMATURE GREEN MARKETS

Latin America and the Caribbean consume green technologies but do not produce them, which limits their ability to insert themselves into global value chains and attract private capital. To close this gap, multiple factors that restrict the mobilization of capital have been identified. First, there is a shortage of bankable projects—that is, initiatives that are sufficiently mature and sound in technical, financial, and governance terms—that can meet the standards required by international investors. Second, high dependence on multilateral funds (World Bank, IDB, and CAF) restricts diversification and capital mobilization.

Added to this is the limited access to large-scale guarantees, which are essential for reducing the perception of risk in contexts where private investment is more cautious. The lack of technical support in project design and implementation limits the quality of supply, while the lack of sophisticated climate finance instruments and the immaturity of green bonds and the carbon market—characterized by low liquidity, limited standardization and little international credibility—prevent the leveraging of private capital and the creation of adequate risk hedging mechanisms.

The great challenge is to generate sufficient competitiveness, which implies not only innovating in financial instruments, but also building enabling environments that reduce risks and increase investor confidence.

7.1.1.1. Response

Expand the role of regional and national development banks to provide guarantees, technical assistance, and co-financing; structure solid project portfolios with specialized technical support; and promote the creation of innovative financial instruments that leverage private capital and diversify risks.

Ultimately, strengthening the catalysts for climate finance—from project bankability to market maturity—is essential to attract significant volumes of private capital and compete with other more advanced regions in energy transition, particularly Asia.

7.1.1.2. Opportunities for collaboration

Move towards the creation of a regional decarbonization fund, inspired by experiences such as the Espírito Santo **Decarbonization Fund** in Brazil, which mobilizes public and private resources under transparent governance schemes.

Likewise, promoting bi-regional cooperation with the European Union on green taxonomies and interoperable carbon markets would attract investment, consolidate regulatory frameworks, and position Latin America and the Caribbean as a more competitive player in global climate finance.

7.1.2. LACK OF REALISTIC STRATEGIES, LOW PRIORITY FOR ADAPTATION AND DISADVANTAGE OF MIDDLE-INCOME COUNTRIES

At the strategic level, one of the main barriers is the lack of definition of real problems and the setting of unrealistic objectives. Some regional debates have raised the issue of competition with Asia as a horizon, which is unfeasible given the difference in production scale, technological capabilities and demographic structure. The absence of a precise definition of the problems to be solved can lead to strategies that are out of step with the reality of Latin America and the Caribbean, diverting resources from real climate and development priorities.

The region also faces a technological gap that puts it at a disadvantage compared to Asia in terms of mitigation. Given this reality, it is urgent to build alternative competitiveness in areas where Latin America and the Caribbean have comparative advantages, such as adaptation, carbon capture, and ecosystem services.

There are also opportunities in emerging clean energies. Following the relative saturation of investments in solar and wind power, greater possibilities are identified in the development of green hydrogen and the use of water resources, areas where Asia is less competitive and Latin America and the Caribbean could position themselves strategically. Added to this is the need for dynamic policies and instruments that reduce current distortions and stimulate investment. The exploration of multilateral mechanisms and specific industrial policies appears to be a key condition for directing investment towards next-generation clean energy.

Another limitation is that adaptation has been given insufficient priority compared to mitigation, leaving vulnerable communities without support. Added to this is the frequent exclusion of middle-income countries from international cooperation. Most cooperation schemes prioritize low-income countries, leaving middle-income countries, which make up a large part of Latin America and the Caribbean, in an ambiguous situation. These countries face serious challenges, such as energy poverty, but because they are not classified as the most vulnerable, they are often left out of concessional aid programs, which limits their opportunities for a just transition.

7.1.2.1. Response

Redefine the strategic objectives of the climate transition in line with the specific characteristics of Latin America and the Caribbean, give greater weight to adaptation in national and regional agendas, and broaden the eligibility criteria for international cooperation to include middle-income countries with high levels of socio-economic and climate vulnerability. In this regard, the introduction of mandatory ex-ante diagnostic methodologies—linking each climate objective to verifiable financial, institutional, and technological capacities—would allow goals to be aligned with regional realities and prevent the dispersion of resources in agendas disconnected from the priorities of Latin America and the Caribbean.

