

#### Independent Regional Stocktake for Latin America and the Caribbean

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## **Foreword**

Achieving the Paris Agreement goal of limiting the global temperature increase to 1.5°C above the preindustrial average requires all sectors to reduce their 2019 emissions levels by at least 48% by 2030 (IPCC 2022).

To periodically track collective progress toward that overarching temperature goal and other Paris Agreement goals, the United Nations Framework Convention on Climate Change (UNFCCC) has a process known as the Global Stocktake (GST). The results of the first GST were presented at COP28, November 30-December 12, 2023. These results will be considered by parties to the Convention when updating their Nationally Determined Contributions (NDCs) in 2025, and it is hoped that the results will spur significantly accelerated climate action at the global and regional levels.

To increase the accuracy, transparency, and relevance of the GST, civil society organizations are providing data and analysis in an effort known as the Independent Global Stocktake (iGST)1. The international consortium includes three regional hubs (Latin America and the Caribbean, West Africa, and Southeast Asia) and working groups focused on each of the main long-term goals of the Paris Agreement (mitigation, adaptation, and finance) plus one group focused on the cross-cutting theme of equity. The iGST's Latin America and the Caribbean (LAC) Hub has produced a regional stocktake to encourage the transformative change needed to ensure a carbon-free, cli-

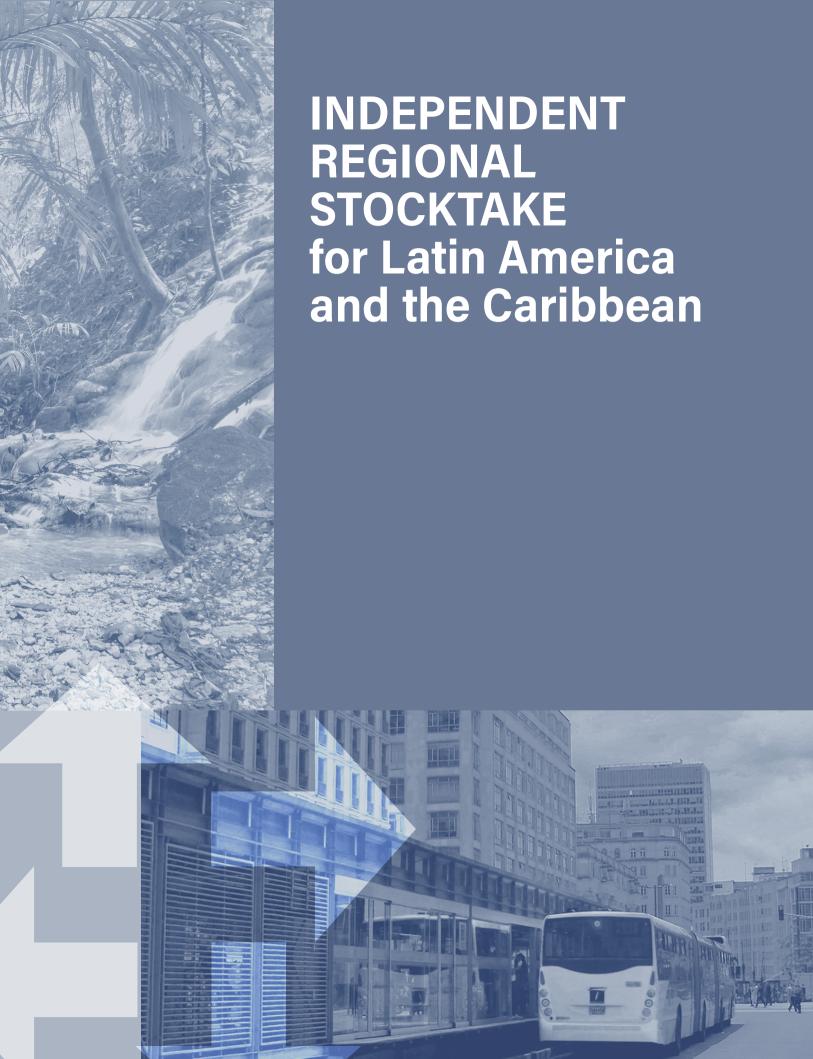
mate-resilient, and equitable future. (This first edition of the LAC regional stocktake does not cover all LAC countries; subsequent editions are expected to do so.) As this stocktake indicates, LAC has incorporated increasingly ambitious measures in its plans, policies, strategies, and laws related to climate change, yet it faces significant challenges in fulfilling its commitments. Extreme natural climatic phenomena such as El Niño and La Niña, hurricanes, droughts, floods, and the spread of pests in a climate modified by human activities endanger the region's livelihoods, ecosystems, and health, exacerbating existing inequalities.

Mitigating the region's emissions (10% of the global total) is a priority to address the causes of temperature increase, but so is adapting to protect ecosystems and populations from latent impacts and taking measures to reduce the losses and damage that the region has already suffered.

Because the climate crisis is intertwined with inequality, poverty, high levels of debt, and other crises, the LAC regional stocktake highlights the need for climate solutions to center justice, equity, and a gender and human rights perspective.

#### Members of the iGST Latin America and the Caribbean Hub

<sup>1</sup> The iGST is an international consortium of civil society organisations working together to support Global Stocktake (GST). The network includes three regional networks (Latin America) Latin America and the Caribbean, West Africa and Southeast Asia) and four working groups that track each of the main long-term objectives of the Paris Agreement: mitigation, adaptation and finance, plus an additional focused group on the cross-cutting theme of equity



<sup>2</sup> The iGST hub for Latin America and the Caribbean is coordinated by Iniciativa Climática de México (ICM). In alphabetical order, the organizations that are part of the hub are Caribbean Natural Resources Institute (CANARI); Climate Analytics (Caribbean); CDP Latin America; Climate Finance Group of Latin America and the Caribbean (GFLAC); Climate Service Center Germany (GERICS); Fundación Avina;, Fundación Ambiente y Recursos Naturales (FARN); Global Initiative for Economic, Social and Cultural Rights (GI–ESCR); Instituto Clima e Sociedade (iCS); REACCIONA; Transparency International-Mexico (TI Mexico); Transforma Global; World Resources Institute-Mexico (WRI– Mexico); and World Wildlife Fund–Mexico (WWF-Mexico).

## 2. Methodology

#### a - Assessed aspects

The indicators used for the regional assessment allow an evaluation of regional

- Socioeconomic trends and structural challenges;
- Climate change perceptions, observed and projected impacts, vulnerability, and associated risks;
- 3. GHG emissions trends in the main economic and productive sectors; and
- 4. Financing of climate action from public resources and through international cooperation.

#### **b** — Information sources

The indicators for the regional assessment were constructed on the basis of recognized sources of information, such as international organizations that have all or several LAC countries as members. These sources include the Latin American Energy Organization (OLADE), the Economic Commission for Latin America and the Caribbean (ECLAC), the International Renewable Energy Agency (IRENA), the International Energy Agency (IEA), the Food and Agriculture Organization of the United Nations (FAO), the United Nations Development Programme (UNDP), and the World Bank.

When the above-mentioned sources did not have the necessary information, the report relied on articles published in scientific journals and information from other nongovernmental organizations with extensive experience in the region. These organizations include the Climate Finance Group of Latin America and

the Caribbean (GFLAC), Latinobarómetro, the Latin American Observatory for Climate Action (OLAC), and CDP (Carbon Disclosure Project) Latin America.

The report considered only post-2009 and pre-May 2023 data.

#### c - Trends

Trends for indicators are shown when information is available.

#### d - Comparisons

Some indicators are used to compare the LAC region to other regions and the world and to compare countries within the region. With respect to some indicators, the highest- or lowest-performing countries are thus identified.



## 3. Social, environmental, and economic context for climate action

a. Context in which the action takes place climate: social, environmental and economic of the region

Inequality in Latin America and the Caribbean makes the region highly vulnerable to the impacts of climate change. The most affected groups are indigenous communities, Afro-descendants, and women (IPCC 2022a).

Inequality is evidenced by marginalization of indigenous peoples with collective rights recognition, the higher climate change risks and burdens faced by women and girls, and disparity in access to safe drinking water

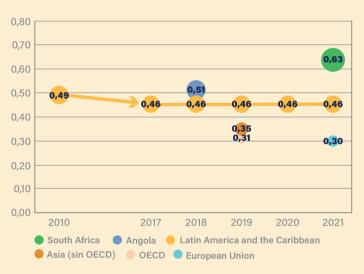
Aguilar 2021; IPCC 2022a

Figure 1. Percentage of the total population whose average per capita income is below the poverty and indigence lines (extreme poverty), 2010-2021.



Source: Based on information from CEPAL (2022).

Figure 2. Concentration of wealth (Gini Coefficient) in LAC and



Source: Based on data from CEPAL (2022) for LAC, EUROSTAT (2022) for the European Union, OECD (2022a) for Asia, UNCTAD (2021) for South Africa, and the World Bank (2022a) for Angola. Note: A value of 0 indicates a perfectly equal distribution of wealth.

## **b.** Challenges of the region to face the climate change

#### b.i. Economic performance

With LAC's share of global GDP declining, the toll of the pandemic became visible as poverty and unemployment rates rose. The region's share of global GDP decreased from 8% in 2010 to less than 6% in 2021 (World Bank 2022c).

