



Building a New Future

Transformative
Recovery
with Equality
and Sustainability



2020

**Thirty-eighth
session of ECLAC**

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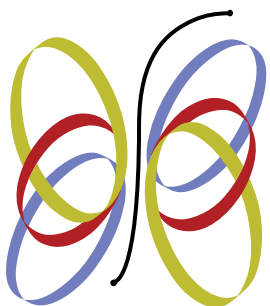
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Alicia Bárcena
Executive Secretary

Mario Cimoli
Deputy Executive Secretary

Raúl García-Buchaca
Deputy Executive Secretary for Management
and Programme Analysis

Ricardo Pérez
Chief, Publications and Web Services Division

Work on this document was coordinated by Alicia Bárcena, Executive Secretary of the Economic Commission for Latin America and the Caribbean (ECLAC), with the collaboration of Mario Cimoli, Deputy Executive Secretary.

The drafting committee comprised José Eduardo Alatorre, Simone Cecchini, Carlos de Miguel, Camila Gramkow, Wilson Peres, Gabriel Porcile, Joseluis Samaniego and Pablo Yanes, who were assisted by Romain Ziv, Vianka Aliaga, Vera Kiss and Nunzia Saporito, all of ECLAC.

The following chiefs of ECLAC substantive divisions, subregional headquarters and country offices also participated in the preparation of this document: Daniel Titelman, Chief of the Economic Development Division; Rolando Ocampo, Chief of the Statistics Division; Simone Cecchini, Officer in Charge of the Social Development Division; Paulo Saad, Chief of the Latin American and Caribbean Demographic Centre (CELADE)-Population Division of ECLAC; Cielo Morales, Chief of the Latin American and Caribbean Institute for Economic and Social Planning (ILPES); Giovanni Stumpo, Officer in Charge of the Division of Production, Productivity and Management; Joseluis Samaniego, Chief of the Sustainable Development and Human Settlements Division; Jeannette Sánchez, Chief of the Natural Resources Division; Mario Castillo, Officer in Charge of the Division for Gender Affairs; Keiji Inoue, Officer in Charge of the Division of International Trade and Integration; Osvaldo Sunkel, Chair of the Editorial Board of the CEPAL Review; Hugo Beteta, Chief of the ECLAC subregional headquarters in Mexico; Diane Quarless, Chief of the ECLAC subregional headquarters for the Caribbean; Verónica Amarante, Chief of the ECLAC office in Montevideo; Martín Abeles, Chief of the ECLAC office in Buenos Aires; Juan Carlos Ramírez, Chief of the ECLAC office in Bogotá; Carlos Mussi, Chief of the ECLAC office in Brasília; and Inés Bustillo, Chief of the ECLAC office in Washington, D.C.

The authors are particularly grateful for the collaboration of the following staff members of ECLAC: Laís Abramo, Diego Aulestia, David Barrio, Omar Bello, Alvaro Calderón, Martín Cherkasky Rappa, Georgina Cipoletta, Rubén Contreras, Felipe Correa, Miguel del Castillo, Marco Dini, Marta Duda-Nyczak, Ernesto Espíndola, Jimmy Ferrer, Marina Gil, Nicolo Gligo, José Javier Gómez, Michael Hanni, Sebastián Herrerros, Juan Pablo Jiménez, Valeria Jordán, Martín Kohout, Luiz Krieger, Pauline Leonard, Alberto Malmierca, María Luisa Marinho, Jorge Martínez, Jorge Mario Martínez, Karina Martínez, Rodrigo Martínez, Javier Meneses, Johan Mulder, Georgina Núñez, Alejandro Patiño, Leda Beatriz Peralta Quesada, Mauricio Pereira, Esteban Pérez, Noel Pérez, Ramón Pineda, Cecilia Plottier, Laura Poveda, Rayén Quiroga, Claudia Robles, Mónica Rodríguez, Adrián Rodríguez, Fernando Rojas, Sebastián Rovira, Lucía Scuro, Octavio Sotomayor, Giovanni Stumpo, Marcia Tambutti, Valeria Torres, Daniela Trucco, Heidi Ullmann, Iliana Vaca Trigo, Cecilia Vera and Paul Wander.

The following ECLAC consultants also provided input for the preparation of the document: Tarek Abdo, Rafael Agacino, Carlos Álvarez, Valentín Álvarez, Daniela Baeza, Florian Botte, Franco Carvajal, Tommaso Ciarli, Stefania De Santis, Sofía del Villar, Andrés Espejo, Luis Miguel Galindo, Nicolás Grimblatt, Gonzalo Herrera, Cristina Klimza, André Lorentz, Camila Quiroz, Heloísa Schneider, Sabrina Torillas, Marco Valente and Giuliano Yajima.

The authors wish to thank Tilman Altenburg, Vanessa Esslinger, Anna Pegels, Leonardo Rojas Rodríguez, Rafael van der Borch, María Isidora Vera and Carolina Zúñiga Juul for their assistance.

Gratitude is also due to Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), the United Nations Development Account and the EUROCLIMA programme, for their support for the substantive work of ECLAC, which has provided analysis and proposals for the preparation of this document.

Explanatory notes

- Three dots (...) indicate that data are missing, are not available or are not separately reported.
- A dash (-) indicates that the amount is nil or negligible.
- A full stop (.) is used to indicate decimals.
- The word "dollars" refers to United States dollars unless otherwise specified.
- A slash (/) between years (e.g., 2013/2014) indicates a 12-month period falling between the two years.
- Individual figures and percentages in tables may not always add up to the corresponding total due to rounding.