Redesign public policies that progressively eliminate fossil fuel subsidies and strengthen the competitiveness of renewables; promote research, development and innovation in green hydrogen and carbon capture technologies; and create industrial policy instruments that integrate energy transition, bioeconomy and ecosystem services.

7.1.2.2. Opportunities for collaboration

Use COP30 as a space to position adaptation as a global financial priority, create a regional energy resilience fund with the participation of CAF, IDB and the European Union, and promote EU-LAC technical cooperation on climate planning methodologies adapted to the reality of the region.

Promote EU-LAC bi-regional alliances in green hydrogen and hydropower; foster technical and financial cooperation for the development of carbon capture and ecosystem services markets; and leverage forums such as COP30 to consolidate multilateral commitments that reduce market distortions and create competitive conditions for clean energy investments.

7.1.3. ABSENCE OF COMMON STANDARDS, INCONSISTENT REGULATORY FRAMEWORKS, LACK OF BANKABLE PROJECTS AND EXCLUSIONARY DE-RISKING

In the regulatory and institutional sphere, the region faces challenges related to interoperability and the development of climate taxonomies, an issue that has already been reflected in previous sessions. Although countries such as Colombia, Chile and Mexico have made progress in this field, efforts remain fragmented and without a common framework. The absence of coherent regional standards prevents the generation of confidence among international investors and makes the mobilization of capital more expensive. Without a solid system for classifying green activities, the region runs the risk of falling behind other geographical areas where taxonomies have already been consolidated as an essential tool for channeling investment.

This situation is compounded by the inconsistency of regulatory frameworks and investment attraction policies. The lack of coherence between climate regulation, investment incentives, human capital formation and the adoption of new methodologies generate uncertainty, increases the risks perceived by investors, makes financing more expensive and weakens the region's attractiveness compared to other more predictable markets.

Another difficulty is the limited quality and bankability of climate projects. A considerable number of projects lack the technical and financial maturity necessary to attract private investment. The lack of clear governance, regulatory soundness and partnerships with national development banks prevents many of them from being considered bankable, which translates into low absorption of internationally available resources.

Enabling conditions also remain weak. Many countries in the region continue to suffer from a lack of technical capacity, fragile regulatory frameworks and political instability. This combination reduces the confidence of international actors and slows down long-term financial commitments. Strengthening enabling conditions is therefore critical: public institutions and development banks must strengthen technical capacities, consolidate regulatory frameworks and ensure political stability to secure sustainable climate commitments over time.

Finally, the **de-risking** schemes applied tend to be exclusionary, as they mainly benefit large, well-established corporations and leave out SMEs and local actors. This limits the diversification of beneficiaries and risks deepening inequalities. This raises questions about these **de-risking** schemes and calls for financial innovation to ensure that returns are distributed throughout the value chain, guaranteeing a more equitable climate transition.

7.1.3.1. Response

It is essential to promote the harmonization of regulatory frameworks and policies to attract investment, integrating regulations aligned with climate objectives, tax incentives, human capital formation and governance methodologies. Aligning these elements will reduce the uncertainty perceived by investors and improve the competitiveness of Latin America and the Caribbean vis-à-vis other emerging markets. In this regard, the development of regional climate taxonomies that are standardized and in line with international standards will help provide greater certainty to investors, accelerating the mobilization of private capital.

In addition, enabling conditions should be strengthened by consolidating public institutions and development banks with greater technical capacity and political autonomy. Support from multilateral organizations such as CAF, IDB and the World Bank can reinforce the technical quality of projects and give them the maturity necessary to be considered bankable.

Finally, **de-risking** schemes must be designed according to criteria of inclusion, so that guarantees, insurance and hedging instruments also reach SMEs, cooperatives and local communities. This will allow for diversification of the portfolio of beneficiaries and ensure that the climate transition is not limited to large corporations, but generates returns distributed throughout the value chain.

7.1.3.2. Opportunities for collaboration

Technical cooperation with the European Union to develop common taxonomies aligned with global standards, assistance from multilateral institutions such as the World Bank and CAF to standardize certification frameworks, and the creation of a regional climate guarantee mechanism backed by the EU and development banks to reduce perceived risks and increase the confidence of international investors.