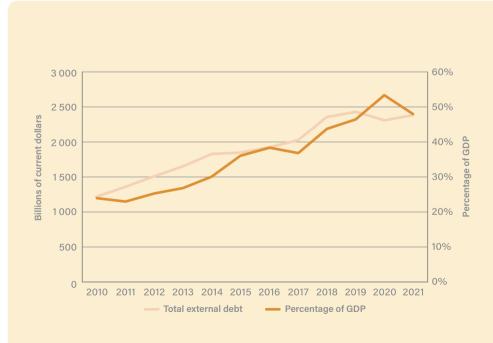
LAC's average GDP per capita has also fallen—to US\$8.340 in 2021. It varies widely within the region, from US\$28.240 per capita in the Bahamas and US\$16.500 in Chile to US\$2.090 in Nicaragua and US\$3.415 in Bolivia (World Bank 2022c).

GDP stagnation and the fall in GDP per capita indicate that the region's economic development, based large-

ly on natural resource extraction and the export of primary goods with little value added, is failing to meet the needs of a growing population and to reduce inequalities in the distribution of wealth.

Another issue for the region is high levels of external debt, both in nominal terms (US\$2.385 billion in 2021) and as a percentage of GDP (48% in 2021) (figure 3).

The region's countries with the highest debt-to-GDP ratio in 2021 were Nicaragua with 102%, followed by Chile with 75%. Those with the lowest level of debt were Trinidad and Tobago with 21% and Guatemala with 31% (CEPALSTAT 2022).



**Figure 3.** . Total external debt, nominal and as a percentage of GDP, 2010–2021

Source: Based on information from CEPALSTAT (2022).

## c. Opportunities for climate actionfrom a perspective of justice and Reduction of inequality

#### c.i. LAC as a laboratory for the just energy transition

The region could become a laboratory for climate action. For example, when it comes to energy transition, LAC is home to some of the world's largest renewable energy resources, including solar, wind, and geothermal energy. In fact, the region is increasing renewable energy projects and pursuing electrification measures. As of 2019, the installed capacity for electricity generation in LAC had reached 440 GW, of which 261 GW (59.48%) corresponded to renewable energies (RELAC 2022). In that year, Brazil, Mexico, and Chile ranked among the 20 countries with the highest investment in renewable energy capacity (WEF 2023).

In 2019, through the Renewable Energy in Latin America and the Caribbean (RELAC) initiative, 15 LAC countries-Barbados, Bolivia, Chile, Colombia, Costa Rica, El Salvador, Guatemala, Haiti, Honduras, Nicaragua, Panama, Paraguay, Peru, and Uruguay-established the goal of reaching a 70% share of renewable energy by 2030 (RELAC 2022). However, despite various efforts within LAC to develop plans for electrification in the residential and transportation sectors, not all countries have established targets necessary to comply with the Paris Agreement (IEA 2022).

Ensuring the sustainability of the transition from fossil fuels to renewables and aligning the region's efforts with The energy transition implies guaranteeing an equitable and transparent distribution of the costs and benefits of renewable energy projects to reduce inequities and power asymmetries among stakeholders and sectors. In this regard, governments must place people's energy needs at the center of climate and energy decisions and must establish mechanisms that guarantee transparency and accountability in the planning, development, and implementation of renewable energy projects.

the long-term goals outlined in the Paris Agreement will require adoption of a climate justice and transparency approach. In other words, a just energy transition goes beyond a technological shift or a transition from an extractive fossil fuel model to an extractive minerals (lithium) model. LAC governments must consider environmental and social safeguards and rely on a human rights approach, from the design to the implementation of energy projects, to avoid repeating the mistakes made by the region's extractive industries (Transforma 2023).

# EFLECTIONS FROM IGST LAC HUB MEMBERS

The conservation of Latin America's biodiversity is essential to fight against climate change worldwide. The first step in this journey is transparency: national and subnational governments and companies must first understand their impacts on the environment to address them better. CDP has been working in the region for more than 10 years to ensure that these organizations report their activities and aligned them with international best practices for environmental action.

#### **CDP Latin America**

The Latin American region is one of the economies most dependent on extractive industries and on the use and export of fossil fuels. Implementing measures to decarbonize and diversify the economy is essential to decouple the generation of resources and jobs and the improvement of living conditions from the activities causing the climate emergency. The region requires a transition to renewable energies that questions the energy model in its entirety, placing the rights of people at the center, especially the rights of those historically marginalized, including women and children in all their diversity, indigenous groups and communities, migrants, the elderly, and people with disabilities who disproportionately suffer the impacts of the climate crisis and the conditions of inequality and discrimination that characterize Latin America. The transition to renewable energy represents an opportunity to rethink how and for whose benefit energy is produced and distributed. Urgent progress must be made in defining a new and just sustainable energy model that reduces inequality gaps and the energy consumption levels of industries and high-income people while protecting ecosystems and preventing the effects of the climate emergency. The results of the Global Stocktake should reflect a decisive message and commitment to advance a just energy transition with a human rights and gender perspective.

#### **Global Initiative for Economic, Social, and Cultural Rights**

The LAC region has important areas of opportunity in the face of the climate emergency. Public participation and access to information are pillars of biodiversity conservation and the protection of environmental defenders. That is why civil society, through initiatives such as OLAC, is driving climate action in the region, promoting the participation of nongovernmental actors in the climate agenda, and enabling citizen monitoring that strengthens public policies and brings attention to the climate crisis, with human rights and the rights of Nature as guiding principles.

Political will is required to prioritize the climate agenda and to provide timely support to the groups most affected by the climate crisis, thereby addressing the issue of damages and losses. Structural transformations are also needed. These transformations must prioritize climate finance, ecosystem protection, and the right to a healthy environment, putting life at the center of decisions without increasing high levels of external debt. The new political leaderships in the region awaken hope for prioritizing the climate agenda, conservation, and regional integration to demand timely, accessible, and debt-free financing at the international level, under a climate justice approach.

**Latin American Observatory for Climate Action (OLAC)** 



## 4. Observed and projected climate impacts

The impacts of climate change exacerbate structural, socioeconomic problems. The greatest impacts are expected to continue to occur in Guatemala, Nicaragua, Honduras, Suriname, Costa Rica, El Salvador, and Bolivia and in agriculture-related economic sectors, particularly cereal cultivation and fishing (IPCC 2022a). An increase in warmer days, torrential rains, and melting glaciers will be the new normal, particularly in Central and South America (IPCC 2022b).

LAC suffers disproportionately from the consequences of climate change: 13 of the 50 countries most affected by hydrometeorological phenomena in the world belong to the region (OECD 2022). LAC is expected to experience increases in temperature, precipitation and storms, and sea level (figure 4). The number of climate-related extreme weather events increased on average in most LAC countries in the 2001–2022 period compared with the 1981–2000 period. Of the 11,933 climate-related extreme weather events recorded worldwide between 1970 and 2022, 17.1% occurred in the LAC region (OECD 2022). The region's temperature and mean annual precipitation in 2021 varied in relation to the 1981–2010 reference period (OMM 2022).

Figure 4. . Examples of changes observed in the region

#### **TEMPERATURE**



2020 was one of the three warmest years on record in Mexico, Central America and the Caribbean; and the second warmest year in South America. Temperatures are 1°C, 0.8°C and 0.6°C above the average of 1981-2010, respectively (WMO, 2021).

#### PRECIPITATION AND STORMS



The Atlantic hurricane season in 2021 was the third most active on record (WMO, 2022).

#### **SEA LEVEL**



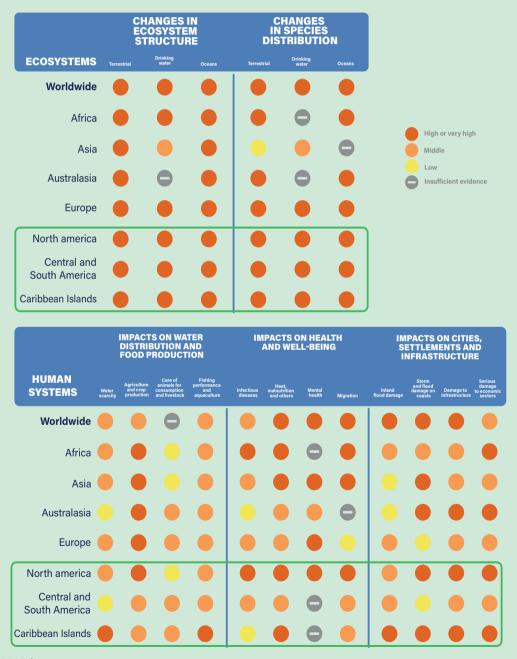
Ocean heat content in 2021 was the highest ever recorded (WMO, 2022).

Source: Based on data from WMO (2022).

The region's temperature and mean annual precipitation in 2021 varied in relation to the 1981–2010 reference period (OMM 2022). The region experienced significant losses of glacier ice masses and a significant increase in sea level. The Intergovernmental Panel on Climate Change has noted a variety of natural system and human system changes attributable to climate change (figure 5).