This publication should be cited as: Economic Commission for Latin America and the Caribbean (ECLAC), *Building a New Future: Transformative Recovery with Equality and Sustainability. Summary* (LC/SES.38/4), Santiago, 2020.

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Introduction

The COVID-19 pandemic is impacting a global economy that is already traversing three structural crises: a crisis of instability and low output growth, a crisis of growing inequality and the environmental crisis that threatens to destroy the natural systems that sustain life on the planet. These three crises are interrelated, linked by the common elements of a political economy that has systematically curtailed governments' ability to promote development and guide the action of markets. As a result, imbalances have been growing and geopolitical and political tensions are mounting, heightening conflicts and weakening the multilateral system at the international level, in addition to eroding rights and the legitimacy of democracies at the domestic level.

The three crises of the global economy and political tensions

Since the early 1980s, the international economy has been redefining its rules, mainly on the basis of the expansion of market forces and the reduction of State's policy spaces, especially of the weakest nation States. This system was associated with rapid financial liberalization that amplified the impacts of speculative processes with currencies, commodities and real estate on the performance of the economy. In turn, the world of work has been increasingly weakened by a system in which capital (because of its high mobility) has gained power to veto or impose policies, which has contributed to increasing inequality.

The capacity of democratic governments to provide public goods and adopt progressive tax policies has gradually been eroded, and with it their ability to sustain the welfare state. The blind confidence in market efficiency led to neglect of their undesirable outcomes, which are engendered endogenously in the absence of regulation. Even before the COVID-19 pandemic, there was a perception that the prevailing development path was unsustainable and had reached its limits, and that we were amid a change or era.

The world order established in the aftermath of the Second World War, with all its inadequacies and limitations, had, at least, a framework ideal: to build international cooperation institutions based on multilateralism. This reference has been weakened; multilateral international cooperation has given way to unilateralism and economic, technological and military rivalries. The absence of multilateral cooperation mechanisms is particularly evident with regard to issues that, by definition, are global in scope and require global action, such as the environment and, more recently, the pandemic.

National political and economic systems are plagued by similar problems to the international system, amid greater uncertainty and divisiveness. Insecurity and apprehension trigger isolationist responses and “beggar-thy-neighbour” policies. This type of response exacerbates divisions in a highly interdependent world. Development and cooperation must therefore be returned to the centre of national and international discussions, with equality as the guiding principle and the values of democracy as the most precious legacy of modernity (ECLAC, 2010).

The technological challenge in the face of external constraints and environmental sustainability

The economic, social and environmental crises are rooted in a system of inequalities and a rigid culture of privilege, in both the international sphere and national economies. At the international level, this inequality is expressed in a centre-periphery system with sharp differences between countries and regions in technological and productive capacities and political and financial power. In this context, so influenced by the ongoing technological revolution, the Latin American and Caribbean region lags

behind in terms of technology and tends to specialize in the production of low-technology, natural-resource-intensive or lower-skilled-labour-intensive goods. This is the basis of their current account disequilibria, which are aggravated by imbalances on the income account. The growth rate of the periphery that is compatible with its long-term current and capital account balance is the maximum growth rate compatible with this external constraint (y^E).

In the environmental sphere, the critical limits regarding the pollution and degradation of ecological systems have been exceeded. These limits can be expressed in terms of a maximum rate at which the world economy can grow without endangering ecosystems' stability, given the evolution of emissions per unit of GDP. They are a function of the intensity and direction of technological progress, as well as of production and consumption patterns. For each growth rate at the centre, all else being constant, it is possible to calculate the maximum rate at which the periphery could grow so as not to exceed the environmental constraint. That maximum rate defines the centre-periphery environmental frontier.

The maximum rate at which the periphery can grow without compromising the stability of the planet's biophysical system is the growth rate compatible with environmental sustainability (y^d). This will be higher if the centre grows less, if technical progress generates environmental innovations more quickly, and if changes in production and consumption patterns help to reduce emissions and environmental degradation for every unit of GDP growth.

The rate of growth required to achieve equality

The improvement of income distribution has always been an important part of the analytical framework of structuralism. In the 2010 decade, the Economic Commission for Latin America and the Caribbean (ECLAC) went beyond income equality to embrace a broad concept of multidimensional equality with a rights-based agenda. Equality is treated as a core value not only in terms of income, but also as a multidimensional rights agenda encompassing equality of opportunity and access, and the recognition of people's differences and dignity. Equality must be seen as an integral component of development itself.

ECLAC argues that inequality is inefficient. Access to education, health and social protection should be seen as investments in capacities and as means of realizing rights for the achievement of the greatest possible well-being for all. For this reason, social policies should not be viewed as palliative measures but as key pieces for building the capacities required to integrate all stakeholders into higher productivity formal employment and innovation, thus accelerating technical progress. The quality of policies changes substantially between an unequal society and an egalitarian society. In unequal societies, economic and political power are concentrated, and each form of power is used to amass the other.

The rate of growth for equality is the minimum rate required to eradicate poverty, increase decent formal employment and implement social policies for a strong and lasting reduction of inequality y^S . This approach highlights the two-way causality between equality and growth: technological and productive lags feed inequality because they limit growth and the creation of higher productivity jobs; but inequality in turn limits growth because it builds economic and political barriers to the dissemination of technology to the entire production fabric.