7.1.4. LIMITED PARTICIPATION OF LOCAL COMMUNITIES AND CLEAR DISADVANTAGE OF AGRICULTURAL PRODUCERS COMPARED TO LARGE CORPORATIONS

The COP30 debate, which will focus on adaptation and resilience, underscores the urgency of linking climate action with social and territorial inclusion. However, structural barriers persist in Latin America and the Caribbean that compromise the legitimacy and sustainability of projects.

One of these is the weak integration of local communities and partners. The lack of participation by rural communities, indigenous peoples and local actors in the design and implementation of climate projects generates social resistance and can lead to territorial conflicts. Without inclusive governance mechanisms, projects lose legitimacy and are exposed to blockages or rejection.

Small agricultural producers are also at a disadvantage. Around 80% of the region's agricultural production depends on small farmers, who lack access to the financing, training and certifications necessary to meet requirements such as those derived from the European Green Deal. These regulations, although well-intentioned, can become new barriers to access to international markets.

In addition, there is a risk of specialization in raw materials without added value. Financing agricultural projects, in the absence of technical and institutional strengthening policies, may consolidate the region as a supplier of raw materials without the development of local production chains. Added to these limitations are specific barriers related to governance, community participation and the involvement of SMEs. In many rural areas, local conditions make it difficult to operate projects due to the presence of organized crime or local strongmen, which makes it necessary to integrate this context into bankability and local agreements. In coca-growing areas, for example, illicit incentives can double the payments for ecological services to coffee growers, undermining green projects.

Another critical aspect is the exclusion of SMEs from dialogue and decision-making. The predominance of top-down approaches, led by large companies, leaves agricultural SMEs out of the picture, despite their weight in the regional economy. This translates into less representation and lower contribution from key players in the ecological transition process. Added to this are banking barriers and the high cost of insurance: commercial banks lack experience in climate projects, demand high guarantees and insurance is excessively expensive, forcing many SMEs to opt for self-insurance and reducing the capital available for the transition.

In the face of these limitations, the experience of bottom-up strategies led by local communities is inspiring, such as the initiatives of coffee growers who have promoted innovation and favored the inclusion of small players, demonstrating that it is possible to generate more equitable development models.

Finally, challenges are also identified in the corporate sector. In Latin America and the Caribbean, decarbonization of scopes 1 and 2 faces few obstacles thanks to the relatively clean energy matrix—for example, hydroelectric generation in Colombia—and the emergence of carbon markets that incorporate biodiversity and climate justice criteria. However, Scope 3, linked to emissions from value chains (such as transporters and SME suppliers), poses major challenges in terms of competitiveness and access to finance.

7.1.4.1. Response

Institutionalize community participation in all phases of projects, offer training, green credit and sustainability certifications to small producers and SMEs, and integrate the territorial context into the assessment of project bankability.

It is also necessary to design policies that support bottom-up development strategies, driven from the local level, and to create financial ecosystems that facilitate the decarbonization of value chains. Therefore, there is a need to design financial ecosystems that channel affordable solutions so that these actors can, for example, renew vehicle fleets and reduce their emissions, thus accelerating the closing of gaps throughout the supply chain.

7.1.4.2. Opportunities for collaboration

Use COP30 as a platform to launch a bi-regional program for socially inclusive adaptation with support from the EU and development banks, create rural just transition funds that integrate small producers into sustainable markets, and promote blended finance mechanisms that support SMEs and value chain suppliers.

EU-LAC cooperation can also facilitate the design of joint certifications and climate insurance programs tailored to small economic actors, ensuring their participation in international markets and closing competitiveness gaps throughout the supply chain.

7.1.5. SCARCE FINANCING FOR NATURE-BASED SOLUTIONS AND WEAK DEVELOPMENT OF CARBON AND BIODIVERSITY MARKETS

One of the main gaps in regional climate finance is that most existing mechanisms have been designed to support the energy transition, leaving nature-based solutions and community-led projects aimed at halting deforestation without sufficient support. This omission limits the exploitation of Latin America and the Caribbean's enormous potential in terms of biodiversity, natural carbon sinks and ecosystem services.

The COP30 agenda also highlights the need to strengthen financial instruments that channel investment towards adaptation and resilience projects. However, climate markets in Latin America and the Caribbean still face serious limitations. Voluntary carbon markets remain in their infancy. Although carbon removal credits (CDRs) offer a promising mechanism, they remain underdeveloped in the region, with low liquidity and limited credibility.