The observed impacts on the structure of terrestrial, freshwater, and marine ecosystems and on habitats of terrestrial and marine species are high or very high for the entire region. Impacts on water availability, fisheries production, and nutrition as well as on cities, settlements, and infrastructure are high or very high for LAC island states.

Figure 5. Observed climate change impacts on natural systems (upper panel) and human systems (lower panel)



Source: IPCC (2022a).

Note: North America includes Mexico, which is part of LAC.

In recent years, some of the most visible impacts of climate change on the region have included ecosystem losses (glacial ice, coral reefs, and forests); agricultural losses related to precipitation decreases; increases in flooding, migration, and insect-borne disease: and the world's most rapid sea level rise (figure 6).

Regarding projected climate change impacts, most regions of Central and South America are expected to see an average increase in temperature, extreme heat, and sea level and a decrease in frosts and cold while average precipitation will vary from region to region (IPCC 2022b).

#### **DROUGHTS AND FIRES**



Droughts in South America represented a 2.6% decline in the 2020-2021 cereal harvest compared to the previous year (WMO, 2022).

In 2022, the reduction in rainfall and alteration of the rainy season affected agriculture in Central America and the tropical Andes (WMO, 2022).

#### **FLOODS**

An increase of 1.5°C would increase the population affected by floods in Colombia, Brazil and Argentina by 100 to 200%; 300% in Ecuador and 400% in Peru (IPCC, 2022).

#### **ECOSYSTEMS**

Since 1980, 30% to 50% of glacier surface loss has been recorded in the Andes (IPCC, 2022). This has increased the risk of water scarcity for the Andean population and ecosystems (IPCC, 2022).

Increase in coral bleaching events in Central and South America. As well as reduction of coral cover in Central America (IPCC, 2022).

Since 1998, high rates of tree mortality and reduced forest productivity have been recorded in the Amazon rainforest caused by droughts and high temperatures attributed to climate change (IPCC, 2022).

The southern part of the Amazon has become a net source of carbon for the atmosphere in the last decade (IPCC, 2022).

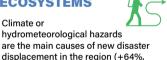


#### Figure 6. Impacts observed in LAC

Source: Based on information from OMM (2022), PDD (2022), IPCC (2022), and CEPAL (2020).

#### **ECOSYSTEMS**

Brazil (WMO 2022).



2022). In the last 8 years, climate-related migrations and displacements have increased in the Andes, Central America and northwestern regions of

between 2008 and 2020) (IOM/PDD

Climate-related migration is projected to increase in the small islands of the Caribbean (IPCC, 2022).



#### **HEALTH**

In Latin America, climate change increases the risk of transmission of diseases such as dengue, malaria and cholera due to the increase in temperature in tropical areas. Brazil, Honduras, Guatemala, and Nicaragua have had the highest number of dengue cases between 1990 and 2007 (ECLAC, 2020).

#### **COASTAL AREAS**

In 2021, the sea level of the Atlantic coasts of the Americas and the Gulf of Mexico rose at a faster rate than on a global scale (IPCC, 2022).



## a. Economic losses and increased inequalities

According to the report A Roadmap for Climate Action in Latin America and the Caribbean 2021–2025 (World Bank 2022b), climate-related disasters in the region, such as hurricanes, droughts, fires, and floods, are becoming increasingly frequent and intense. They cause enormous economic losses, with annual costs due to disruptions in energy and transportation infrastructure systems equivalent to 1% of GDP and up to 2% in some Central American countries.

ECLAC projections indicate that, in Latin America and the Caribbean, the economic costs of climate change associated with a 2.5°C temperature increase will be between 1.5% and 5% of regional GDP by 2050 (CEPAL

2015). However, these figures present a high level of uncertainty because they include only some sectors and do not incorporate all potential effects or feedback/adaptation processes; the costs generated by climate change adaptation measures could represent figures of less than 0.5% of the region's GDP (CEPAL 2015).

The effects of climate change alter harvesting periods, damage key crops, and cause water shortages that can destabilize local and global food security. In a scenario with a temperature rise above 3°C by the year 2100, potential corn crop yield losses in some Central American countries would be great (Alatorre and Fernández 2022) (figure 7).

Figure 7. Potential corn crop yield losses for South America, percentage variation, 2030–2100

#### PERCENTAGE CHANGE IN LOSSES REDUCTION 2030 2050 2100 **IN CORN CROPS** Large losses 4.2 18 2,4 Mexico Average losses Low losses 4,6 18,9 3,4 Panama No losses or increases 0 19,4 3,1 Nicaragua 5,3 4,6 19.8 Belize Honduras 6,6 6,6 20 Costa Rica 8,8 7,7 21,3 21,4 Guatemala 4,5 9,2 31,6 El Salvador 9,2 7,7 Source: Alatorre and Fernández (2022).

#### a.i. Climate Change Perception in the Region

In 2017, Latinobarómetro, a public opinion study that annually conducts some 20,000 interviews in 18 Latin American countries, representing more than 600 million inhabitants, set out to gauge perceptions of climate change in Argentina, Bolivia, Brazil, Colombia, Costa Rica, Chile, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay, and Venezuela.

It found that 32% of interviewees did not believe climate change was occurring (Latinobarómetro 2017). Disbelief was lowest in Ecuador, where 55% of interviewees strongly agreed with the assertion that climate change does not exist, and highest in Uruguay, where only 11% strongly disagreed with that assertion.

Percentage of people who agree/strongly agree or disagree/strongly disagree with the statement that climate change does not exist, 2017

Figura A. Percentage of people who agree/strongly agree or disagree/strongly disagree with the statement that climate change does not exist, 2017



Source: Latinobarómetro (2017).

Note: The pie chart displays the average for the 18 countries included in the study.

According to a global risk survey conducted by in 2019, climate change was considered a serious threat by 68% of respondents in LAC, compared with only 56% of respondents in OECD countries, 48% of respondents in Africa, and just 36% of respondents in Asia (Lloyd's Register Foundation 2019). Compared with issues in the areas of health, education, corruption, equality, and work and salary conditions, climate change ranks lowest in terms of willingness to take public action (marches and other protests) in Latin America, according to Latinobarómetro (2021).

#### Figura B. Percentage of people who consider climate change to be a threat to

Source: Lloyd's Register Foundation (2019). Note: In each of the 121 countries and territories where the Global Risk Survey was conducted, researchers interviewed a sample of about 1,000 people over the age of 15. Information on the survey methodology can be found at https://wrp. lrfoundation.org.uk/understanding-the-poll/.

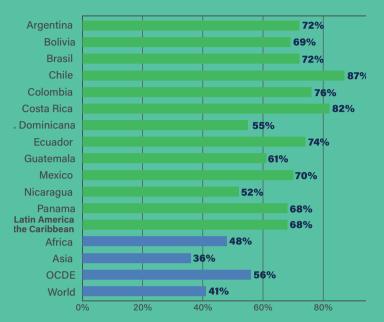
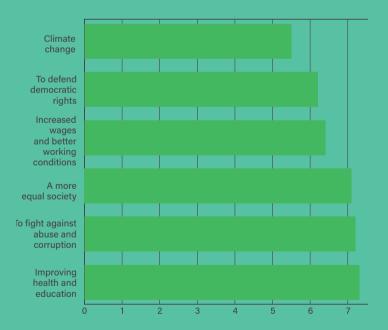


Figura C. Willingness, on a scale of 1 to 10, to march and protest for action on climate change and five other issues

Source: Latinobarómetro (2021). Note: 0 = least willingness



#### b. Climate change risks and structural inequality

The consequences of climate change do not impact all of society in the same way. For example, children are more vulnerable than adults to extreme heat, droughts, floods, and other effects of climate change (UNICEF 2021) (table 1).

Tabla 1. Main impacts of climate change on different social groups in LAC

SOCIAL GROUP	PRINCIPALES IMPACTOS IDENTIFICADOS
Native populations	River overflows cause floodings and bring diseases (IAI 2022).
	Wildfires burn crops (IAI 2022) and affect the health of the nearby population (Castellanos et al. 2022).
	Access to basic services is reduced (IAI 2022) and homes are lost (Castellanos et al. 2022).
	Floods, droughts, and fires negatively affect livelihoods (Castellanos et al. 2022) and cause migrations (IAI 2022).
	Frequent flooding associated with sea level rise poses damage risks (IAI 2022).
Coastal and island populations	Fish catches decrease due to higher sea surface temperatures and stronger ENSO events that negatively affect the marine environment (Castellanos et al. 2022). <sup>3</sup>
	Droughts, heavy rains, cyclones, and ENSO events increase (Castellanos et al. 2022).
	Freshwater availability is reduced (Castellanos et al. 2022).
Children	Extreme heat affects development during gestation (IAI 2022).
	Forty-five million infants are exposed to heat waves and 55 million, to water scarcity (UNICEF 2021).
	Lack of access to fresh drinking water increases the risk of disease (Castellanos et al. 2022).
	One hundred and five million infants are exposed to atmospheric pollution (UNICEF 2021).
	Forest fires increase the risk of respiratory diseases (Castellanos et al. 2022).
Rural populations	Physical access to markets and services is disrupted (World Bank 2022).
	Crop losses occur due to highly variable rainfall and seasonal droughts (Castellanos et al. 2022).
Women	Gender-related economic and labor inequality makes women more vulnerable to climate change actions (Aguilar 2021; Castellanos et al. 2022).
	Extreme weather events disproportionately affect the ability of women and girls to carry out their daily tasks.
	In rural contexts, they must travel greater distances to collect firewood and water, increasing their exposure to gender-based violence outside the home (UNFCCC 2022).
Fishers	Ocean current deflections and the warming of ocean waters alter the distribution of fish stocks and ecosystem structure (IAI 2022).
Farmers and ranchers	Floods, droughts, and fires destroy farmers' possibility to produce (IAI 2022).
	Rising temperatures, changes in water flows, and reduced pastures reduce livestock breeding (Castellanos et al. 2022).
Seniors	Illnesses increase due to extreme heat, poor air quality, and water pollution (USGCRP 2016).
Manufacturing industry workers	Stress increases due to heat (Castellanos et al. 2022).
Low-income population	Water availability decreases and food insecurity increases (Castellanos et al. 2022).
	Exposure to zoonotic and vector-borne diseases increases (Castellanos et al. 2022).
	Housing is lost in marginal areas with a heightened risk of climatic events (Castellanos et al. 2022).

