Great Expectations: Challenges to Implementing Climate Policies in Latin America and the Caribbean¹

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Abstract

The Latin America and the Caribbean (LAC) region is a distinct geographic, economic and cultural area with a place in the climate change landscape. LAC has suffered the impacts of climate change at a level disproportionate to the amount of emissions it produces. Awareness of this experience, in addition to factors such as the region's large young population, increasing middle class, vast natural resources and considerable economic growth potential provide reasons to hope LAC can implement significant climate change policies to meet its Paris commitments. Springing from its cultural and historical affinities, the region has borne a flurry of polycentric initiatives promoting exchange, integration and coordinated approaches to common problems. Climate policy implementation to meet Paris commitments is still incipient, with some of its countries serving as models, some as laggards and the rest positioned somewhere in between. For this reason, partnerships with regions which have advanced more in this area can prove useful. The EU-CELAC summits and the *Euroclima program are two examples. Due to its high levels of inequality and* social unrest, the key challenge to implementing climate policies in LAC will be the strengthening of a political atmosphere where human rights, the rule of law and democratic values prevail.

¹ A later version of this preliminary draft will appear as a chapter in a forthcoming book. ² Visiting Fellow, Centre for European Studies, Australian National University. Unless otherwise noted, all translations in this chapter are my own. The opinions expressed are personal and do not represent the official view of any institution.

Introduction

The Latin America and the Caribbean (LAC) region is a distinct geographic, economic and cultural area with a place in the climate change landscape.



Figure 1. Geography of LAC

Source: Latin American Network Information Center (LANIC 2015).

With an area of 20 million square kilometres (The World Bank 2022), LAC possesses a population of 650 million people and 46% of forested land area (Baumgartner, Carman, and Jo. 2022). According to Statista, LAC's GDP is approximately 4.8 trillion dollars (Statista Research Department 2022), with Brazil and Mexico, respectively the largest Portuguese and Spanish speaking

countries in the world, accounting for 54% of the population and 59% of GDP.³ According to CEPAL, LAC has a population of around 660 million people,⁴ a GDP of \$5.2 trillion⁵ and a GDP per capita of \$7,931 (CEPALSTAT 2021).⁶

LAC comprehends countries located in four geographical areas: North America (Mexico), the Caribbean (with 21 countries), Central America (7 countries) and South America (13 countries) (LANIC 2015). That adds up to 42 countries, which coincides with the World Bank's definition too (World Bank 2022a).

The most comprehensive definition results from the UN's Department of Economic and Social Affairs 'regional groupings' used for the Sustainable Development Goals Indicators. It divides LAC in three sub-regions with 49 states or territories, some of them contested(United Nations Statistics Division 2022): Caribbean (with 26)⁷, Central (with 8)⁸ and South (with 15)⁹.

A more restrictive definition of LAC comes from considering the 33 members of the Latin American and Caribbean Community of States (or CELAC, for its acronym in Spanish): Antigua y Barbuda, Argentina, Bahamas,

³ Given the different approaches to defining LAC, certain inconsistencies may appear between figures about it depending on how the source defines LAC.

⁴ Or 640 million for Statista (Statista Research Department 2022) and 652 for the World Bank (World Bank 2022a).

⁵ It is \$5.49 trillion according to the World Bank (World Bank 2022a) and \$4.8 for Statista (Statista Research Department 2022).

⁶ Or \$8,340 for Statista (Statista Research Department 2022) and the World Bank (World Bank 2022a).

⁷ Anguilla, Antigua and Barbuda, Aruba, Bahamas, Barbados, Bonaire, Sint Eustatius and Saba, British Virgin Islands, Cayman Islands, Cuba, Curaçao, Dominica, Dominican Republic, Grenada, Guadeloupe, Haiti, Jamaica, Martinique, Montserrat, Puerto Rico, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Sint Maarten, Trinidad and Tobago, Turks and Caicos Islands and United States Virgin Islands.

⁸ Belize, Honduras, Costa Rica, El Salvador, Guatemala, Mexico, Nicaragua and Panama.

⁹ Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, French Guiana, Malvinas or Falkland Islands, South Georgia & the South Sandwich Islands, Guyana, Paraguay, Peru, Suriname, Uruguay and Venezuela.

Barbados, Belice, Bolivia, Brasil¹⁰, Chile, Colombia, Costa Rica, Cuba, Ecuador, El Salvador, Federación de San Cristóbal y Nieves, Grenada, Guatemala, Guyana, Haití, Honduras, Jamaica, Mancomunidad de Dominica, México, Nicaragua, Panamá, Paraguay, Perú, República Dominicana, San Vicente y las Granadinas, Santa Lucía, Suriname, Trinidad y Tobago, Uruguay and Venezuela (SELA 2022).¹¹



Figure 2. Political Map of the Caribbean.

CELAC is preferred here as the best proxy for LAC for several reasons. First, because it is a formal grouping with a commitment to unity and integration, both economic and political, based on common historical and cultural similarities and common challenges. Second, because its reach is comprehensive, open to all LAC countries. Thirdly, because it pursues coordinated strategies to tackle common problems in the region (and

Source: El Orden Mundial (Gil 2021).

¹⁰ Under President Jair Bolsonaro, in 2020 Brasil pulled out of CELAC. Ahead of the elections that took place in October 2022, presidential candidate Luiz Inácio Lula Da Silva had indicated that if elected [polls then put him ahead by a margin (Harrison 2022) that turned out to be much smaller] he would reintegrate Brazil to CELAC and other regional and international initiatives (Revista Fórum 2022). In Section 5 of this chapter we draw on his post-victory speech which is consistent with the election promises.