Nature-based solutions have not been mainstreamed. Conservation, soil regeneration and watershed management projects have demonstrated benefits, but most remain at the pilot stage and are not fully integrated into financial systems. Green and biodiversity instruments also remain immature. Although there has been progress in green bonds and the design of taxonomies, these markets lack standardization and international trust. The creation of biodiversity credits is still in its infancy and faces risks of legitimacy and a lack of strong environmental and social safeguards.

Furthermore, it is essential to emphasize the difference between emissions reduction and carbon removal: while reduction prevents new emissions from being generated, removal captures those already emitted, which is a decisive factor in slowing climate change and opens up specific investment opportunities in the region.

Agricultural carbon markets are very underdeveloped, even though the agricultural sector is key to reducing emissions and capturing carbon. The lack of integration into value chains represents a missed opportunity to channel financing towards sustainable and regenerative agriculture.

An illustrative example can be seen in the agricultural sector, where removal technologies costing USD 150 per ton of CO_2 and a margin of USD 70 not only contribute to carbon capture, but also improve soil quality and generate additional economic benefits. In the case of coffee, these practices have multiplied its market value from £5 to £15 per pound, demonstrating the potential of linking climate action with sustainable rural development. The evolution of these local efforts raises the need to move towards top-down structured carbon removal credits capable of scaling up sustainable practices and generating wider ecological and financial benefits.

The opportunities in carbon and biodiversity are significant. The region can capitalize on its carbon capture capacity and ecosystem wealth to compete in international carbon markets and attract investments aimed at protecting ecosystems. This approach not only contributes to mitigation, but also to climate adaptation and regional food security.

At the same time, progress is being made on financial instruments such as specific taxonomies, green bonds and new biodiversity credits to reward conservation beyond existing regulations. However, these mechanisms carry risks that require clear environmental and social safeguards, as well as standards that reinforce their international legitimacy. Initiatives such as those promoted by the Instituto Clima e Sociedade (iCS) to stimulate businesses based on nature-based solutions are concrete examples of innovation in this area.

7.1.5.1. Response

Develop a financial framework that prioritizes nature-based solutions, expanding flows to projects for the conservation, restoration and sustainable management of soil, forests and water resources. This framework must recognize that biodiversity is not only an ecological asset, but also an economic and social one, capable of generating multiple benefits in mitigation, adaptation and sustainable rural development.

Integrating biodiversity into climate action requires expanding soil recovery with diverse biomass, incorporating agroecological management practices and establishing preventive conservation measures in the face of growing vulnerabilities such as forest fires. In this context, an agroecological transition is essential not only to reduce emissions from deforestation and land use change, but also to open up opportunities in the still nascent agricultural carbon markets.

This requires the design of inclusive scalability strategies that allow for a transition from pilot experiences to regional initiatives, avoiding the risk of monocultures and ensuring the active participation of local communities and small producers, so that they are integrated into sustainable value chains that strengthen both food security and territorial competitiveness.

In addition, it is essential to consolidate taxonomies and standards for biodiversity credits and green bonds that ensure transparency, avoid double counting risks, and establish robust social and environmental safeguards.

In this regard, regional frameworks need to be created to standardize carbon credits and green bonds and consolidate platforms that increase liquidity and confidence. Linking nature-based solutions and regenerative agriculture projects to global agri-food chains will be key. This will not only attract additional financing, but also ensure more stable and sustainable markets for local producers. This approach can transform biodiversity into a true vector of international competitiveness, harnessing the potential of Latin America and the Caribbean as an "ecological superpower," but under inclusive governance models that distribute benefits throughout the value chain.

7.1.5.2. Opportunities for collaboration

COP30 and EU–LAC bi-regional cooperation offers an ideal platform for integrating biodiversity as a pillar of climate finance. Joint initiatives can be launched to strengthen biodiversity taxonomies, promote regional conservation credits and create a bi-regional fund for nature-based solutions. Likewise, the EU, with its experience in carbon markets and environmental certification, can support the scaling up of small-scale projects in Latin America and the Caribbean towards global sustainable investment platforms.