The three sustainable development gaps

The three rates determine three gaps to be closed: between y^S and y^E (social gap), between y^E and y^A (environmental gap) and between y^S and y^A (sustainability gap). Given the centrality of equality in sustainable development, the objective of public policy must be the convergence of the other two rates with the growth rate needed for equality, which implies $y^S = y^E = y^A$.

From the perspective of the Latin American and Caribbean periphery, the three gaps reflect the three crises of the international system: the crisis of weak growth in a global economy that reproduces technological and productive asymmetries, forcing deficit-running economies to adjust through lower growth rates; the crisis of inequality in economic structures that cannot generate high-productivity formal jobs and allow the concentration of political and economic power; and the crisis of environmental destruction in economies that depend on natural-resource exports to sustain growth and imitative consumption patterns.

This document argues that the right mix of social and environmental policies, together with economic, technological and industrial policies, can relaunch development in Latin America and the Caribbean, with redistribution as a crucial component. This virtuous combination of policies can bring to fruition the proposal of growth for equality and equality for growth.

These policies and their combination and coordination are referred to as the “big push for sustainability” and are geared towards substantially increasing investment and redirecting it towards productivity, environmental stewardship, employment and social inclusion. Only a sharp rise in investment can bring about the radical transformation of production and consumption patterns, ensuring that the technological revolution serves the new development model. The aim is to produce an interconnected shift towards building a welfare state, reducing technological gaps, moving production onto an environmentally sustainable path and attaining social equality.

* * *

This document has five chapters. Chapter I provides an assessment of the three crises facing the world and Latin America and the Caribbean. Chapter II presents an analytical framework for discussing these crises in an integrated and systematic manner, using a three-gap model. Chapter III sets forth studies of the quantitative impacts on growth, emissions, income distribution and the external sector in different policy scenarios, highlighting the potential of policies for a big push for sustainability to create a path for low-emissions growth with equality. Chapter IV examines the sectoral dimension of policies for a big push, identifies the sectors that could be instrumental in steering the economy towards environmental sustainability, and discusses policies to foster them. Chapter V concludes with an analysis that articulates macroeconomic, industrial, social and environmental policies and emphasizes the role of the State in building consensus to implement them.

I. The three crises of the development model facing the global economy and Latin America and the Caribbean

This chapter addresses the three structural crises —of the economy, of inequality and of the environment— that form the backdrop to the crisis caused by the COVID-19 pandemic. First it examines long-term trends, then it explores the effects of the pandemic that reveal and exacerbate structural problems. The first part focuses on the global scenario, and the second on Latin America and the Caribbean.

A. The three crises facing the global economy

1. The pandemic is affecting a global economy already marked by slow growth in GDP and trade

The first structural crisis is related to the weak recovery following the global financial crisis of 2008–2009, when growth in GDP, trade and investment trended downward.

The weakness of GDP growth and world trade stems from a combination of three forces: (i) differences in the specialization patterns of economies, which mean that for many, growth is limited by external sector imbalances (in the form of recurrent external debt crises and exchange-rate crises); (ii) significant capital mobility, which encourages short-term speculation and hinders national policymaking for full employment and income redistribution; and (iii) the absence of international governance to correct these imbalances. International

governance does not offer mechanisms to encourage expansionary adjustments in economies running a surplus, but rather imposes recessionary adjustments on economies that are in deficit nor does it offer mechanisms to scale back the speculation that feeds uncertainty and undermines investment in fixed capital.

2. Inequality is an obstacle to development

Rising inequality in the world's major economies has been one of the main factors behind the increase in domestic political tensions and in trade conflicts. From a long-term perspective, the wealthiest 1% of the global population increased their income steadily in most countries and captured 27% of the total cumulative growth, while the poorest 50% captured only 12% (Alvaredo and others, 2019).

Inequalities are not limited to income, however. According to the United Nations (2019), the difference in life expectancy at birth between countries with low and very high human development is 19 years, reflecting gaps in access to health. Similarly, only 42% of adults in countries with low human development have completed primary education, compared to 94% of adults in countries with very high human development. Gender inequalities are manifested in higher levels of poverty among women (in terms of money and disposable time), in the overload of unpaid and care work, in precarious labour market participation, in weaker representation in decision-making spheres, and in the persistence of femicide.

Privileges and inequalities are reproduced over time. This can be observed by means of a coefficient that measures how the income of parents correlates with that of their children (intergenerational income persistence coefficient). In countries where the culture of privilege is less engrained, for example Denmark and Finland, this coefficient is usually insignificant. However, it is very high in many countries, particularly in Latin America and the Caribbean.

The pandemic has exacerbated negative trends in personal and functional income distribution. The income of informal workers is projected to fall by 60% worldwide, and by 81% in Latin America

and Africa. Inequality is worsened by the fact that the recovery of financial markets also means that the richest 1% have regained some of the wealth they lost at the beginning of the crisis.