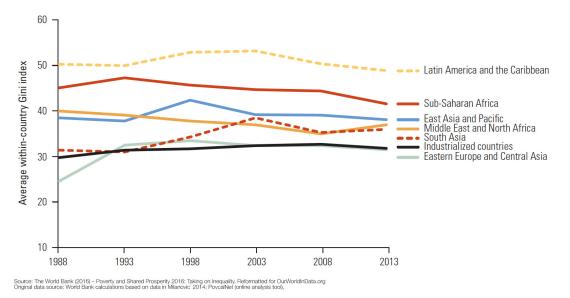
¹¹ The UN Development Program follows this exact definition on its page and reports. See for instance (United Nations Development Program 2022).

beyond) such as threats to democracy, corruption, organised crime, violence, poverty, inequality and climate change. And fourthly, because it provides a platform for the member states to advance common interests at the UN and other multilateral fora (Agencia EFE 2021), including the CELAC-EU summits (Ayuso 2021).

LAC is a highly unequal region (Roser and Ortiz-Ospina 2016) with low economic growth. Though income inequality has decreased in the past thirty years, LAC¹² remains one of the most unequal regions in the world (Department of Economic and Social Affairs 2020). In fact, as Figure 2 shows, LAC's income inequality is the highest the world except for Sub-Saharan Africa (UNDP 2021):



Trends in the average economic inequality within countries, by world region – 1988-2013



Source: World Bank (World Bank Group 2016).

COVID-19 only exacerbated this situation and LAC had the strongest economic setback of all world regions (World Bank 2022b), with a 6.7% decrease in GDP in 2020, though in 2021 it grew again by 6.8%. At any rate,

¹² Together with 'Africa' (presumably, Sub-Saharan Africa). , and according to the second source it is the Middle East. Unfortunately, LAC shares the highest place in income inequality in either case, with two of the biggest countries by GDP and population, Mexico and Brazil, among the most unequal ones, with 10% of the population holding close to 60% of the income.

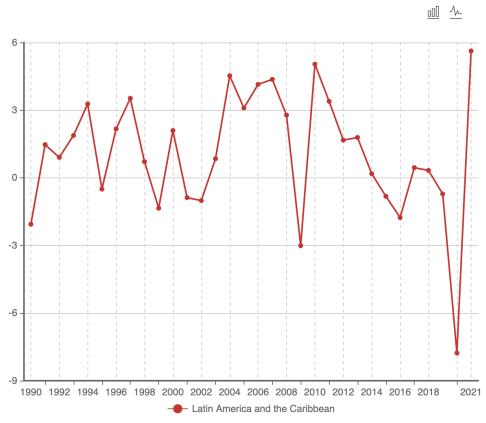
GDP per person in real terms has barely grown for the past 30 years, as can be appreciated in Figure 3:

Figure 3 - LAC GDP per capita change 1990-2021

Economic / Real sector / National accounts / Annual / In dollars

Rate of growth of Total Annual Gross Domestic Product (GDP) per capita at constant prices in dolllars

(Percentage)



Source: CEPALSTAT - ECLAC - UNITED NATIONS

Source: Economic Commission for Latin America and the Caribbean (ECLAC 2022).

Furthermore, the problem of low economic growth per capita results even more serious when seen in conjunction with the situation of high inequality alluded to above. As of 2020 LAC's Gini coefficient sat at 0.50.¹³ As can be seen in Figure 4, its poverty rate reached 33%, with 13.1% of the population suffering extreme poverty (CEPAL 2022b).

¹³ The Gini index, as defined in the OECD glossary, 'measures the extent to which the distribution of income (or, in some cases, consumption expenditure) among individuals or households within an economy deviates from a perfectly equal distribution', with a Gini index of zero representing perfect equality (Directorate 2006).

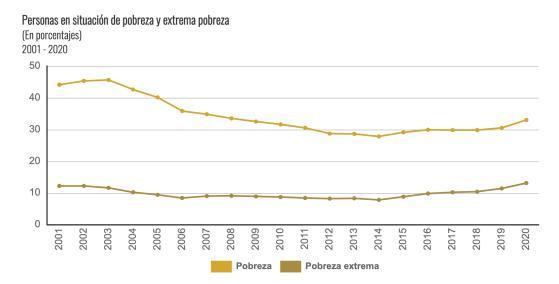


Figure 4. Poverty and extreme poverty in LAC (% of total population).

Source: (CEPAL 2022b).

Unfortunately, income inequality in a region rich in resources, young population, territory and economic activity is only one of several symptoms that reveal a greater problem. Organised crime, violence, corruption, the grey economy, nepotism and lack of opportunities are also signs of a region yet to mature politically. Fundamental freedoms, democratic representation, an open public sphere, the balance of powers and the rule of law need to become prevalent so that those symptoms may recede and so that the new environmental challenges affecting the region can be mitigated through successful climate policies. We will come back to this in section 4 of this paper. Let us first, however, review those environmental challenges.

1. The Impact of Climate Change in LAC

LAC has suffered the impacts of climate change at a level disproportionate to the amount of emissions it produces. Figure 5 shows that in the past thirty years only Sub-Saharan Africa emits less carbon. Data from the Economic Commission for Latin America and the Caribbean (CEPAL 2019), the United States Environmental Protection Agency (EPA 1 August 2022) and Climate Watch (Climate Watch 2022) indicate that LAC produces less than

10% of global greenhouse emissions. This is corroborated by the latest (sixth) IPCC Assessment Report (IPCC 2022).