Promote a bi-regional agreement on carbon markets at COP30 that integrates Latin America and the Caribbean and the European Union, promote technical cooperation to develop biodiversity and sustainable agriculture taxonomies, and establish a regional agricultural credit platform that connects small producers with international buyers.

7.1.6. DEPENDENCE ON FOSSIL FUEL REVENUES AND CONCESSIONAL FINANCING IN THE ABSENCE OF ALTERNATIVE FISCAL MECHANISMS

One of the debates that will resonate most at COP30 will be that of the fiscal sustainability of the climate transition, as many countries in Latin America and the Caribbean depend on fossil fuel revenues to finance social policies and basic services. The decline in tax revenues from fossil fuels is a central challenge. The energy transition involves a gradual reduction in oil, gas and coal exports, which threatens the sustainability of public finances in countries dependent on these resources. The absence of alternative fiscal mechanisms to replace this revenue compromises the ability to sustain social, educational and health policies.

The energy transition in Latin America and the Caribbean is characterized by parallel market growth: while investment in clean technologies is advancing, fossil fuels continue to be used to a large extent thanks to subsidies and cheap supply available in several countries. This phenomenon limits the speed of structural change in the energy sector and delays the actual replacement of polluting sources.

In this context, challenges and dependence on climate finance emerge. The costs and dependence on concessional financing have become a central obstacle, as access to transition technologies remains very expensive and, in the case of the biomass market in Brazil, depends almost exclusively on concessional financing. Added to this is the saturation of concessional mitigation financing: available funds are depleted, deadlines are extended, and guarantees are at their limit, highlighting the need to double the capacity of multilateral development banks while strengthening domestic markets. In this context, only 23% of the financing needed for a comprehensive energy transition comes from concessional sources, putting excessive pressure on already scarce resources.

The situation is further complicated by structural distortions that make financing more expensive, such as high fossil fuel subsidies, inadequate taxation, import barriers and friction in financial transactions. The disparity in prices in the carbon market is a clear indicator of these costs: while in Mexico carbon credits are priced between 3 and 20 USD per ton of CO_2, in more mature markets such as China or the OECD they reach 70 USD, reflecting both high transaction costs and the immaturity of the regional market. In addition, risk hedging instruments and sovereign guarantees are expensive and difficult to access, making it essential to innovate in multilateral and sovereign guarantee schemes that allow for cheaper capital. Along these lines, financial governance proposals such as the **Espírito Santo Decarbonization Fund** are also being discussed, which seeks to structure resources and mobilize public and private capital for regional decarbonization projects.

Added to this picture is the sectoral vulnerability to extreme weather events. Strategic sectors such as tourism, agriculture and hydroelectric power generation are already showing the growing impacts of phenomena such as droughts and floods. Hence the need to promote a transition explicitly geared towards adaptation, critically addressing the inequality in adaptation capacities between countries, regions and communities.

Finally, deforestation and land use change remain the main source of emissions in the region. The massive loss of forests, mainly in the Amazon, exacerbates the climate impact and compromises the achievement of international goals. Without a solid agroecological transition that combines productivity and sustainability, Latin America and the Caribbean will not be able to meet their climate commitments or take advantage of opportunities in carbon markets linked to soil and biodiversity.

7.1.6.1. Response

Establish alternative fiscal mechanisms such as environmental taxes and regulated carbon markets, explore debt-for-nature swap schemes that free up resources for climate action.

In this context, the potential of the region's critical raw materials, such as lithium, has also been highlighted, which require financing for their sustainable and strategic extraction. One proposal is to exchange external debt for investment in carbon removal projects and the responsible development of these minerals, integrating climate and production objectives.

Create sectoral resilience funds to support adaptation in vulnerable sectors such as tourism, agriculture and hydroelectric power, promote the phasing out of fossil fuel subsidies and develop more accessible and affordable risk guarantee and hedging instruments, combined with sovereignty mechanisms and support from multilateral banks, to lower the cost of capital and recognize cost-benefit trade-offs.

7.1.6.2. Opportunities for collaboration

Use COP30 as a platform to advance a bi-regional green fiscal financing mechanism that progressively replaces fossil fuel revenues, promote debt-for-nature agreements with multilateral banks and the European Union, establish a bi-regional agroecological transition and bioeconomy fund, and work together on innovative financial instruments such as the **Espírito Santo Decarbonization Fund**, which channels public and private capital under transparent governance schemes.