3. Exceeding planetary boundaries

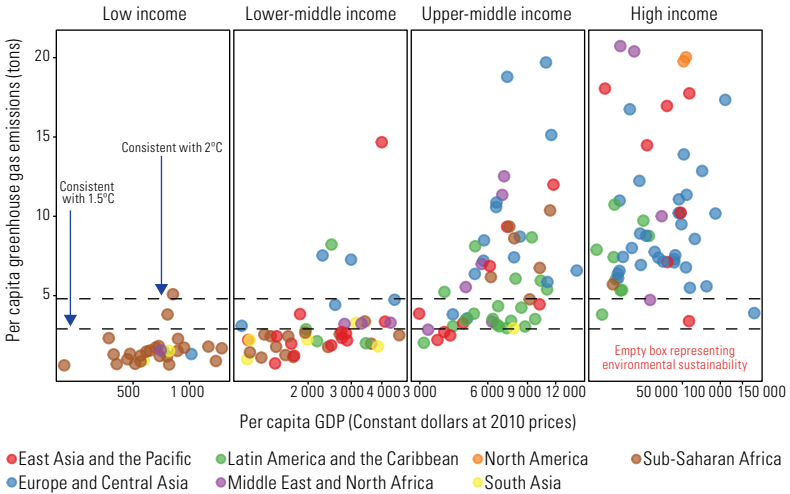
The current development path has reached a point that has put the survival of the ecological system that supports it at risk. Markets cannot stop these processes, as rates of return do not internalize the destruction of nature or many of its effects on health and well-being. Ecosystems and biodiversity are shrinking at alarming rates: more than 1 million species are in the process of extinction (IPBES, 2019). According to the Living Planet Index, the 16,704 populations representing the 4,005 species monitored worldwide were reduced by 60% between 1970 and 2014.

Figure 1 shows how, with the prevailing development model, no country has managed to achieve high income without radically increasing emissions of the greenhouse gases (GHG) that are a determining factor of climate change. In other words, the box representing the space where high GDP and environmental sustainability would overlap is empty. Altering this trajectory requires radically changing production, distribution and consumption patterns, directing major technological efforts towards sustainability and, in addition, as discussed below, adjusting growth in the countries at the centre of the system to allow those on the periphery to grow fast enough to permit economic and social convergence within planetary environmental boundaries.

The pandemic may be seen as a sign of the increasing presence and encroachment of human beings in the planet's ecosystems. Emerging zoonotic diseases, such as COVID-19, show the potential negative consequences of increasing human pressure on nature (UNEP/ILRI, 2020). The frequency with which pathogenic microorganisms jump from animals to humans has increased with forest and agricultural exploitation and urbanization, and with ecosystem depredation.

Figure 1
Per capita GDP and per capita greenhouse gas emissions
around the world, 2017

(Dollars at 2010 prices and tons of CO₂eq)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of J. Gütschow and others, "The PRIMAP-hist national historical emissions time series (1850-2017)"; German Research Centre for Geosciences (GFZ), GFZ Data Services [online] <http://dataservices.gfz-potsdam.de/pik/showshort.php?id=escidoc:4736895>; and World Bank, World Development Indicators, 2019, Washington, D.C. [online database] <http://data.worldbank.org/data-catalog/world-development-indicators>.

4. The double asymmetry in environmental issues and the importance of the principle of common but differentiated responsibilities

Not all countries or social groups contribute to emissions or suffer their impacts in the same proportion. There is a double asymmetry in the sense that the countries that produce the most emissions and the richest social groups have the greatest capacity to defend themselves against the effects of climate change, while those who produce the least emissions (the poorest countries and social groups) are those who suffer the consequences the most and have the least resources to recover. Policies for equality need to be linked with policies for environmental protection, recognizing the principle of common but differentiated responsibilities: the cost of climate change mitigation and adaptation should not fall on everyone equally, because the contribution

of different social groups and countries to environmental degradation (and the benefits this generated in the past) has been very different.

Rich countries are the biggest contributors to and beneficiaries of environmental deterioration and should make the biggest efforts to reduce this deterioration and its impacts.

B. The three crises facing Latin America and the Caribbean

1. The determinants and evolution of the growth rate compatible with external equilibrium

As in the global economy, trends in global growth and trade were already inauspicious before the COVID-19 pandemic. The preceding six years (2014–2019) had produced the lowest run of economic growth since 1951 (0.4%). Amid the pandemic, per capita GDP in 2020 will be similar to that of 2010 (ECLAC, 2020d).

There is limited fiscal space in the region to respond to the pandemic. Public debt increased from about 30% of GDP in 2009–2011 to over 45% in 2019. In the Caribbean, average debt was 68.5% of GDP in 2019. As a result of external shocks, compounded by structural weaknesses and vulnerabilities and high exposure to natural disasters and the impacts of climate change, some small island developing States (SIDs) in the subregion are among the most indebted economies in the world.

The region's structural growth problems are rooted in its specialization pattern, which is based on static comparative advantages that have a negative impact on the growth of an economy that does not issue an international reserve currency, in the absence of adequate governance in the global economy (Blecker and Setterfield, 2019, pp. 425–470). This specialization reflects endogenously reproduced technological gaps that are one of the great challenges of development policy.

In the region, international competitiveness has been based largely on natural resources or the abundance of cheap labour, i.e. spurious competitiveness. This type of advantage can sustain short periods of rapid growth (for example during the commodity boom), but cannot underpin convergence with advanced countries over the long term. To achieve this convergence, competitiveness must be

based on technology uptake and on productive diversification towards technologically dynamic sectors, i.e. genuine competitiveness.

None of the determinants of genuine competitiveness have shown a dynamic performance in the region. Labour, material and energy productivity have lagged behind. Investments in research and development (R&D) by Latin America and the Caribbean and the number of patents registered by the region are both negligible, providing almost no stimulus for the productive sectors that could increase the proportion of environmental goods and services in the region's exports.