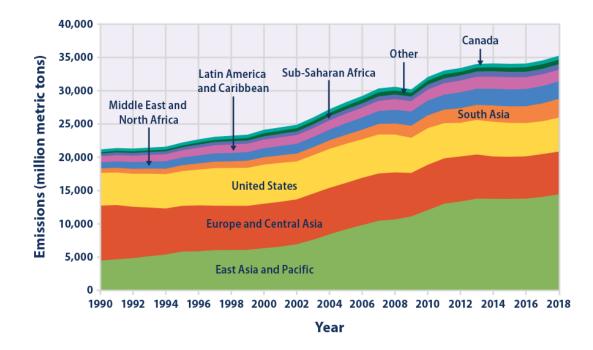


Figure 5. Carbon emissions per region.

Numerically, the comparison between regions is laid out in Table 1 below. And, while the figures may be different when not only carbon emissions are considered,¹⁴ the basic assessment remains.

However, the effects of climate change are being and will continue to be strongly felt in the region. Recent reports by the World Meteorological Organisation shows how significantly LAC is being affected by climate change (OMM 2021).

Source: (EPA 1 August 2022).

¹⁴ The UN Development Program calculates that the region's accounts for 8.1% of global GHG emissions including Land Use, Land-Use Change and Forestry sector.

Region	Metric tons	Share
East Asia and Pacific	14,420.47	40.91%
Europe and Central Asia	6,428.11	18.24%
United States and Canada	5,698.73	16.17%
South Asia	2,828.14	8.02%
Middle East and North Africa	2,608.22	7.40%
Latin America and Caribbean	1,749.36	4.96%
Sub-Saharan Africa	845.63	2.40%
Others	670.08	1.90%

Table 1 - Global Carbon Dioxide Emissions by Region, 2018

Source: (EPA 1 August 2022).

Sea levels in 2020 rose above the world average. Roughly a third of the population in LAC live by the coast, with an estimated 6–8% living in areas that are at high or very high risk of being affected by coastal hazards. Temperatures in the North Atlantic Ocean were warmer than usual. The sea level in the Caribbean has been rising at a slightly higher rate than the global average (OMM 2021).

Glaciers in the Andes between Argentina and Chile continued to melt, temperatures rose and rainfalls diminished. In Guatemala, climate change contributed to the loss of nearly 80% of the corn harvest. In Haiti, 4.1 million people faced food crises. Between 1998 and 2020, the impacts of climate change have cost more than 312,000 lives and affected over 277 million people in LAC (Mora Díaz 2021).

The average temperature in the 30 years to 2021 increased by 0.2%, twice as much as in the previous 30 years. Glaciers in the tropical Andes have lost at least 30% of the area they had in the 1980s; the figure is 50% for some glaciers in Peru. Chile's central region faced its thirteenth consecutive year of drought, while parts of Brazil, Paraguay and Bolivia faced their worst drought since 1944. Sea levels, flooding and hurricanes all reached extraordinary increases. Deforestation of the Amazon grew by 22% compared to the 2020 levels. Out of the 175 natural disasters occurring

between 2020 and 2022, 88% had a meteorologic, climate or hydrologic cause (UNFCCC Secretariat 2022).

These effects, though caused only fractionally by LAC, constitute a strong motivation for the region to join efforts towards the achievement of the Paris Agreement goals. And such efforts will have a greater impact the larger the emitters who undertake them are.

Country	MtCO2e	% of LAC's GHE	% GHE LAC	% of World's GHE
Brazil	1451.6	35.94%		2.92%
Mexico	670.8	16.61%		1.35%
Argentina	398.9	9.88%	76.54%	0.80%
Venezuela	299.6	7.42%		0.60%
Colombia	270.5	6.70%		0.54%
Peru	190.7	4.72%		0.38%
Bolivia	138.7	3.43%	14.36%	0.28%
Ecuador	98.7	2.44%		0.20%
Paraguay	96.6	2.39%		0.19%
Chile	55.3	1.37%		0.11%

Table 2 - GHG Emissions in LAC, 2019

Source: Climate Watch Data (Climate Watch 2022).

Within the 33-country region, 90% of emissions can be attributed to 10 states, and 77% of emissions to only five of them (see Table 2). Without detriment to the importance each country has in climate action in this region, due to space constraints, emphasis throughout this chapter falls on the states that pollute the most and can therefore make the largest contribution towards the global goal.

Table 3 presents the latest available information as is therefore taken here as reference in singling out the biggest emitters in the LAC region. Analysis on these ten countries can provide an accurate approximation to the whole region's situation, as they account for over 90% of emissions.

Country	1990	2005	2020	Global %	LAC %	Accum
World	22,727.88	30,170.03	35,962.87	100.00		
LAC	958.86	1495.66	1572.27	4.35	100.00	
Brazil	228.30	382.82	451.80	1.26	28.97	28.97%
Mexico	291.04	448.86	407.70	1.13	25.98	54.94%
Argentina	108.15	165.90	176.51	0.49	11.26	66.21%
Colombia	52.53	60.92	90.25	0.25	5.75	71.95%
Venezuela	102.74	153.45	88.95	0.25	5.75	77.70%
Chile	33.01	58.88	84.56	0.24	5.52	83.22%
Peru	20.89	31.87	44.48	0.12	2.76	85.98%
Ecuador	17.59	28.38	33.28	0.09	2.07	88.05%
Trinidad & Tobago	12.67	34.25	30.27	0.08	1.84	89.89%
Dominican Republic	8.04	18.80	29.09	0.08	1.84	91.72%

Table 3 - CO2 Emissions by LAC Country (Mton)

Source: EDGAR (Crippa et al. 2021).