Strategic recommendations

08

Strategic recommendations 08

Based on the analysis of the three Working Group sessions—dedicated to climate plans and NDCs, the role of the private sector, and green financing mechanisms—a set of cross-cutting strategic recommendations has been identified. These seek to consolidate the enabling conditions for ecological transition in Latin America and the Caribbean, strengthening cooperation with the European Union and ensuring that the benefits of decarbonization are distributed equitably across society and territory.

8.1. Public policy and regulation

The success of the transition to a green industry in Latin America and the Caribbean depends on the capacity of states to articulate clear regulatory frameworks, adequate incentives, and effective and participatory governance schemes. Regulatory fragmentation, the lack of integration between climate commitments and economic strategies, and the absence of community participation mechanisms have so far limited the attraction of capital, the implementation of sustainable projects, and social legitimacy.

In this regard, the following are priorities:

* **Harmonize regulatory frameworks** at the national and bi-regional levels, moving **towards common green taxonomies and certification mechanisms** that provide confidence to international investors and enable the development of joint projects.

* Establish **stable fiscal and regulatory incentives** that favor investment in renewable energy, the circular economy and nature-based solutions, accompanied by transparency and traceability requirements (e.g. Scope 3 reporting, TCO in telecommunications, Battery Passport in critical value chains).

* Promote **cooperation between the different governing bodies** of the ministries of economy, finance and environment to ensure that climate commitments (NDCs and long-term strategies) are translated into public budgets, sectoral investment plans and fiscal instruments. This coordination should be extended to subnational governments to ensure territorial coherence.

* **Institutionalize social and territorial governance mechanisms** that integrate local communities, indigenous peoples, SMEs and municipal governments in the definition of regulatory standards, transition plans and infrastructure projects.

* Create **regional multi-stakeholder climate governance platforms** that bring together the private sector, universities, local authorities, development banks and civil society, facilitating policy coordination and joint monitoring of progress.

In this way, public policy and regulation become **a catalyst for green investment with social legitimacy**, reducing perceived risks, accelerating technology adoption and ensuring that the ecological transition translates into economic competitiveness and territorial cohesion.

8.2. Financing

The scale of investment needed to meet climate commitments in Latin America and the Caribbean—estimated at around 3.7–4.9% of annual regional GDP—requires the deployment of innovative financial vehicles and stronger multilateral coordination, while ensuring that resources reach all territorial levels and social actors equitably. The limited fiscal capacity of states, the risk perception of international investors and the concentration of financing schemes in large corporations remain the main obstacles.

In this context, the following is recommended:

* Developing **innovative financial vehicles** that combine public, private and multilateral resources: sovereign and thematic green bonds linked to climate objectives, EU–LAC bi-regional co-investment funds with shared guarantees, and credit instruments accessible to SMEs and households (e.g. green mortgages, microcredits for clean technologies in the home).

* **Expanding the scope of climate de-risking** through guarantees and risk coverage that not only benefit large corporations, but also include SMEs, cooperatives, agricultural producers and local communities. This will allow for diversification of beneficiaries and prevent the transition from exacerbating pre-existing inequalities.

* **Institutionalize multilateral coordination mechanism**s between CAF, IDB, World Bank, EIB and other financial actors to standardize methodologies, articulate regional project portfolios and mobilize resources towards strategic sectors. The creation of a regional decarbonization and resilience fund under shared governance is key to multiplying the impact.

* **Design financial mechanisms with a territorial and social focus**, so that municipalities, rural regions, and vulnerable communities can access green credit, climate insurance, and adaptation funds. These instruments must incorporate criteria of territorial equity, recognizing regional heterogeneity and the importance of local actors.

* **Promote innovative fiscal and debt instruments**, such as debt-for-nature swaps and climate-linked credits, which allow internal resources to be freed up and generate liquidity to finance the transition in sectors where it is most needed, such as sustainable agriculture and water management.

Bi-regional cooperation can play a decisive role by providing sovereign guarantees, technical assistance and capital, complementing the efforts of multilateral banks and expanding access to finance for historically excluded territories. In this way, climate finance becomes not only a means of closing the investment gap, but also an engine of social and territorial cohesion, ensuring that the benefits of the green transition are distributed fairly and sustainably throughout the region.