The technological frontier is moving increasingly towards environmental innovations. In the countries of the region as well as other regions of the world, these innovations have expanded more than the average. However, although the region tripled its environmental patents per million inhabitants between 2000–2007 and 2008–2016, the figure remains small compared to the more advanced countries of the Organization for Economic Cooperation and Development (OECD), China or the Republic of Korea.

Most of the patents relating to environmental impact issues (such as renewable energies, electric and hybrid vehicles, energy efficiency in buildings, and water and waste treatment) are concentrated in the United States, Japan and European countries. The difference in the number of environmental patents between Latin America and the Caribbean and a country that has achieved recent convergence with developed economies, such as the Republic of Korea, almost doubled. This lag is also reflected in R&D expenditure on environmental objectives in relation to GDP.

2. Equality: the pending challenge for Latin American and Caribbean development

The inequality of the region's societies is a hallmark on the world stage. Inequality in Latin America and the Caribbean, as measured by the Gini index, began to decline in 2004, but this fall slowed from 2014 onward. The impact of the COVID-19 crisis will likely significantly push up an already very high Gini index.

Income inequalities intersect with gender, ethnic, racial and territorial inequalities and with those connected to the different stages of the life cycle. Women, indigenous people and Afrodescendants—above all indigenous women and Afrodescendent women—receive significantly lower wages than non-indigenous or non-Afrodescendent men with the same level of education (ECLAC, 2019b).

Equality, poverty reduction, the fight against discrimination, and improvements in education and labour indicators for women form the economic and social foundations of a democratic society. The pandemic has afforded a much clearer view of the rifts in Latin American and Caribbean societies and the vulnerability of most of the population to all kinds of shocks.

3. The environmental balance: climate change and the degradation of natural heritage

The global environmental crisis is also having repercussions in Latin America and the Caribbean. On the one hand, there is a severe deterioration in natural resources. The loss of tropical and subtropical forests has a major impact on hydrology, as forests play a key role in transporting atmospheric moisture and provide a global circulation system that influences cloud cover and rainfall on a regional scale. In the Amazon Basin this effect is called “flying rivers”. Over 70% of the rainfall in the River Plate Basin originates in the Amazon rainforest (Van der Ent and others, 2010). Therefore, the decline in the flying rivers could have a devastating effect on the South American economy.

In Latin America and the Caribbean, climate change has physical and environmental as well as social and economic consequences, and implies a growing cost in terms of lost GDP. According to estimates—which are partial, since some effects, such as disappearance of species, are not measurable—these costs could represent around 2 percentage points of regional GDP during the second half of the twenty-first century (ECLAC, 2015). It is estimated that the economic cost of a 2.5°C temperature rise—which, given the current trend, could occur by the mid-twenty-first century—would be between 1.5% and 5% of current regional GDP (Stern, 2013); Galindo and others, 2014).

The situation in the countries of the Caribbean and Central America is a prime example of the asymmetry between a low contribution to GHG gas emissions and high vulnerability to the effects of climate change, in particular the increase in the frequency and intensity of extreme weather events. According to the World Risk Index, which shows the level of exposure and vulnerability to extreme weather events, four countries in the subregion (Dominica, Haiti, Honduras and Nicaragua) have been among the 10 most affected in the world in the last 20 years, both because of exceptionally devastating events and because of their recurrence (Eckstein and others, 2019).

Between 1980 and 2010, the Caribbean was the subregion where, on average, disaster damage represented the largest percentage of GDP, exceeding 8% on six occasions; in Central America, meanwhile, disaster damage exceeded 8% of GDP on two occasions (Bello, 2017). Caribbean SIDs generate just 0.36% of global GHG emissions, but they are particularly vulnerable owing to their geographic, climatic, and socioeconomic conditions (including debt). In the 2008–2018 period, the Caribbean was the developing subregion with the highest average annual number of deaths and people affected as a percentage of the total population, both by natural disasters linked to climate change (such as tropical cyclones) and by geophysical disasters (especially the earthquake in Haiti in 2010).

C. Concluding remarks

This chapter showed how the three structural crises —the economic crisis, the equality crisis and the environmental crisis— of the current development style are expressed at the level of the world economy and in the region. Adding to these three crises are the impacts of the pandemic, which has sharpened the economic and social difficulties of Latin America and the Caribbean.

On the economic front, the region still needs to build the technological capacities that will support genuine competitiveness and, with it, a higher rate of growth with external equilibrium. The countries' labour productivity and technological efforts have not improved enough to raise this rate and achieve income convergence with advanced economies. The same is true of productivity in the use of energy, water and materials.

The pandemic has also widened the large gaps in health, education, income and wealth, as well as in the exercise of political and social rights that exist between different social groups, aggravated by various forms of discrimination. Social policies and growth in income and formal employment were key to achieving the improvement in distribution trends seen since 2004 (albeit at a slowing pace). However, as a result of the pandemic, the prospects for expanding decent employment have worsened, with sharp contractions in GDP and employment and rises in poverty and inequality.

Lastly, Latin America and the Caribbean clearly expresses the double asymmetry in environmental issues: the region accounts for a small percentage of global emissions, but is greatly affected by their impacts, with the poorest strata of the population suffering the most. Moreover, the region's natural resource endowment is often exploited unsustainably. The adverse impacts of environmental destruction on productivity, GDP growth, loss of biodiversity and natural disasters associated with human activities are already visible.