2. LAC—Reasons for Hope

As advanced above, experience of the effects of climate change provide countries motivation to join the Paris Agreement efforts. Such efforts will be more impactful the larger emitters those countries are. As we will see in Section 4, at least some of the larger emitters are taking the challenge seriously.

But there are more reasons for hope. Current and future efforts by LAC countries have as background the region's large young population, its increasing middle class, its vast natural resources and its considerable economic growth potential.

In 2020 LAC's largest age groups were those between 5 and 29 years old, with the largest among them being 20 to 24 year olds (CEPAL 2022a). Figure 6 provides some perspective: LAC's proportion of young population is

comparable to Central and Southern Asia's and only inferior to Africa's¹⁵. In 2021 LAC's proportion of under fifteens was 24% (Banco Mundial 2022).

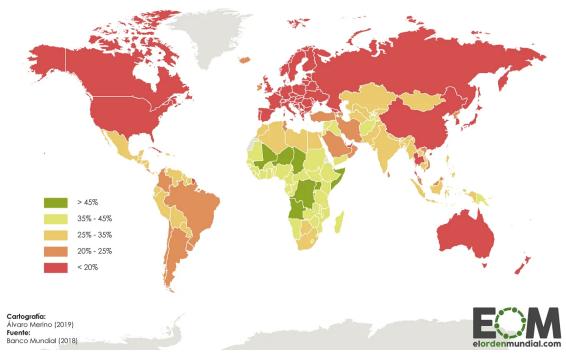


Figure 6 - 'Youth Index' - % of under-fifteens in 2018

La división Norte-Sur en el Índice de juventud

% de la población con 14 años o menos

Source: El Orden Mundial (Merino 2020).

LAC possesses 57% of the primary forests in the world which store 104 gigatons of carbon and hosts between 40 and 50% of the world's biodiversity and a third or all plant species (WMO 2021). Not only are forests important to sequester atmospheric carbon. The also help regulate hydrological cycles and stabilise landscapes and contribute to soil and water conservation in fragile ecosystems (CEPAL 2021). The region holds 23% of the total world's forests.

Like most other countries who signed the Paris Agreement, LAC states have submitted their Nationally Determined Contributions (NDC) to the UN's NDC Registry.¹⁶

¹⁵ Which is expected to host 40% of the total world population around 2100.

¹⁶ Created to enact Article 4, paragraph 12 of the Paris Agreement (United Nations Framework Convention on Climate Change Secretariat 2022).

The complexity of comparing NDCs from different LAC countries can be appreciated in a recent study published by CEPAL (Samaniego et al. 2022). Though comprehensive and a good overview of the situation in the region, it does not facilitate a clear comparison of NDCs between countries, as the way and perspective in which each of them presents their proposed courses of action to achieve Paris goals may differ from those of others. For instance, Brazil takes 2005 as reference to measure the evolution of its emissions whereas Mexico uses 2000.

Other sources such as Climate Action Tracker showcase countries' commitments against the common goals of Paris, but only for a selection of states and not always ranked by amount of emissions. For LAC, for instance, their analysis leaves out Venezuela, Ecuador, Dominican Republic and Trinidad & Tobago, countries in the list of 10 largest emitters (see Table 3 above), while it includes Costa Rica,¹⁷ whose CO2 emissions in 2019 were less than 0.2% of LAC's and under 0.02% of the global figure (Climate Watch 2022).

The Joint Research Centre for Policy Report of the European Commission aggregates its own Emissions Database for Global Atmospheric Research (EDGAR) and complements it with other sources such as the International Energy Agency. EDGAR 'offers an alternative that complements national inventories and has advantages in terms of producing timely emissions estimates that are comparable across countries' (Crippa et al. 2021) and provides a good basis for the analysis presented in section four.

3. A Flurry of Initiatives towards Common Goals

Springing from its cultural and historical affinities, the region has borne a flowery of polycentric initiatives promoting exchange, integration and coordinated approaches to common problems starting as far back as 1826.

¹⁷ This is not to imply that Costa Rica is not worth attending to. The country showcases some of the best practices in the region. However, our focus in this paper seeks to be comprehensive of the largest emitters as good climate policies coming from them will have a greater impact.

This background is important for climate policy making, as coordinated approaches are more likely to succeed in the long run as they involve expertise, resources, communication and solidarity across the whole region.

Noteworthy initiatives include (by year of creation):

- 1960: ALALC—Free Trade Latin American Association (ALADI 2021).
- 1969: Andean Community (Secretaría General de la Comunidad Andina 2021).
- 1975: SELA—Latin American and Caribbean Economic System (Secretaría Permanente, SELA 2022).
- 1980: ALADI—Latin American Association for [Economic] Integration (Secretaría General, ALADI 2021).
- 1991: MERCOSUR—South Common Market (Secretaria do MERCOSUL 2022).
- 2004: ALBA—Bolivarian Alliance for the Peoples of our America People's Trade Agreement (ALBA-TCP 2022).
- 2008: UNASUR—South American Nations Union (Secretaría Permanente SELA 2015).
- 2019: PROSUR—Forum for the Progress and Integration of South America (PROSUR 2022).
- CELAC—Latin American and Caribbean States Community (Secretaría Permanente, SELA 2022).