Source: Based on information from Aguilar (2021), Castellanos et al. (2022), IAI (2022), UNFCCC (2022), UNICEF (2021), USGCRP (2016), and the World Bank (2022).

 $<sup>3\,</sup>El\,Ni\bar{n}o/Southern\,Oscillation\,(ENSO)\,is\,a\,natural\,phenomenon\,characterized\,by\,fluctuating\,ocean\,temperatures\,in\,the\,Control of the control of the cont$ central and eastern equatorial Pacific that are associated with changes in the atmosphere. This phenomenon has great influence on climatic conditions in various parts of the world (OMM 2022).

It is expected that, due to climate change, about 2.6% of the region's total population (17 million people) will be forced to move (World Bank 2022c). The Andes, northeastern Brazil, and the northern countries of Central America are among the most migration-sensitive regions (IPCC 2014). Climate-related migrations are expected to increase in vulnerable

low-lying areas such as the Caribbean islands (OMM 2022). Small island developing states of the Caribbean, home to 43 million people, including 12.6 million children and adolescents. are increasingly at risk of forced migration because of more intense hurricanes related to global warming (UNICEF 2019).

#### c. Opportunities to adapt and increase resilience

Adaptation plans are critical to reducing the impacts of climate change as well as to addressing key development challenges such as reducing inequality and poverty. Policy frameworks for adaptation planning include national adaptation plans, NDCs, long-term strategies, long-term adaptation planning, and climate-resilient pathways.

Argentina, Barbados, Colombia, Costa Rica, Guatemala, Jamaica, Mexico, and Uruguay have national adaptation plans in their long-term climate action strategies. However, almost half of the countries in the region lack a 2050 vision and an adaptation work plan (IDB 2022). Moreover, the region lacks in-depth analysis of the effectiveness of adaptation planning. The Inter-American Development Bank suggests

that such analysis include criteria such as a comprehensive approach, inclusion, implementation feasibility, integration, and monitoring assessment (Pérez Urdiales et al. 2022).

Because the adaptation measures adopted by countries respond to national and local needs, capacities, and characteristics, their systematization and assessment at the regional level is a complex issue that requires political and collective discussion beyond the scope of this report. Although countries report many adaptation measures, it is not clear whether these measures are supported by robust policy frameworks and sufficient budget allocations or even whether they are being implemented.

#### Tabla 2. Table 2. Adaptation in the Nationally Determined Contributions of LAC countries

#### **COUNTRIES**

they presented an NDC. Of these, 24 submitted a new, updated NDC or a second NDC (WMO, 2022).

Latin American cities (34% of cities that reported through CDP) have an adaptation plan.

#### LATIN AMERICAN STATES

(45% of states that reported through; CDP) have an adaptation plan.



Agriculture, food security, water, health, ecosystems and biodiversity were highlighted as priorities for adaptation in the NDCs.

11 NDC's link their commitments to Sustainable Development

5 NDC's indicate the contribution of their commitments to the Sendai Framework for Disaster Risk Reduction (Sendai Framework).

2 NDC's with the Convention on Biological Diversity (CBD) and the Convention against Desertification (UNCCD)

1 NDC with the Ramsar Convention on the Protection of Wetlands



Most countries in the region explicitly include the approach of nature-based solutions (NBS) or ecosystem-based adaptation (EbA) and the remaining countries and the remaining countries in the region include it implicitly.

Source: Based on information from WMO (2022), Euroclima (2022), and CDP (2022).

Scientific evidence shows that we are in the presence of a climate crisis that is already negatively impacting the enjoyment of human rights. In United Nations General Assembly Resolution A/74/161, the UN Special Rapporteur on Human Rights and the Environment indicates that the most pressing environmental risk today is climate change, and he states that it is already having a significant impact on people's rights. Although the climate crisis affects the entire planet, there are differentiated impacts for certain regions and groups. Latin America is one of the most affected regions, according to the IPCC. Similarly, groups with pre-existing inequalities and inequities—such as indigenous peoples and communities (Oxfam 2016), women (UN OHCRH 2009), and children (CIDH and REDESCA 2021)—with relatively little capacity or means to face the consequences of climate change, are the most affected, despite contributing the least to the issue.

In this context, states and companies in the region can no longer postpone addressing climate change, and it is, therefore, imperative that they establish and implement measures and actions to confront it and at the same time comply with their human rights obligations. Under the Paris Agreement, these measures and actions should be based on the best available scientific information (article 4) and should reflect a human rights and gender perspective (preamble).

#### Interamerican Association for Environmental Defense (AIDA)

The climate crisis threatens the well-being, health, and survival of the most vulnerable groups, such as children. This crisis interacts with other global crises, such as the water, health, and public safety crises, generating major disruptions in global systems. The climate crisis amplifies existing inequalities, disproportionately affecting those who contributed the least to the crisis. National governments must develop or update long-term adaptation plans, integrating a vision of social justice and protection of human rights. To ensure communities' resilience in the face of climate change, such as extreme hydrometeorological events, it is crucial to invest in climate change mitigation and adaptation measures expeditiously. Otherwise, we could face incalculable losses and damages, such as loss of human lives and cultures.

#### REACCIONA - Red de Acción Climática A.C.

- 18. Por ejemplo, el Relator Especial de Naciones Unidas sobre derechos humanos y ambiente, en su informe presentado en 2019, indica que el riesgo ambiental más apremiante en la actualidad es el cambio climático, y afirma que ya está repercutiendo de manera significativa en los derechos de las personas. Asamblea General de las Naciones Unidas, Resolución A/74/161, Relator Especial sobre la cuestión de las obligaciones de derechos humanos relacionadas con el disfrute de un medio ambiente sin riesgos, limpio, saludable ysostenible, David R. Boyd, 15 de julio de 2019, p.7, disponible en: https://undocs.org/es/A/74/161/.
- OXFAM, Desterrados: Tierra, Poder y Desigualdad en América Latina, 2016, https://www-cdn.oxfam.org/s3fspublic/file\_ attachments/desterrados-ejecutivo-es-29nov-web\_0.pdf/.
- 20. Así lo ha expresado el Consejo de Derechos Humanos de Naciones Unidas, al señalar que «las mujeres están especialmente expuestas a los riesgos relacionados con el cambio climático debido a la discriminación de género, las desigualdades y los roles de género que las inhiben». Consejo de Derechos Humanos, Doc. ONU A/ HRC/10/61, Informe de la Oficina del Alto Comisionado de las Naciones Unidas para los Derechos Humanossobre la relación entre el cambio climático y los derechos humanos, 15 de enero de 2009, p. 17, disponible en: https://www.acnur.org/fileadmin/Documentos/BDL/2009/7033.pdf
- 21. Resolución 3/2021 «Emergencia Climática: alcance y obligaciones interamericanas de derechos humanos,
- pág. 6, disponible en https://www.oas.org/es/cidh/decisiones/pdf/2021/Resolucion\_3-21\_SPA.pdf
- 22. Acuerdo de París, Artículo 4, numeral 1.
- 23. Véase el preámbulo del Acuerdo de París.





# 5. Mitigation: Needed transitions for socially just and inclusive low-carbon development

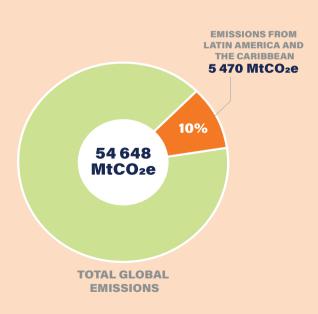
#### a. The region's contribution to emissions

atin America and the Caribbean's historical contribution to global CO<sub>2</sub> emissions is lower than that of other regions. Thus far, the region's decarbonization has been slow. Between 2010 and 2020, CO<sub>2</sub> emissions changed little due to intensive agricultural and livestock activities and to land use change, which accounts for 59% of the region's total CO<sub>2</sub> emissions. Decarbonization of the energy sector, responsible for 31% of emissions, has also been slow (EDGAR 2022 and IPCC 2022a).