Because the economic, social and environmental dimensions interact with each other, thought must be given to the three crises and how to solve them together. Chapter II outlines an analytical framework to connect the three crises, and identifies some policy scenarios.

II. A three-gap model and sustainable development scenarios

A. A three-gap model

Chapter I identified three closely interlinked crises in the development model: economic, social and environmental. This chapter analyses these using a three-gap model based on recognition of the sharp technological, financial, institutional and power asymmetries in the international economy, which are reproduced endogenously, forming a centre-periphery system. The three-gap model forms a relatively simple analytical framework, which is used to examine the three crises and possible policy responses to both these structural trends and the impacts of the COVID-19 pandemic. The model also clearly shows the urgent need to rebuild global governance on a foundation of multilateralism, with the Sustainable Development Goals (SDGs) as the pillars.

The social, economic and environmental dimensions of sustainable development interact to form an integrated whole. These interactions can be studied by defining three growth rates: that which is consistent with the external constraint, that required by the pursuit of equality as a key goal of sustainable development, and the maximum rate that is consistent with planetary limits.

1. Growth that is consistent with the external constraint

The structuralist school of economic thought recognizes that the international system is composed of very heterogeneous countries that can be divided into two groups, the centre and the periphery.¹ The centre has high per capita income and is positioned on or very close to the technological frontier, which enables the countries there to compete in the most technology-intensive sectors with the strongest demand and, consequently, to dominate world trade in those sectors. The technological capabilities at the centre also allow it to successfully create new processes, goods and services, thereby diversifying production. The opposite occurs at the periphery, which lags behind the centre in terms of technology. The technology gap also forces the periphery to rely mainly on static comparative advantages based on natural resources or low wages in order to compete on the international market.

The link between technology, production structures and convergence of per capita income between the centre and the periphery may be conceptualized succinctly by the notion of the external constraint on growth. Countries with production structures that are highly concentrated in low-technology activities tend to generate high import demand as they grow, while their exports do not respond as readily to changes in income in the rest of the world. More advanced technology, capabilities and diversification raise the ratio of the income elasticity of exports (ϵ) to the income elasticity of imports (π). The higher the ratio (ϵ/π), the faster the periphery can grow without an increase in its imports pushing up the deficit in the basic balance (current account plus long-term financial flows). The occurrence of an external deficit requires an adjustment, largely through a lower growth rate. The ratio of these elasticities defines the relative periphery and centre growth rates that are consistent with the external constraint ($\frac{y^E}{y^C} = \frac{\epsilon}{\pi}$), as a function of capacities and the production structure (ECLAC, 2012; Blecker and Setterfield, 2019).

¹ Centre and periphery are ideal types that are each highly heterogeneous in the real world. Countries on the periphery, if they adopt appropriate policies, can reposition within the system.

In some cases, the external constraint does not operate as described (for example, in a global scenario that is highly conducive to exports from the periphery) and economies grow less than their potential for external equilibrium. However, in most cases, the reverse occurs, especially for many Caribbean countries, given the substantial burden of their foreign debt service and repatriation of earnings.

The growth rate of the periphery consistent with the external constraint (y^E) is the maximum rate at which the periphery can grow without generating unsustainable disequilibria in the basic balance, given its pattern of specialization (reflected in the ratio ε/π) and the growth rate of the centre (y^C). If the centre grows faster, the periphery exports more and the external constraint eases; structural change at the periphery towards more technology-intensive and faster-growing sectors in the world market enables the periphery to export more (or the income elasticity of its imports declines). In both cases, the growth rate that is consistent with the external equilibrium increases.

2. Growth for equality

As early as the start of the 1960s, ECLAC took a stand against the prevailing idea in mainstream economics that inequality was necessary for investment and growth. The Commission stressed the need for agrarian and fiscal reforms that would enable better distribution of assets and income, leading to increased land productivity and expansion of the domestic market.

More recently, the concept of “multidimensional equality” came to the forefront not only on the policy agenda but in the broader analytical framework. This concept encompasses, in addition to equality of income, equal opportunity and access, and recognition of people’s differences and dignity. ECLAC (2010a) has described this as “the abolition of privilege and the firm establishment of equal rights for all individuals, irrespective of their origins and of their gender, nationality, age, territory and ethnicity [...] This principle crystallizes in the idea of citizenship [...]” and strengthens the need for the consolidation and expansion of political democracy, which must be seen as an integral component of development itself.

Equality contributes decisively to capacity-building and is therefore a driving force of technological learning, productivity and economic

growth. Conversely, inequality has an indirect effect on productivity, because it acts as a social and political brake on the design and implementation of development policies. There is a substantial difference in policy quality between unequal and egalitarian societies. This is rooted in the political economy and in power structures. In unequal societies, economic and political power are concentrated, and each form of power is used to amass the other.

In the model presented in this chapter, the growth rate necessary to reduce inequality, or growth rate for equality y^s , is defined as the minimum rate needed to achieve the multidimensional equality goals required by the rights agenda and for capacity-building.

3. The centre-periphery environmental frontier

The forms that economic growth has taken cannot be sustained without jeopardizing the stability of the planet. Emissions of GHGs and other pollutants, and consumption of natural resources, depend on the rate of economic growth and the ability of technological progress to decouple economic growth from emissions and to reduce the intensity of natural-resource use. The faster the growth of the centre, the less environmental space will be left for the growth of the periphery, and the faster the environmentally-friendly technological progress at the centre and at the periphery, the more overall environmental space will be available for growth (less carbon emissions per unit of GDP).