8.3. Capacities and infrastructure

The transition to a green industry in Latin America and the Caribbean cannot happen without a solid foundation of technical, human and institutional capacities, along with the expansion and modernization of enabling infrastructure. Currently, deficits in electricity transmission, energy storage, logistics for green hydrogen and battery recycling are compounded by limitations in specialized human capital and fragmented regulatory frameworks, slowing down the implementation of strategic projects.

In this context, the following is recommended:

* **Investing in critical infrastructure**—electricity transmission and distribution networks, ports, railways, recycling centers, and energy storage—as an essential condition for massively integrating renewables, producing green hydrogen, and consolidating circular value chains.

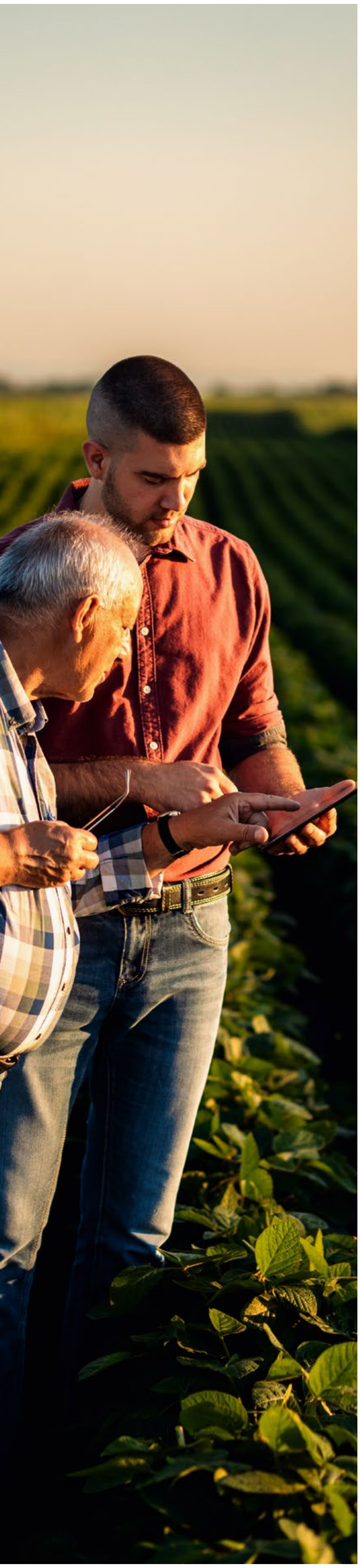
* **Strengthening the technical and institutional capacities** of regulators, development banks and local governments in areas such as green taxonomies, risk governance, emissions traceability and environmental management. These capacities are essential for building confidence in the markets and increasing the bankability of projects.

* **Develop training and retraining programs geared towards green jobs**, with an emphasis on strategic sectors (renewable energy, circular economy, electric mobility, nature-based solutions). Technical and higher education should integrate digital skills; artificial intelligence applied to energy management and corporate sustainability.

* **Create university-business-government partnerships** that promote applied research and technological innovation programs, ensuring that local knowledge is translated into solutions adapted to the region's productive and social contexts.

* **Consolidate just transition strategies** that guarantee the inclusion of workers and communities in reconversion processes, combining continuous training, skills certification and access to quality jobs in emerging green sectors.

Capacity building and investment in infrastructure should be seen as two sides of the same strategy: without enabling infrastructure, it is not possible to scale up green technologies, and without trained human capital, it is not possible to sustain them over time.



8.4. Data and communication

The green transition in Latin America and the Caribbean requires a robust data and communication infrastructure that ensures transparency, trust and accountability. The absence of standardized information systems and fragmentation in the reporting of indicators make it difficult to assess the impact of climate policies and mobilize capital. Likewise, poor communication of results reduces the social legitimacy of projects and limits citizen participation.