CELAC would appear to be the most representative of those organisations. If Brazil comes back to participate fully it has a promising future, which both the UE and China have anticipated by establishing relations with this body. As already mentioned in the Introduction to this chapter, when the UN's Environment Program lists for its Latin America and the Caribbean region virtually the same countries that are CELAC members (UNEP 2017).

CELAC faces many challenges, the first of which is to show its difference and relevance vis-a-vis the other already existing integration initiatives described above. Self-defined as 'an intergovernmental mechanism for dialogue and political accord *[concertación]*', it constantly attempts to master

contradictory forces. On the one hand it aspires to gather, integrate and represent *all* the states in the region; but on the other hand some of those states may hold disagreement with each other over a variety of issues and in general be less reliable given the decline in political culture of the whole region¹⁸ and in the vigour of its democracies.¹⁹

This is not a CELAC-specific problem. A fragile political culture is and has been a handicap of this region from the beginning of its independent existence in the XIX century. It is one of the reasons why the strong pull towards convergence and unity present in the newly independent states two centuries ago has not yet materialised, while similar efforts in other parts of the world— eminently in Europe—have progressed more in less time. It is also a strong reason why previous integration initiatives, the latest one being UNASUR (Fonfara et al. 2019) have collapsed.

All the difficulties notwithstanding, CELAC has been a credible interlocutor before the European Union (EU), the United States (US) and seems to be gathering viability as the biggest players in the region are investing time, resources, and political capital in it. Mexico just ended the *pro tempore* presidency in which CELAC was revitalised (Secretaría de Relaciones Exteriores 27 de diciembre de 2021). Argentina has been elected by consensus to hold the presidency as of this year (EFE 2022). Unfortunately Brazil suspended its participation in CELAC (Agencia EFE 2021), most likely

¹⁸ In 2021 LAC suffered the sharpest year-on-year decline of any region since the Democracy Index exists (2006), especially in the 'political culture' category. There is 'growing scepticism about the ability of democratic governments to address the region's problems and of growing tolerance for authoritarian governance' and a weakening commitment to democratic political culture which has permitted 'the growth of illiberal populists such as... Bolsonaro in Brazil, ...Lopez Obrador in Mexico or ...Bukele in El Salvador, as well as fostering authoritarian regimes in Nicaragua and Venezuela' (EIU 2022).

¹⁹ Only two LAC states appear in the list of 'fully democratic' countries, while eleven are classified as 'flawed democracies', seven as 'hybrid regimes' and three appearing as 'authoritarian regimes'. Under this perspective, in a full democracy '...not only basic political freedoms and civil liberties are respected, but which also tend to be underpinned by a political culture conducive to the flourishing of democracy. The functioning of government is satisfactory. Media are independent and diverse. There is an effective system of checks and balances. The judiciary is independent and judicial decisions are enforced. There are only limited problems in the functioning of democracies' (EIU 2022).

due to political differences with other members. Mexico has for the time being exercised leadership and filled the vacuum left by Brazil (Silva Barros 2021), whose GDP represents 30% of the regional total. But its return is highly desirable for the success of the initiative.

However Brazil seems likely to rejoin CELAC, throwing all its weight behind it (as well as other regional initiatives) in an effort to present a common front of interaction and negotiation to China, the US, the EU and others (Taglioni 2022). In fact, during his post-victory speech, the newly-elected President referred to 'a longing' expressed to him by contacts from different countries for

'that sovereign Brazil who spoke as a par to the wealthiest and most powerful countries..., contributed to the development of the poorest' and 'worked for the integration of South America and Latin America and the Caribbean, strengthened MERCOSUR and helped to create the G20, UNASUR, CELAC and the BRICS. Today we are telling the world that Brazil is back...that Brazil is too big to be relegated to the sad role of world pariah' (Molinero et al. 2022).

CELAC is still in development and faces many challenges, one of which was rightly pointed out by Colombia as Argentina takes the baton for the 2022 pro tempore presidency: how to deal with member states who are clearly not functioning democracies such as Nicaragua, Cuba and Venezuela (García 2022). But if strengthened it has the potential to serve as a platform for integration for which there is already interest, as seen in the dialogue Pacific Alliance - MERCOSUR (Rosales 2020).

4. Laggards, Heroes and Zombies

Climate policy implementation to meet Paris commitments is still incipient in LAC, with some of its countries serving as models, some as laggards and the rest positioned somewhere in between.

Few countries in LAC have taken climate action seriously, among them Colombia and Chile (Schechter and Cortiñas 2021). The most noticeable laggards have so far been Brazil and Mexico, both the largest economies, with the largest populations and the highest amount of greenhouse emissions. Their situation can be explained in good part by the arrival to

power of two populist presidents (right-wing in Brazil, left-wing in Mexico) who have stalled any commitment and, in the case of Mexico, actually reversed progressive policies that had already been set in law under a previous president. The situation in Brazil might improve if the newly elected president can carry out the environmental part of his program as of 2023 which includes protection of the Amazon, a halt on deforestation and the fulfilment of the Paris Agreement goals (Cullell 2022).

The largest fossil fuel CO2 emitters in the LAC region in 2019 were Brazil and Mexico, with 1.3% and 1.2% respectively as a share of the world's total. In the same year Rusia, India, United States and China accounted for 4.6, 7.8, 14.5 and 27.9% of emissions (Tiseo 2022).