The centre-periphery environmental frontier is the set of growth rates of the periphery y^d that is consistent with stability of the global ecosystem for each growth rate of the centre, given the rates of technological progress (which decouples growth from emissions and environmental destruction) at the centre and periphery. For the purposes of calculability and simplicity, in the quantitative exercises in chapter III the position of the centre-periphery environmental frontier is assumed to depend on the level of emissions that science deems necessary to keep the increase in global warming below 1.5°C. However, this is only an approximation of the broader concept of an environmental frontier, which refers to how the equilibrium of the whole ecosystem (not only climate change) is affected by human action.

The centre-periphery environmental frontier encapsulates two key environmental problems of inequality. First is the need to protect the environment for future generations; that is, a matter of intergenerational

equality. Second is the conflict between how much the centre and the periphery can each grow if environmental destruction is to be avoided; in other words, a problem of inequality between countries, which affects current generations.

B. Making external and environmental constraints compatible with growth for equality

External, social and environmental crises interact with and feed into each other. Can these interactions be reshaped so that they contribute to sustainable development? It is argued that this is possible, subject to implementation of certain policies and an institution-building effort, both in national economies and in the multilateral system. This analysis is performed with regard to a centre-periphery model, in which the periphery is Latin America and the Caribbean, and the centre is the rest of the world. This simplification, of course, disregards the fact that a huge part of the rest of the world is peripheral; this is nonetheless justified insofar as Latin America and the Caribbean is the focus in this exercise.

As discussed below, in Latin America and the Caribbean, the rate needed for equality exceeds that allowed by the external constraint. There are two reasons for this. In a highly unequal region, with a sizeable percentage of the workforce in the informal sector, the minimum rate for equality is necessarily high. Moreover, given the pattern of specialization in the region, the ceiling formed by the external constraint is quickly reached and therefore the rate y^E is low. For these reasons, the rate for equality is higher than the rate consistent with the external constraint ($y^S > y^E$). The gap between the two is called the “social gap”. These two variables depend on social, industrial and technological policies that can transform the production structure and levels of inequality. The greater the redistributive effort of the economy (for example, thanks to a very progressive tax system), the lower y^S is.

Even if y^E is low, given the growth of the rest of the world and the existing limited carbon budget, the growth rate in Latin America and the Caribbean that is consistent with the external constraint is higher than that stipulated in the centre-periphery environmental frontier; that is to say, $y^E > y^A$. The difference between these two growth rates will be

called the “environmental gap”. While the evolution of y^E depends on how technological capabilities and structural change affect the dynamics of exports and imports, the evolution of y^A depends on how those same variables affect emissions and natural resource use. Social policies and education can also help to change y^A ; for example, by modifying consumption patterns and providing public services that reduce environmental impacts (such as in the areas of sanitation or public transport).

Lastly, the total gap between the minimum growth rate needed for equality and the maximum rate that is consistent with the environmental frontier is referred to as the “sustainability gap”, since it is the gap whose closure ensures sustainable development in its three dimensions: economic, social and environmental. Sustainable development is achieved only when all three gaps are closed, and therefore: $y^S = y^E = y^A$. Development policy should aim to have the maximum rates relating to the environment and the external constraint converge towards the rate for equality, assuming that the latter is the highest of the three. Three types of policies can contribute to this aim: (i) social policies, which, by improving income distribution, enable equality goals to be achieved with lower rates of growth; (ii) industrial and technological policies which, in combination with social policies, improve genuine competitiveness and raise y^E ; and (iii) environmental policies, which, in combination with social, industrial and technological policies, promote the decoupling of emissions from GDP and prevent predatory use of natural resources, raising y^A .

To achieve the goal of equality, the conditions for equality must be met in this generation, between countries and within each country, as well as the conditions for intergenerational equality, respecting future generations’ right to development. Achieving equality in the present generation requires the periphery to grow at least at the rate required to reduce inequality, and achieving it intergenerationally requires that the centre and periphery grow at most at the rates stipulated by the centre-periphery environmental frontier.

C. Adjustment paths depend on policy decisions

There are economic forces linked to competitive processes in goods and foreign-exchange markets that force economies to adjust to the external constraint. There are market mechanisms that make growth tend towards y^E . However, achieving y^S and y^A depends on economic policy decisions, which determine the possible scenarios.

The document describes two scenarios that represent the poles of a continuum. While the cases today (and those that are likely to take shape in the future) are at intermediate points in the continuum, the polar cases provide greater insight into the forces acting on the three gaps and help to identify the instruments that can change how they operate. While in the first scenario, the pursuit of environmental sustainability widens the centre-periphery gap, in the second, by contrast, common but differentiated responsibilities are recognized within the framework of the global green new deal and progress is made towards a big push for sustainability. This virtuous scenario includes the adoption of policies at the centre that accelerate innovations in environmentally sustainable goods and products, adoption of industrial and technology policies at the periphery that promote rapid dissemination, adaptation and incremental improvement of frontier technology based on progress at the centre, diversification of periphery capabilities at the same rate as its absorption of technological progress, the building of a welfare state at the periphery in keeping with technological capabilities, and international agreements that penalize the production and trade of polluting goods and processes and accelerate the dissemination of clean technologies to the periphery. Such agreements would form an international governance framework consistent with the targets that the international community set itself in the 2030 Agenda for Sustainable Development and with the negotiations on climate change.