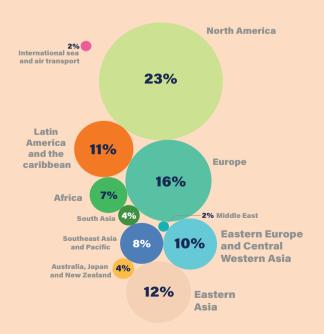
The region's emissions represent 10% of global GHG emissions, a share that remained almost constant from 2010 to 2019 (figure 8).

From 1850 to 2019, cumulative CO<sub>2</sub> emissions from fossil fuel use and land use in LAC made up 11% of historical global emissions, making the region's contribution less than that of North America (23%), Europe (16%), and East Asia (12%) (figure 9).

**Figure 8.** LAC's total net emissions and its share of global emissions, 2010–2019

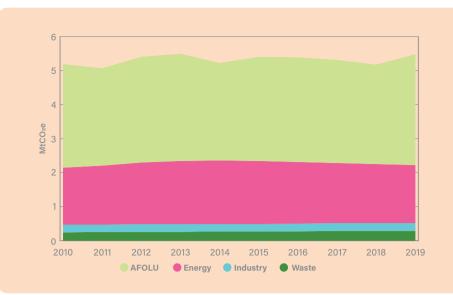


**Figure 9.** Historical cumulative net anthropogenic CO<sub>2</sub> emissions by region, 1850–2019



Source: Based on information from EDGAR (2022) and IPCC

Source: IPCC (2022a).



**Figure 10.** Historical series of CO<sub>2</sub>e emissions of LAC by sector, 2010–2019

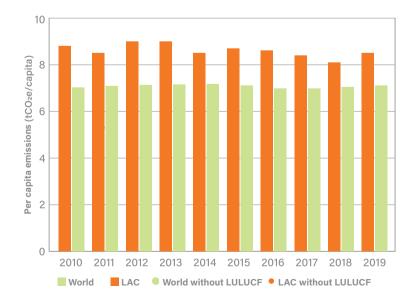
Source: Based on information from EDGAR (2022) and IPCC (2022a).

LAC's cumulative CO<sub>2</sub> emissions are dominated by emissions from land use and land use change, particularly deforestation of virgin forests (figure 10).

Excluding LAC's emissions from land use change, the region's per capita emissions in 2021, 4.86 tCO<sub>2</sub>e, were 21% lower than the world average (EDGAR 2022; World Bank 2022c). When total net emissions are taken into account, LAC's per capita emissions in 2019, 8.5 tCO<sub>2</sub>e/, were higher than the world average, 7.1 tCO<sub>2</sub>e (EDGAR 2022; IPCC 2022a; World Bank 2022). These figures highlight the importance of mitigating

emissions from the land use, land use change, and forestry (LULUCF) sector, which represents 59% of LAC's emissions (figure 11).

The evolution of total greenhouse gas emissions in relation to GDP has fluctuated little, remaining between 0.8 tCO<sub>2</sub>e/US\$ and 1 tCO<sub>2</sub>e/US\$ from 2010 to 2019 (EDGAR 2022). This lack of movement indicates that, despite current efforts, the region has neither significantly mitigated its emissions nor managed to decouple economic growth from emissions growth (EDGAR 2022; Minx et al. 2021; World Bank 2022).



**Figure 11.** Per capita emissions with and without LULUCF for LAC and the world

Source: Own elaboration with information from EDGAR (2022); IPCC (2022a), and World Bank (2022c).

Note: LULUCF = land use, land use change, and forestry

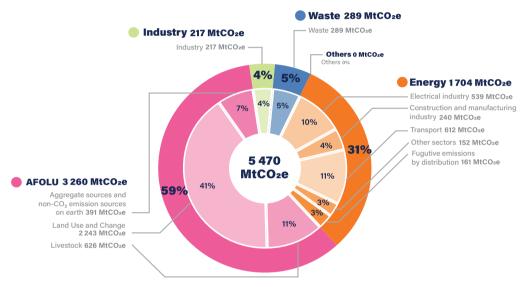
#### a.i. CO<sub>2</sub> emissions by sector

The region's productive activities are still largely dependent on land use and raw materials derived from agricultural, livestock, and forestry activities, which are the region's main sources of CO2 emissions (EDGAR 2022; IPCC 2022a). The region's dependence on fossil fuels continues.

In 2019, emissions from agriculture, forestry, and other land use (AFOLU)

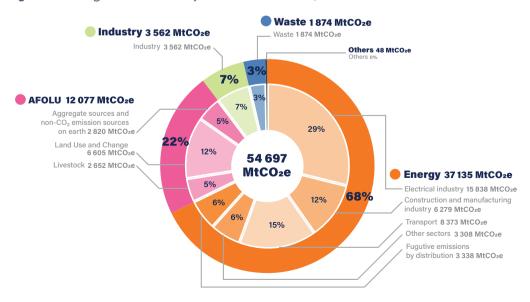
subsectors represented 59% of LAC's emissions, higher than the share of emissions from the region's energy subsectors, 31% (EDGAR 2022; IPCC 2022a) (figure 12). The energy sector accounts for the greatest share of emissions in only five LAC countries: Chile (77%), Mexico (64%), Panama (63%), Ecuador, and Argentina (51%) (EDGAR 2022). By contrast, the energy sector is the largest contributor to global emissions with a 68% share (EDGAR 2022; IPCC 2022a) (figure 13).

Figure 12. Total LAC emissions by sector and subsector, 2019



Source: Based on information from EDGAR (2022) and IPCC (2022a).

Figure 13. Total global emissions by sector and subsector, 2019



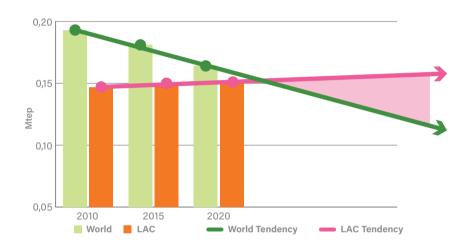
Source: Based on information from EDGAR (2022) and IPCC (2022a).

#### a.ii. Energy outlook

In LAC, the amount of primary energy (in tons of oil equivalent, TOE) per unit of GDP, a measure of the economy's energy intensity, has trended slightly upward since 2010 (figure 14). This trend in energy consumption and fossil fuel use contrasts with the global trend, which has been declining since 2010.

Within the region, there is a wide range of energy intensity—the ratio between a country's total energy demand and gross domestic product, which indicates an economy's energy efficiency. The country with the highest energy intensity in 2021 was Trinidad and Tobago at 0.60 toe/million US\$ (OLADE 2022a; World Bank 2022c), a value well above the regional average toe/million US\$), followed (0.13)by Bolivia at 0.18 toe/million US\$ (OLADE, 2022a; World Bank, 2022c).

Figure 14. Energy intensity of the economy, 2010-2021



Source: Based on information from OLADE (2022a), IEA (2022), and the World Bank (2022).

Within the region, there is a wide range of energy intensity—the ratio between a country's total energy demand and gross domestic product, which indicates an economy's energy efficiency. The country with the highest energy intensity in 2021 was Trinidad and Tobago at 0.60 toe/million US\$ (OLADE 2022a; World Bank 2022c), a value well above the regional average (0.13 toe/million US\$), followed by Bolivia at 0.18 toe/million US\$ (OLADE, 2022a; World Bank, 2022c). The countries with the lowest energy intensity are Panama and Costa Rica at 0.04 toe/million US\$ (OLADE 2022a; World Bank 2022c).

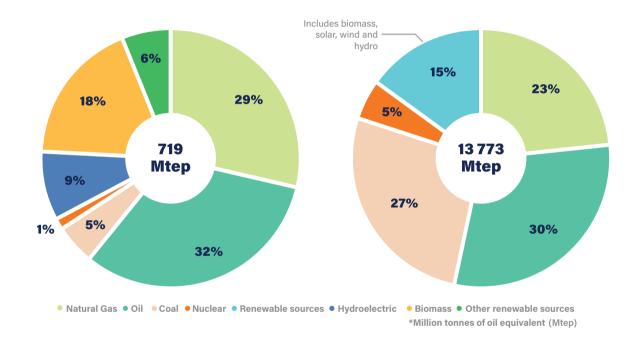
Between 2010 and 2021, primary energy use per capita in LAC dropped 18%, from 1.3 toe/per capita to 1.1 toe/per capita (OLADE 2022a; IEA 2022; World Bank 2022). In 2021, Trinidad and Tobago had the highest per capita primary energy index (9.21 toe/per capita), followed by Argentina (1.79 toe/per capita). The countries with the lowest primary energy index per capita in 2021 were Nicaragua (0.36 toe/per capita) and Costa Rica (0.51 toe/per capita) (OLADE 2022a; World Bank 2022c).

The region's primary energy mix relies heavily on fossil fuels, in addition to large-scale hydroelectric power and bioenergy that is mostly traditional biomass, that is, use of unsustainably obtained firewood for cooking and heating (figure 15).

LAC countries with the highest share of renewables in their primary energy mix are Guatemala (85%), Nicaragua (74%), and Costa Rica (69%). LAC countries with the lowest share of renewables are Ecuador (4%), Dominican Republic (5%), and Argentina and Bolivia (6% each) (OLADE 2022a).