At a Leaders Summit on Climate convened by President Joe Biden in April 2021 Brazil's president Jair Bolsonaro also claimed that the country would achieve carbon neutrality by 2050 (Schreiber 2021). True, the pledge may have been motivated by the international pressure to end deforestation that Brazil has been under (Branford and Torres 2021). However it is not clear how the goal will be achieved. Sebastián Piñera of Chile committed to decarbonize its energy matrix by 2040, achieve carbon neutrality by 2050, and become the most efficient green hydrogen producer in the world. President Iván Dugue reiterated Colombia's commitments to a 51% emissions reduction by 2030 and a target of carbon neutrality by 2050. He highlighted some of the measures that Colombia is taking to achieve its targets, including a clean energy transition that will achieve 14% clean electricity by August 2022, the largest fleet of urban and cargo transport in the region, and a reforestation effort that aims to plant 180 million trees by August of 2022. Mexico's President Andrés López didn't commit the country to any particular goal (Herrera et al. 2021) and only promised vague actions in reducing crude oil production (despite recent oil discoveries), generate cleaner energy through hydro-electricity (even though the laws introduced by his government on electricity have actually reversed any progress made by previous governments) and planting trees on a million hectares in the country.

With the election of Lula as president, the situation for Brazil—and indeed for LAC given this country's prominence for the whole region—will change. The Amazon (60% of which is in Brazil) possesses half of the remaining tropical rainforests in the world. Years of unchecked deforestation under Bolsonaro cannot be undone. And Lula is receiving a divided country, a congress dominated by the opposition and other challenges. Still, his track record as former president and his post-victory speech point to 'a strong commitment to preserving the Amazon, protecting Indigenous people's rights and reaching a zero-deforestation target' (Baragwanath 2022).

According to the European Commission's Emissions Database for Global Atmospheric Research, the ten largest LAC emitters were:

Country	Total	Per Capita	Change v 1990
Brazil	489.86	2.28	114%
Mexico	418.35	3.09	44%
Argentina	189.00	4.12	88%
Venezuela	104.67	3.12	2%
Chile	85.70	4.61	160%
Colombia	77.57	1.53	48%
Peru	55.14	1.64	164%
Ecuador	41.14	2.34	134%
Trinidad and Tobago	28.99	21.01	129%
Dominican Republic	27.73	2.47	245%

Table 4 - Carbon (Mt CO2/yr) Emissions in 2021, LAC's largest

Source: Emissions Database for Global Atmospheric Research (Crippa et al. 2022).

This is a similar result to the one for 2020 (see Table 3) with small variations in the order²⁰ but still the same countries in the list of ten largest emitters. Since together they account for over 90% of emissions in the region, a brief analysis of their NDCs can provide a fairly good approximation to the situation of LAC as a whole.

²⁰ Concretely, Colombia has descended from fourth to sixth largest emitter.

Though NDC information can be consulted in the corresponding United Nation (UN)'s Registry (UN Climate Change 2022), a simple reading of such information might provide limited elements for an overall, comparative perspective. This is obvious because, though each country registers its NDCs in view of the Paris Agreement, they may use different starting points, circumstances and means to assess their situation and set their goals.

Ahead of the Climate Change Conference in Glasgow (COP26) last year the UN calculated, based on the latest NDCs pledges available from most of the 193 Parties to the Paris Agreement, our planet was headed to have a 13.7% in global GHG emissions *increase* in 2030 in comparison with 2010. The IPCC had estimated that, in order to keep the rise in temperature on Earth to only around 1.5%, global emissions needed to *decrease* 45% by 2030 (UN Climate Change 2021). But how to assess the performance of individual countries, and in particular LAC's ten largest emitters in that context?

A study from the Institute of the Americas reveals useful insights to answer that question (Miranda 2021). Unfortunately the study leaves out Venezuela²¹ but includes the other nine. Below is a summary of findings relevant to this chapter, extracted mostly from the country 'NDC Scorecards' Miranda provides:

Country	Is the updated NDC GHG emission reduction target more ambitious?	Does it have a carbon neutrality commitment?	ls it on track to achieve its pledges?	ls it implementing policies/regulatio ns consistent with NDCs?
Brazil	No	Yes	No	No
Mexico	No	No	No	No
Argentina	Yes	Yes	?	?

²¹ A direct reading of the NDC Registry reveals that the only commitment Venezuela made in its November 2021 was to reduce emissions by 20% by 2030 with respect to a business as usual (no action) scenario. This same pledge was present in the country's initial NDC from 2015, so there is no improvement.

Venezuela	No	No	?	?
Chile	Yes	Yes	Yes	Yes
Colombia	Yes	Yes	Yes	Yes
Peru	Yes	Yes	Yes	Yes
Ecuador	Yes	No	?	?
Trinidad and Tobago	?	?	No	Yes
Dominican Republic	Yes	Yes	?	Yes

Source: Institute of the Americas (Miranda 2021).²²

On the bright side, two 'heroes' among the region's largest emitters are Colombia and Chile.

Ahead of the Glasgow Climate conference (COP26) held in November 2021, Colombia updated its NDCs to aim for a 51% reduction in GHG emissions by 2030 compared to its 2014 emissions level; a reduction of black carbon emissions by 40% and net-zero by 2050. Its NDCs are among the most ambitious in LAC and are highly aligned with the country's goal of carbon neutrality by 2050. Colombia is one of the few countries in the region that is on track to achieve its Paris pledges. NDCs include massive landscape reforestation and restoration projects, including an initiative to plant 180 million trees by 2022. It is putting in place an Active Transport and Travel Demand Management program to increase the share of trips made by bicycle above 5% in all Colombian cities by 2030, and it has begun to elaborate a pilot Emissions Trading Scheme in 2018 to be ready for implementation by 2025. More stringent vehicle emission standards for road transport as well as reductions in agricultural burning, and switching to more efficient technologies for heating and cooking. Building Back Greener: 26% recovery spending from the country's total spending, from which 27.7% has been green recovery spending according to the UN Environment Programme's Covid-19 Recovery Tracker for LAC (Miranda 2021). In 2022 Colombia enters COP27 exceeding expectations. The goal of carbon neutrality by 2050 is accompanied by more than mitigation measures and adaptation targets which include limiting the gross annual