In this regard, the following is recommended:

- **Consolidate interoperable climate and financial information systems** at the regional level, integrating emissions inventories, value chain traceability, biodiversity monitoring, and economic and social impact metrics. The creation of bi-regional data observatories would allow for the generation of comparable indicators and increase the international credibility of projects.
- **Standardizing reporting and disclosure mechanisms**, aligning corporate practices with global sustainability frameworks (TCFD, European CSRD, green taxonomies), so that investors and citizens have clear and verifiable information.
- **Promote transparency as a competitive asset**, linking access to preferential financing with the publication of environmental, social and governance (ESG) performance metrics. This will strengthen the confidence of banks, insurers and sovereign wealth funds in projects in the region.
- **Develop impactful communication strategies** that bring the tangible benefits of the energy and climate transition closer to local communities, highlighting improvements in employment, health, quality of life and resilience. An inclusive, evidence-based narrative facilitates community acceptance and reduces social resistance.
- P**romote digital platforms for citizen participation** that allow households, SMEs, and local governments to monitor progress in an accessible and transparent manner, integrating the social dimension into the climate transition.

Together, improved data and communication not only strengthen investor confidence, but also broaden the social legitimacy of the green transition, ensuring that the perceived benefits are clear, verifiable and shared among all actors in the region.

8.5. Governance and bi-regional cooperation

The transition to a competitive and fair green industry in Latin America and the Caribbean requires solid and coherent governance, articulated both at the regional level and in its strategic relationship with the EU. Institutional fragmentation, heterogeneous regulatory frameworks and limited regional coordination capacity have weakened the effectiveness of climate policies and investor confidence. At the same time, existing bi-regional cooperation mechanisms—such as CELAC, the EU-CELAC summits and the **Global Gateway**—offer untapped potential for mobilizing resources and generating common frameworks.

In this context, the following is recommended:

* **Creating new spaces for bi-regional coordination**, such as an EU-LAC Platform for Green Investment and Climate Governance, to coordinate regulatory policies, standardize reporting methodologies and facilitate the interoperability of carbon markets and green taxonomies.

* **Consolidate bi-regional observatories** for data and macroeconomic climate analysis, capable of generating comparable indicators and facilitating joint decision-making on systemic risks, sectoral resilience and investment opportunities.

* **Institutionalize EU-LAC multi-stakeholder dialogue forums**, bringing together governments, development banks, businesses, universities and civil society, with the aim of building social legitimacy, identifying territorial barriers and accelerating the implementation of transformative projects.

* **Strengthen bi-regional climate diplomacy**, using international milestones such as COP30 to position the EU-LAC alliance as a global benchmark in ecological and just transition, integration of biodiversity into financial markets and promotion of debt-for-nature swaps.

In this way, bi-regional governance and cooperation become a cross-cutting enabling framework, capable of reducing fragmentation, mobilizing capital and socially legitimizing the green transition, reinforcing the role of Latin America and the Caribbean and Europe as strategic partners in global climate action.

Next steps 09

Next steps 09

The process of the Working Group on Green Industry in Latin America and the Caribbean, developed over three sessions, has made it possible to build a collective diagnosis and formulate concrete proposals to accelerate the climate transition in the region.

Together, the three sessions have made it possible to identify critical issues, generate operational responses and propose opportunities for bi-regional cooperation, which are set out in this document in the form of strategic recommendations. These proposals constitute a basis for immediate action by governments, businesses, multilateral organizations and civil society actors.

The next phase of work under this initiative will consist of ensuring that these recommendations are translated into effective commitments and efficient implementation mechanisms to promote a just green transition. To this end, a communication and advocacy plan will be developed to disseminate this report in key areas for the region, with a special focus on COP30, as well as to position its conclusions in the public and political debate. This effort will seek to coordinate with the actors responsible for implementing the proposed measures, generating strategic alliances that accelerate their implementation.

COP30 will be the ideal setting to disseminate the report's recommendations on financing for green industry, climate governance, and regional and bi-regional cooperation. Among the initiatives to be considered are the creation of a common green taxonomy platform and joint projects in strategic areas such as hydrogen and biodiversity protection.

Throughout this process, **alinnea** has played a central role by providing a neutral space for dialogue that has brought together public, private, multilateral, civil society and academic actors. With a view to developing the proposed measures, **alinnea** is open to working hand in hand with the key actors responsible for their implementation and reaffirms its willingness to collaborate and forge alliances with all entities committed to promoting the green industry in Latin America and the Caribbean.

Appendix. Members of the alinnea working group

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This report aims to serve as a roadmap for turning commitments into effective investment flows and for ensuring that the ecological transition in Latin America and the Caribbean is competitive, fair, and inclusive.

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