Energy resources used for electricity production in LAC are predominately hydroelectric power and fossil fuels, but the share of renewable energies has increased since 2015 (figure 16). Fossil fuels make up 68% of the primary energy mix in LAC (OLADE 2022b). However, about 58% of the region's electricity mix now comes from renewable sources (Pérez Urdiales et al. 2021).

Figure 15. Primary energy mix for LAC and the world, 2021



Source: Own elaboration with information from OLADE (2022a) and IEA (2022).

Note: Mtoe = Million tons of oil equivalent

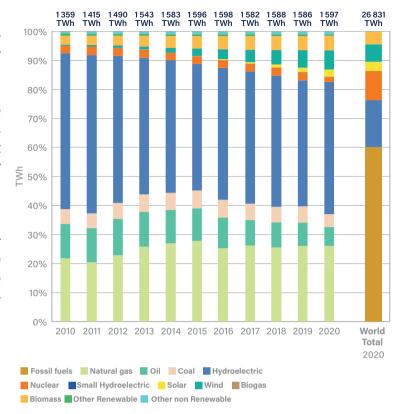
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LAC countries with the highest share of renewables in their electricity generation mix are Costa Rica (26%) and Chile (24%). Countries with the lowest share of renewables in their electricity generation mix are Colombia (2%) and Dominican Republic (5%) (IRENA 2022b). An analysis of the emissions of the energy sector shows that the subsector with the highest contribution is transport, followed by the electricity industry (figure 17).

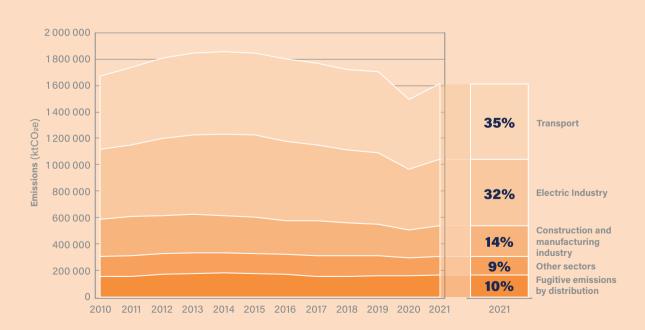
In 2015, GHG emissions in the region began to decrease, reaching their lowest level during the COVID-19 pandemic in 2020. However, the region missed the opportunity to make progress on a green recovery, and emissions rebounded in 2021.

Figure 16. Electricity generation mix in LAC and the world,



Source: Based on information from IRENA (2022a).

Figure 17. Emissions of the energy sector by subsectors, 2010–2021



Source: Based on information from EDGAR (2022).

#### b. Carbon-intensive practices

#### b.i. Deforestation and land use changes

Between 1990 and 2020, the proportion of regional forest cover declined systematically from 53% to 46%. The total loss of land covered by forest was 1.38 million square kilometers, equivalent to slightly more than the entire surface of Peru or half of the surface of Argentina (CEPAL 2021). }

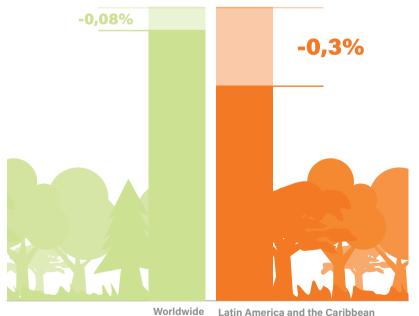
The average annual rate of native forest loss in the region (0.3%) is nearly three times the global rate (0.08%) (World Bank 2022c) (figure 18)

Land use and land use change represents the greatest share of LAC's emissions (59%), and it includes emissions attributable to forest loss (EDGAR 2022) (figure 19).

To stop deforestation and forest degradation-which is critical to the region's decarbonization effortsgovernments must strengthen the institutional and financial capacity of the entities involved and pay attention to the causes of deforestation and forest degradation, such as unsustainable agricultural and livestock practices, uncontrolled expansion of cities, and illegal logging and land use change.

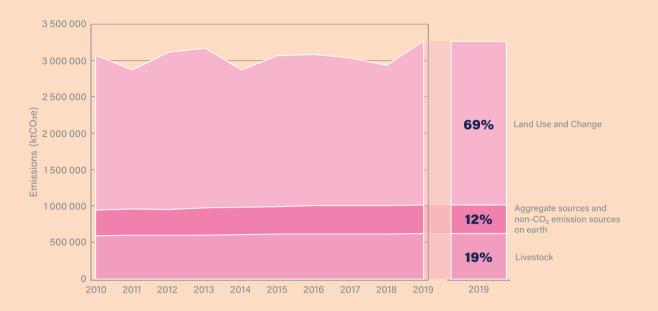
Figure 18. Annual percentage of virgin forest loss in LAC and worldwide

#### **AREA OF NATIVE FORESTS (2010-2016) AVERAGE YEARLY LOSSL**



Source: Based on information from the World Bank (2022c).

Figure 19. Emissions from the AFOLU sector by subsector



Source: Based on information from EDGAR (2022) and IPCC (2022).

Note: AFOLU = agriculture, forestry, and other land use

#### b.ii. Gas as a transition fuel

Because emissions from the energy sector account for 31% of the region's emissions (EDGAR 2002; IPCC 2022a), it is important to immediately consider substitution of fossil fuels such as oil, coal, and gas with renewables, that is, it is not enough to transition to natural gas.

Compared with fuels such as coal and oil, natural gas emits less carbon dioxide per unit of energy; however, the main component of natural gas, methane, has a warming potential more than 80 times greater than that of carbon dioxide (UNEP n.d.). Therefore, transitioning from coal and oil to natural gas would take the region further away from achieving the global goal of reducing GHG emissions by 40% by the year 2030 to limit the average increase in the Earth's temperature by 1.5°C (IPCC 2022a). Moreover, the transition

to low-carbon economies implies a technological reconversion that will turn gas infrastructure into stranded assets (CT 2021).

In addition to increasing emissions that accelerate global warming, the exploration and production of natural gas require significant capital investments that are subject to various uncertainties due to the physical characteristics of gas fields and the granting of permits and licenses, not only endangering the health of the people working in the industry who are exposed to highly polluted gases and vapors but also affecting communities living around large infrastructure projects.

Proven natural gas reserves in LAC account for 4% of global reserves; the majority of the region's reserves (99%) come from Argentina, Bolivia, Brazil, Colombia, Mexico, Peru, Trinidad and Tobago, and Venezuela (OLADE

2023). Argentina is home to the world's second-largest proven reserve, in Vaca Muerta, where serious environmental impacts have been observed. These impacts include air, soil, and water pollution as well as health problems due to environmental degradation and other social impacts on indigenous peoples affected by the exploitation of Vaca Muerta (FARN 2021).

LAC countries hold approximately 4% of the world's natural gas reserves, 19% of oil reserves, and 1% of coal reserves (British Petroleum 2022). considering unconventional Even hydrocarbon reserves, the region has

no dominant presence in the fossil fuels market at the global level. Countries where coal is extracted or burned, such as Brazil, Chile, Colombia, and Mexico, could promote diversification of energy sources among other LAC countries.

The lack of clear targets for phasing out fossil fuels and phasing in renewables in LAC countries leads to modeling exercises that do not allow for significant progress (TRANSFORMA 2023). The region must articulate ambitious goals to accelerate its exit of fossil fuels, including gas, while guaranteeing the conditions to increase use of renewables in a fair. equitable, and transparent manner.

#### c. LAC as an innovation space for climate action

#### c.i. Current and projected renewable energy capacity

The region has geographical and orographic conditions that favor solar irradiation and the generation of offshore and onshore wind energy. These conditions can help LAC move toward a more sustainable energy mix and reduce the environmental and health impacts of fossil fuel use. According to the International Renewable Energy Agency, LAC has the potential to increase its large-scale wind (41.5 GW) and solar (27.6 GW) energy capacity nearly fivefold (460%) by 2030, representing almost 70% growth above the region's current total electricity capacity from all sources, which is 457 GW (IRENA 2022b).

If the region's potential large-scale solar and wind energy projects were fully operational by 2030, they and alreadyoperational renewables projects would achieve 80% of the solar energy target

and 220% of the wind target set by the International Energy Agency to reach net zero emissions. In short, the region would exceed the renewable energy targets in 2030 (GEM 2023).

The region's renewables landscape is highly varied. Several LAC countries, notably, Brazil, Chile, and Colombia, have made considerable progress in creating renewable energy markets and diversifying their energy mix. (Mexico had made progress until post-2018 regulatory and legal changes stymied implementation of renewable energy projects for electricity generation.) Brazil generates 84% of its electricity from renewables, but Jamaica relies on imported oil derivatives for 87% of its electricity generation (OECD 2022). Barbados, Cuba, Dominican Republic, Jamaica, Puerto Rico, and Trinidad and Tobago have at least 100 MW of potential large-scale solar and wind projects (GEM 2023).