²² Except for Venezuela, for which information has been taken directly from the NDC Registry (United Nations Framework Convention on Climate Change Secretariat 2022).

deforestation rate to a maximum of 50,000 hectares by 2030, and the commitment to generate carbon budgets in 2023. It also contained a commitment to strengthen and develop carbon pricing mechanisms, plus guidelines for the implementation of the NDCs at both sectoral and territorial levels (Baumgartner, Carman, and Jo. 2022).

Chile, on its turn, brought to COP26 an updated NDC program which included limiting its total annual GHG emissions at 95 MtCO2e by 2030; setting an 'emissions budget' limit of 1,100 MtCO2e between 2020-2030 and reaching its peak of emissions by 2025. To achieve its NDCs, the current policy emissions pathway includes the Unconventional Renewable Energy Law; a carbon tax; an action plan to achieve electrification of 40% of private vehicle fleet and 100% of public urban transport by 2050; and a National Green Hydrogen Strategy to provide clean fuel to the most difficult to decarbonize sectors. It is also formulating a Climate Change Framework Law that would engrain in domestic legislation the carbon neutrality commitment by 2050, along with financing measures and economic instruments. The government also announced in 2020 that the retirement of coal-fired power plants will be achieved 15 years ahead of schedule (Miranda 2021). In 2022 Chile's commitment to Paris ahead of COP27 remains. Its NDC contains a social pillar with commitments on which the implementation of the NDC must rest to guarantee a fair transition and sustainable development in the country. Comprehensive measures that integrate both adaptation and mitigation include circular economy, land use, land-use change and forestry (LULUCF), and ocean commitments. This NDC also stands out for having an ambitious unconditional goal in absolute terms and is also one of the few countries in LAC with a carbon emissions budget for the 2020-2030 period, in light of its commitment to becoming carbon neutral by 2050. Chile's NDC is based on a comprehensive evaluation of mitigation measures and an analysis that provides clarity in terms of goals and the economic impact on society to facilitate its acceptance and implementation (Baumgartner, Carman, and Jo. 2022).

The UN Development Program (UNDP) has in 2022 undertaken initiatives such as the 'Regional Snapshot' to explore NDCs of countries in the region,

their ambition, progress and feasibility (United Nations Development Programme 2022), in order to support their progress towards the attainment of the Paris Agreement goal: containing the rise in global temperature to less than 2.0% and as close as possible to 1.5% in comparison with 'pre-industrial'²³ levels (UNFCCC 2022).

LAC faces serious challenges moving forward. On the one hand, it is already receiving the impacts of the Planet's warming in a noticeable and at times irreversible way. Notwithstanding the region's wealth in terms of people, natural resources, size of the economy and potential for integration, poor governance, a weak rule of law and fragile democratic structures hold back its economic and social progress. The design, implementation and upkeep of effective and sustained climate policies is in jeopardy too. There is no easy solution, but constructive collaboration with other regions can help. And few other regions could have a closer affinity to LAC than the EU.

5. LAC and the EU—A Natural Partnership?

Partnerships with regions which have advanced more in the implementation of climate policies can prove useful. The links between Europe and LAC go centuries. And though relations have not always been optimal and grievances remain, there is also a history of constructive and positive exchanges crossing the Atlantic in both directions.

Today, the EU and LAC share several languages (eminently Spanish and Portuguese, but also French, Dutch and English) and a myriad of economic, academic, social and cultural exchanges. In order to be strong and relevant in the XXI century, both face the challenge of fostering unity in diversity. For different reasons, the EU, though far from perfect, has managed to advance more both in the realm of integration and in that of climate policy—in which it is a world leader. All these reasons make the EU a valuable climate partner for LAC.

²³ 'Pre-industrial' is understood as 'the multi-century period prior to the onset of large-scale industrial activity around 1750'. The reference period 1850–1900 is used to approximate pre-industrial global mean surface temperature (IPCC 2018).

Several exchanges and initiatives have existed between the two regions to address climate change. The EU-CELAC summits and the Euroclima program are two examples. Mutual collaboration has benefited both regions and brought them motivation and support in the achievement of the Paris Agreement goals. For LAC this partnership has also produced financial support and valuable know-how from Europe in the design, implementation and follow-up of climate policies.

The UE-CELAC relationship includes summits, roadmaps and agreements. Euro-clima focuses on cooperation and contains a funding mechanism to foster the implementation of sound climate policies.

Summits between the EU and LAC have existed since 1999 (celebrated in Rio de Janeiro). However, after the foundation of CELAC in 2011 the summit is now between the two regional organisations. The first EU-CELAC summit took place in 2013 in Santiago (Chile). The second one was celebrated in Brussels.

In the Action Plan that followed the 2015 summit (Council of the European Union 2015), the second in a list of topics for action was 'Sustainable development; environment; climate change; biodiversity; energy;' and proposed collaboration and exchange with the following outcomes in mind:

- Improved knowledge on problems and consequences of climate change including vulnerability and risk assessment, biodiversity loss and environment issues in its widest meaning, and integration of these issues into sustainable development and climate adaptation strategies and other adaptation activities.
- Strengthened capacities and emergency networks to prevent and address the effect of natural disasters.
- Improved capacity for sustainable development, environmental and climate change-related challenges and for the conservation and sustainable use of biodiversity.
- Improved use and accessibility of renewable energies, increased energy efficiency and saving as these play an important role in the diversification and complementarity of the energy matrix.