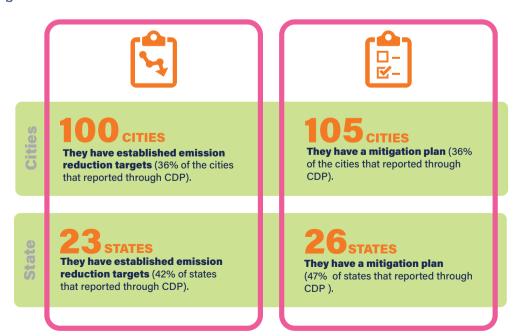
More diversified energy mixes will not only help LAC countries reduce emissions but also drive a just energy transition. Large-scale renewable energy projects could unlock local development processes, local job creation, and greater access to energy. Local people should be involved in all stages of these projects' development to ensure that long-term social and environmental impacts are considered and that strategies to mitigate them are developed, Likewise, small and mediumscale renewable energy projects could promote local development and involve communities and individuals in the energy sector. These projects, whether private, collective, or community based, could ensure that the benefits of the transition are equitably distributed. Together, large-, medium-, and smallscale renewable energy projects can allow the region to achieve a just energy transition promoting universal access to clean energy and generating local development.

A diversified, decentralized energy system based on renewable and endogenous resources would create local suppliers offering quality jobs and would establish continuous learning and capacity-building processes. Moreover, such a system would reduce the region's vulnerability to the impacts of climate change, such as increased heat waves or reduced river flows. Thanks to its abundance of renewable energy, LAC could become a test environment for climate solutions that spur low-carbon development.

## c.ii. Mitigation measures at the subnational level

The Paris Agreement recognizes the importance of climate action at the subnational level. It is at this level that projects' social and environmental impacts are felt. For this reason, work at the subnational level should be considered in the measures promoted and accounted for by NDCs. According to the Carbon Disclosure Project, 36% of Latin American cities reporting to the project have emissions reduction objectives (figure 20).

Tabla 3. Mitigation actions at the subnational level in LAC



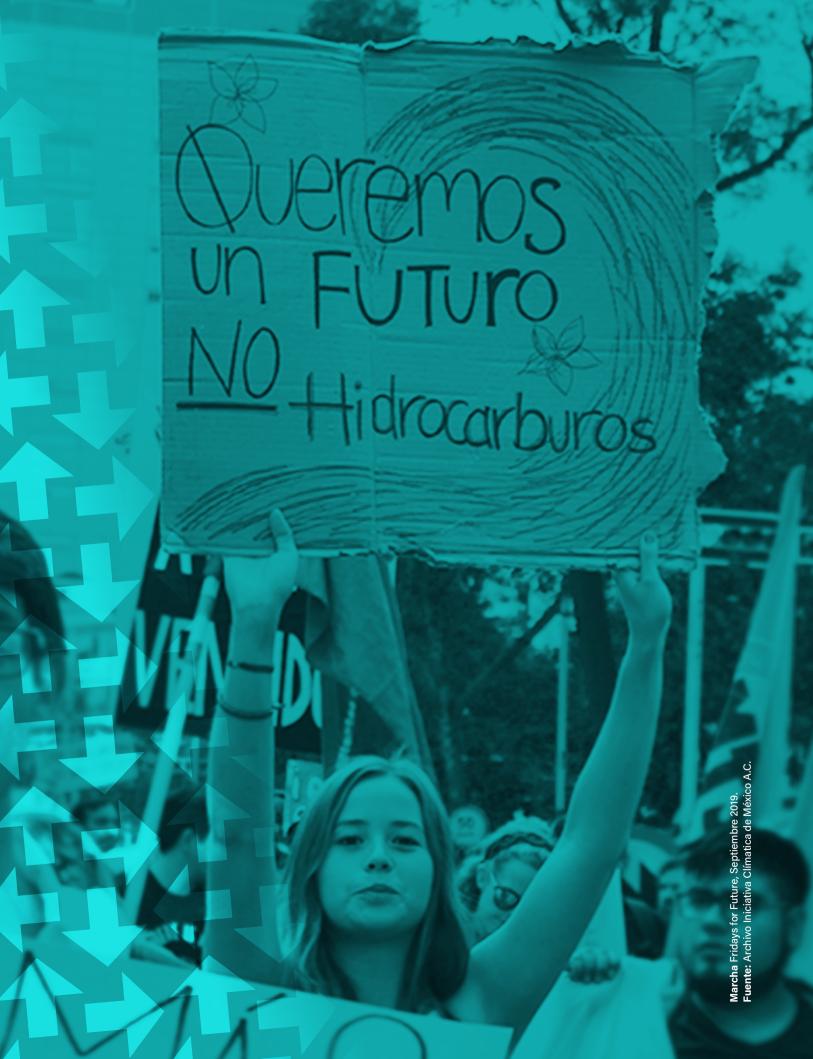
Source: CDP (2022).

LAC's cumulative CO2 emissions are dominated by emissions from land use and land use change, particularly deforestation of native forests. Action is needed not only to reduce emissions from the AFOLU sector but also to take advantage of all opportunities to reduce GHG emissions in every other sector of the economy. Efforts need to be focused on reducing emissions according to the more ambitious trajectories proposed by the IPCC because every fraction of global average temperature rise increases the risks associated with climate change.

The LAC region must prioritize the transition to economies and societies that follow a low-GHG- emissions and climate-resilient development model, making sure that the transition is fair to the communities and sectors most affected by it and made in a way that ensures environmental integrity.

In addition to its potential to reduce emissions—by taking advantage of its capacity to generate energy from renewable sources and reverse the loss of forest cover, for example-LAC also has great potential for CO2 absorption through its tropical forests, which contribute to the conservation of biodiversity and ecosystems, generating multiple benefits at the local, national, regional, and global levels.

Transforma Global



# 6. Finance: Prerequisite to achieve progress in the region's climate action

To align financial flows with the objectives of the Paris Agreement, regional governments need to redirect investment in hydrocarbons to projects that promote implementation of mitigation and adaptation measures.

The World Economic Forum's Global Risks Report 2023 points out that many of humankind's most significant challenges are related to the environment (WEF 2023). Climate change is an existential threat. The fact that global financial flows are not allocated to reduction of greenhouse emissions, resilience enhancement, and socially inclusive low-carbon development is worrisome.

To address climate change impacts and implement greenhouse mitigation measures, LAC is greatly dependent on international cooperation and decarbonization of the financial sector and the real economy. According to the Economic Commission for Latin America and the Caribbean, the region has experienced a marked increase in climate finance flows in recent years. Annual average disbursements increased from around \$3 billion USD to \$8 billion USD between 2015 and 2018, and they come from both international and national sources (CEPAL 2019).

However, mobilizing large-scale financial resources to effectively address climate challenges remains difficult, in part due to technical and capacity barriers to accessing international climate funds.

#### a. Key stakeholders in climate finance

#### a.i. Role of the public sector in achieving progress on climate change

The budget assigned to carbonintensive projects by LAC countries is four times the budget allocated to sustainable measures such as renewable energies and energy efficiency (GFLAC 2022). Governments have a major opportunity to redirect their own resources to projects aligned with their mitigation and adaptation objectives by harnessing their enabling and coordinating capacities to promote the transition and to regulate their national economies. In this regard, regional governments have implemented many policies and programs to leverage financial resources and support climate change mitigation and adaptation

through national funds for climate finance. According to the Sustainable Finance Index results prepared by the Climate Finance Group of Latin America and the Caribbean, 20 countries within the region assigned less than 1% of their budgets to climate action in 2021 (GFLAC 2022). These countries—Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Trinidad and Tobago, Uruquay, and Venezuela-are still investing to expand hydrocarbons exploitation its associated and infrastructure (GFLAC 2022).

In 2021, LAC countries allocated \$70.275 billion USD (4% of the overall 2021 budget) to carbon-intensive activities and only \$1.8 billion USD to sustainable actions. They allocated \$133 million USD to the environmental

a.ii. Role of the private sector in achieving progress on climate change

The private sector is needed to raise the necessary capital for the economy's decarbonization and to diversify funding sources through new financial mechanisms. The private sector is therefore critical to transforming economic activities to comply with emissions reduction objectives, developing innovative solutions that support adaptation and preservation of natural resources, and channeling funds to investments and essential assets for the transition to climateresilient and low-carbon economies.

Several institutions have attempted to calculate the cost of climate action through different methodological approaches.

sector, \$354 million USD to renewable energy and energy efficiency, and \$1,312 billion USD to natural disaster reliefrepresenting only 0.11% of the overall budget (\$1,650.727 billion USD)-for that same year (GFLAC 2022).

Some meaningful initiatives have been implemented through financial sector; as an example, green taxonomies establish criteria and qualifications to determine which economic activities can be considered sustainable from an environmental and green-bonds standpoint.

Colombia was the first Latin American country to publish a green taxonomy in April 2022; Mexico followed suit in March 2023. Peru, Brazil, Costa Rica, and Chile have each developed a taxonomy roadmap, and Dominican Republic is developing a green taxonom

The Latin American Observatory on Climate Action (OLAC) estimates that LAC countries need between \$2.1 billion USD and \$5.8 billion USD to implement mitigation actions and between \$0.8 billion USD and \$1.9 billion USD to implement adaptation actions by 2030 (OLAC 2019). The United Nations Environment Programme's Emissions Gap Report 2022 finds that LAC's current mitigation investment is four to eight times less what it should be (UNEP 2022). And the Inter-American Development Bank calculates that, by 2030, between 7% and 19% of LAC's annual GDP will be needed strengthen infrastructure and safeguard social capital from climate change impacts (Galindo, Hoffmann, and Vogt-Schilb 2022).

Climate change affects the financial system through two main channels. The first channel is physical risks infrastructure, from property, and land damage. The second channel is transition risks stemming from changes in climate policy, technology, and consumer and market confidence during the adjustment to a lowercarbon economy (Grippa 2019).

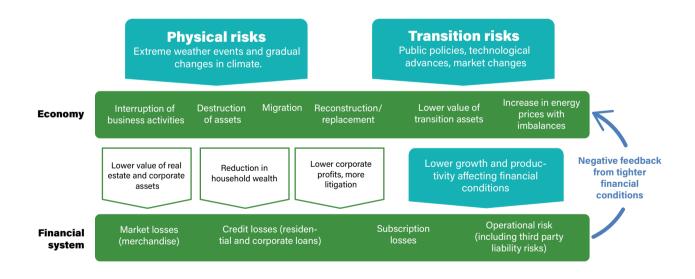
The Task Force on Climate-related Financial Disclosures (TCFD) promotes the transparent and consistent disclosure of financial information related to climate change. The TFDC provides a structured framework for companies to evaluate and disclose climate risks and opportunities so that the private sector can make informed decisions regarding climate-related financial risks. Brazil, Chile, Colombia, and Mexico already have specific regulations that mandate the adoption of TCFD recommendations

at various levels and to make disclosures. to certain stakeholders.

Furthermore, some private Latin American and Caribbean banks have established environmental protection and climate-change mitigation funding lines. These funding lines mostly consist of flows from multilateral or national development banks that are allocated as loans (CEPAL 2020).

The market for green, social, and sustainable bonds (GSS), instruments labeled for specific sustainability and climate-change mitigation projects, has experienced significant regional growth. Fourteen LAC countries issue GSS bonds. Together, Brazil, Chile, and Mexico have issued 77% of the region's GSS bonds (CBI 2021).

Figure 20. Financial risks associated with global climate change and its potential impacts.



Source:CDP, 2022.

### b. International cooperation

#### b.i. Funding received by LAC for mitigation and adaptation measures is insufficient.

The Climate Finance Group of Latin America and the Caribbean determined that only 14% of international financing to support climate action in LAC is destined for that purpose (GFLAC 2022).

International financing to support climate action in Latin America and the Caribbean comes from diverse sources, such as multilateral agencies, development agencies, climate funds, and cooperation programs. According to Climate Funds Update, the Green Climate Fund (GCF) is the leading climate finance provider in the region.

GCF has approved \$1,906 billion USD for 29 projects in 13 countries as well as \$52 million USD for 85 so-called preparation projects—planning and institutional strengthening activities related to climate change (CFU n/d). The secondlargest climate finance provider in LAC is the World Bank's Clean Technology Fund (CTF), which has approved \$763 million USD in concessional loans for 42 projects in Brazil, Chile, Colombia, Ecuador, Honduras, Mexico, Nicaragua, Paraguay, and Peru. The third-largest provider is the Amazon Fund with \$705 million USD in grants allocated to 102 projects in Brazil. These three funds represent 68% of the total funding for the region (CFU 2022) (table 3, figure 21).

FUND	SIGNED-OFF FUNDS (MILLION USD)	SIGNED-OFF PROJECTS
Green Climate Fund (GCF-IRM, GCF-1)	1906.1	29
Clean Technology Fund (CTF)	762.8	42
Amazon Fund	705.3	102
Global Environment Fund (GEF-4, 5, 6, and 7)	569.7	127
Forest Investment Program (FIP)	245.8	22
Adaptation Fund (AF)	165.2	42
Pilot Program for Climate Resilience (PPCR)	126.0	19
Forest Carbon Partnership Facility (FCPF)	89.1	13
Scaling Up Renewable Energy Program in Low-Income Countries (SREP)	60.4	14
Special Climate Change Fund (SCCF)	49.9	12
BioCarbon Fund	49.3	2
UN-REDD Program	46.6	10
Global Energy Efficiency and Renewable Fund (GEEREF)	30.8	2
Adaptation for Smallholder Agriculture Program (ASAP)	30.4	5
Partnership for Market Readiness (PMR)	25.9	15
Millennium Development Goals Achievement Fund (MDG-F)3	24.4	7
Global Climate Change Alliance (GCCA)	24.1	2



Multilateral financial resources for climate change efforts in LAC are highly concentrated in the region's largest economies: Brazil (\$1,179 billion USD) and

Mexico (\$555 million USD), representing 35% of the regional financing, followed by Costa Rica, Colombia, and Chile (CFU 2022).

# c. Financing for mitigation versus financing for adaptation

Most climate financing is allocated to mitigation and to reducing emissions from deforestation forest and degradation in developing countries (REDD+). Less than half of climate financing goes to adaptation (figure 22). Mitigation projects are mainly focused on the renewable energy generation, transportation, and energy efficiency sectors; adaptation projects are focused on the forest, agriculture and land use, sewage, and risk management sectors (CEPAL 2020)

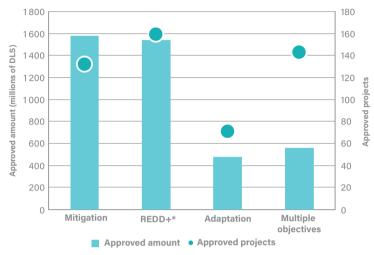
Climate financing received by LAC represents between 0.05% and 0.15%

of the region's estimated mitigation needs and between 0.03% and 0.06% of the region's adaptation needs through 2030 (based on GFLAC 2022). More financing resources for adaptation, in particular, are required to reduce the region's vulnerability.

Along with climate financing, the region needs technological and capacities strengthening support. With that support, and using its own resources, the region could begin to put key productive sectors such as food and energy on a more sustainable and fair development path.

LAC has emphasized the challenges posed by international financing practices that promote indebtedness of impoverished and climate-change-affected countries (Carty, Kowalzig, and Zagema 2020). It needs innovative, country-specific financial instruments

such as thematic bonds (green, blue, social), debt exchange, blended use of concessional loans and technical assistance from climate funds, and guarantees for which new financial sector stakeholders can apply (Bazán 2022).



\*REDD+ (Reduction of emissions from deforestation and forest degradation, conservation, sustainable management of forests or increase in the carbon budget.)

Climate finance in Latin America and the Caribbean has bolstered countries' climate agendas, in part by reinforcing institutional capacities. In addition, it has advanced development of climate-finance national strategies and identified financing gaps. On the other hand, most financing has gone to the biggest economies, and financial instruments have promoted debt. Moreover, most climate financing is still addressed to mitigation, which needs to be rapidly balanced with financing that addresses losses, damages, and adaptation, given the increasingly complex socioeconomic conditions faced by the communities that are still in the early stage of adaptation to climate change. The countries most affected by climate change are speaking out about their real needs and demanding financing instruments suited to these needs.

Climate Finance Group of Latin America and the Caribbean (GFLAC)

Latin America is particularly vulnerable to climate change because of its socioeconomic situation, potential loss of biodiversity and freshwater supply, and role in global food security. Climate finance flows to the region do not reflect this reality. Most funding to battle climate change has been channeled to emissions reduction in the energy generation, industry, and transportation sectors rather than to local adaptation in the water and agricultural sectors. This situation has resulted in part because of the onerous requirements of financing sources for information about localized climate impacts and potential outcomes for each financed activity. This "climate rationality" improves the information quality and recommended actions, but it hinders the engagement of on-site stakeholders.

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# 7. Considerations for the next regional stocktake

The second independent stocktake for LAC, in 2028, could be supported by government decisions to guarantee monitoring mechanisms and robust reporting and verification.

Regarding **ADAPTATION AND VULNERABILITY**, the next edition of the report—and decision-makers throughout the region—would benefit from more and better information on

- Regarding **MITIGATION**, the next edition of the report—and decision-makers throughout the region—would benefit from more and better information on
- Regarding **FINANCING**, the next edition of the report—and decision-makers throughout the region—would benefit from more and better information on

- Climate change impacts on key developmental challenges such as food security and human rights
- 2. Health hazards for vulnerable groups, particularly indigenous and rural communities
- Effects of losses and damages on biodiversity and ecosystem services, cultural traditions, and indigenous knowledge
- 4. Country-specific risk management
- 5. Nature-based adaptation solutions such as sustainable agriculture practices, biodiversity conservation, and commitments to zero deforestation National adaptation plans

- Post-pandemic economic recovery packages that led to a GHG emissions surge
- 2. Recommendations to move toward economic recovery with a climate justice approach
- 3. NDC ambition and countries' compliance with ICTU (information to facilitate clarity, transparency and understanding) criteria
- 4. Climate action benefits beyond fossil fuel reduction and renewable energies acceleration—benefits such as green employment

- 1. Allocations to fossil fuels and renewable energies (lack of data disaggregation hinders transparency)
- 2. Assignment of resources in finance instruments such as carbon taxation and emissions
- 3. Costs of inaction
- 4. Needs of Latin American countries to steer international financing toward implementation of effective actions to address climate change

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