The 2017 summit was cancelled (EESC Press Unit 2017). In 2018 the European External Action Service declared that CELAC was the EU's official counterpart for the region-to-region summit process and strategic partnership. The EU's 'engagement with CELAC is complemented by strong bilateral relations with individual countries and does not exclude cooperation with sub-regional groups such as MERCOSUR, CARICOM/CARIFORUM, Pacific Alliance, SICA and UNASUR' (European External Action Service 2018).

Ministers of the EU and CELAC met in Berlin in December 2020 (European External Action Service 2020) and agreed to work in the preparation of the next EU-CELAC summit. Among several areas of coincidence for continued or future joint cooperation they concluded on the importance of climate change and the aspiration to reach zero carbon emissions by 2050.

An informal meeting took place at the end of 2021 (General Secretariat of the Council 2021). Another ministerial meeting between the two organisations took place in Buenos Aires on 27 October 2022 with the purpose of renewing the bi-regional partnership to strengthen peace and sustainable development (Lenzu 2022). The EU is planning to propose a 2023 summit with CELAC (AFP 2022), coinciding with the presidencies of those blocks by Spain and Argentina respectively (Ministerio de Relaciones Exteriores, Comercio Internacional y Culto 2022). This commitment has been publicly confirmed by the Spanish Prime Minister, Pedro Sánchez (Molina 2022).

Several initiatives of support from the EU to CELAC to this end were mentioned, in particular Euroclima+.

Euroclima+ is a flagship program of the EU in LAC (Euroclimaplus Secretariat 2020) which aims at reducing the impact of climate change and its effects in LAC (it only includes 18 LAC countries at the present). It finances a broad range of activities including technical assistance, capacity building, exchange of best practices, studies, events, seminars, workshops, peer to peer exchanges and pilot projects.

Euroclima+ is a regional cooperation program between the EU and eighteen Latin American countries. It aims at reducing the impact of climate change and its effects in Latin America by fostering action towards the fulfilment of the Paris Agreement (Secretariado de Euroclima+ 2022a). It is financed through a commitment of €144 million since 2010 by the governments of Germany, Spain and France (Secretariado de Euroclima+ 2022b).

Euroclima+ comprehends six priority sectors—forests, biodiversity and ecosystems; energy efficiency; disaster risk management; resilient food production; water management and urban resilience perspective; and urban mobility—and six strategic action lines—plans and policies; climate financing: transparency; intersectoral, multi-level and multiple stakeholders coordination; action for climate empowerment; and gender and vulnerable groups (Secretariado de Euroclima+ 2021).

Both the bilateral dialogue EU-CELAC continued through summits, ministerial meetings and other gatherings, as well as initiatives such as Euroclima+ showcase the relevance, value and further potential of this partnership for LAC.

Conclusion

This chapter has presented an overview of Latin America and the Caribbean as a distinct region. Like other areas of the world, LAC is experiencing the impacts of climate change. Its response matters not so much for the size of its emissions but especially for its potential to act as a net 'carbon sink'. Indeed, according to JP Morgan, LAC's sequestration potential places it as a leader in the carbon credit market (Stubbs 2022). LACs natural resources, young population and economic capacity provide reasons for hope—'great expectations'—about its future.

Furthermore, due to cultural, geographical and historical commonalities LAC sits on an array of initiatives and networks pushing for integration at different levels and with diverse centre points since the XIX century. The most comprehensive of those initiatives is CELAC, though others are more

developed in their degree of cooperation (eg MERCOSUR and Pacific Alliance).

The level of integration matters as more of it will help the region tackle the big problems individual countries cannot face by themselves. This is evident in the case of climate policy. While due to space constraints here only the largest emitters have been analysed to a certain degree, action, motivation, solidarity and best practices are needed from all 33 states. And there is much that large emitters who lag in meeting their Paris Agreements can learn from low emitters who are exemplary in climate policy (Costa Rica could be a case).

Though the level of progress towards the achievement of Paris goals may be modest so far, recent changes in the political landscape in Brazil provide space for optimism,²⁴ as do the partnerships the region is establishing with parts of the world that are more advanced in climate policy such as Europe.

However the key take of this chapter is that the political atmosphere and framework under which LAC operates is as important as the policies themselves if the region is to progress in climate action (as well as other aspects such as economic growth, income equality and indeed integration). Due to its high levels of inequality and social unrest, the key challenge to implementing climate policies in LAC will be the strengthening of a political atmosphere where human rights, the rule of law and democratic values prevail.

Climate policies need a legal framework where the law is created through transparent and democratic processes, enforced once approved, and respected; an independent judicial system and checks on the executive; freedom of information and expression to foster debate in the public sphere; respect for all citizens and their freedom; fair and free elections of representatives. A framework where democracy, the rule of law, balance of

²⁴ Unfortunately the same cannot be said of the second largest country in the region, Mexico, which will be muddled in inaction at least until 2024 (while López Obrador is president), notwithstanding efforts by the Biden US government to encourage greater climate ambition from its southern neighbour (Lewis, Madry, and Ellis 2022).

powers and human rights prevail will provide stability, predictability and a foundation for sound, clear, legitimate and sustained climate action. This atmosphere is not a given in LAC and must be created, maintained and enhanced.

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