D. The size of the three gaps in Latin America and the Caribbean

This section measures the three growth rates in Latin America and the Caribbean and considers the preconditions for closing the three gaps, obtaining $y^S = y^E = y^A$, where the policy objective should be to cause all rates to converge at y^S .

1. The external constraint

The ratio between export and import income elasticities can be used to calculate the rate of growth compatible with external balance for Latin America and the Caribbean, given the growth of the rest of the world. While the results vary significantly from country to another, only in the case of Panama is the ratio close to 2. The average ratio of income

elasticity of exports to income elasticity of imports in South America is approximately 0.7. This means that if global growth were to reach 2% in the next few years, this subregion could grow by 1.4% without increasing its external debt. The quantitative exercises carried out for the countries of the Caribbean Community (CARICOM) during the period 1990–2005 estimate an average rate of growth compatible with external balance of 3%. However, high levels of external debt in many CARICOM economies suggest that this rate would be difficult to achieve as it does not take into account the impact of debt service.

2. The rate of growth required for equality

In order to achieve a significant and lasting reduction in inequality, growth must reach a critical rate or threshold at which quality jobs can be generated and social and redistribution policies financed. As a quantitative indicator of progress towards equality, the target used is the eradication of monetary poverty. This is an ambitious target, given that the COVID-19 pandemic has significantly increased the percentage of poor: it is estimated that number of people living in poverty could reach 231 million (37.8% of the population of Latin America and the Caribbean) in 2020.

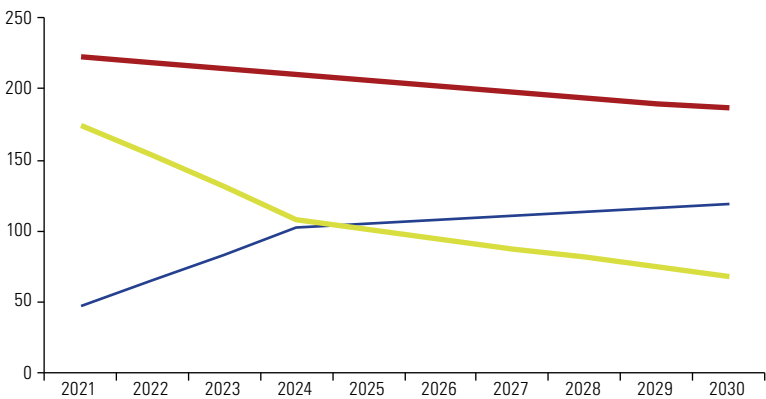
The exercise below assumes the following redistribution policy: for the first year (2021), the government redirects 1.5% of GDP to the poorest households in the form of an emergency basic income consisting of a cash transfer equivalent to the poverty line, increasing the amount of the transfer by 0.5 points of GDP annually to reach 3.0% of GDP in 2024, whereupon it would remain constant until 2030. The number of poor will decrease over time, as GDP growth creates jobs and as basic income transfers lift more and more people out of poverty. The latter effect is explained by the increase in the share of GDP allocated to transfers between 2021 and 2024, and the fact that the increase in GDP means that while the same percentage is transferred, the monetary amount received is higher.

Figure 2 shows the changes in the number living in poverty in Latin America and the Caribbean under two annual GDP growth scenarios: 2.5% and 4.0%. The GDP growth rate of 2.5% is a projected post-pandemic rate, which takes into account the impact of the pandemic and past trends in GDP growth. This is considered the business-as-usual growth rate. The 4.0% rate represents a more favourable scenario, which

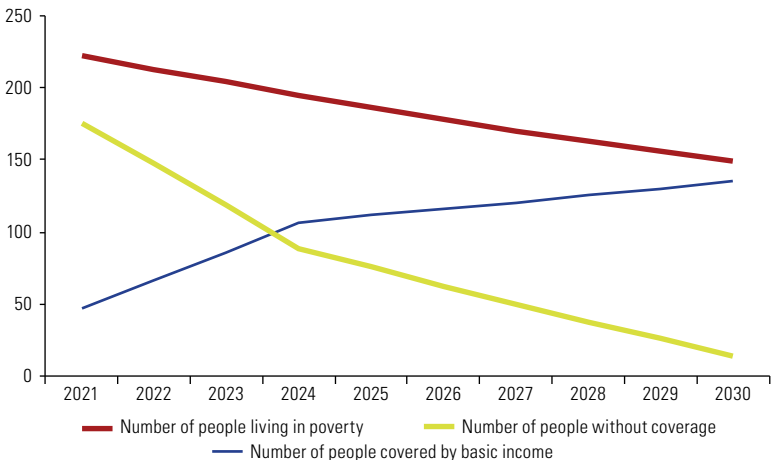
supposes a major boost in the region's competitiveness and technological capacities (increasing the ratio between elasticities, as discussed above). The red line in figure 2 represents the total number of poor while the blue line represents the number covered by basic income. Thus, the gap between the two lines indicates the number of people not covered by basic income and, therefore, living in poverty.

Figure 2
Latin America and the Caribbean: redistribution policy and growth rates required to eradicate poverty in the region, 2021–2030
(Millions of people)

A. Scenario 1: GDP growth of 2.5%



B. Scenario 2: GDP growth of 4.0%



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

Simulations show that only with GDP growth of 4.0%, in combination with the strong redistribution policy outlined above, would Latin America and the Caribbean come close to the poverty eradication target (about 2.0% of the population would continue to live in poverty).

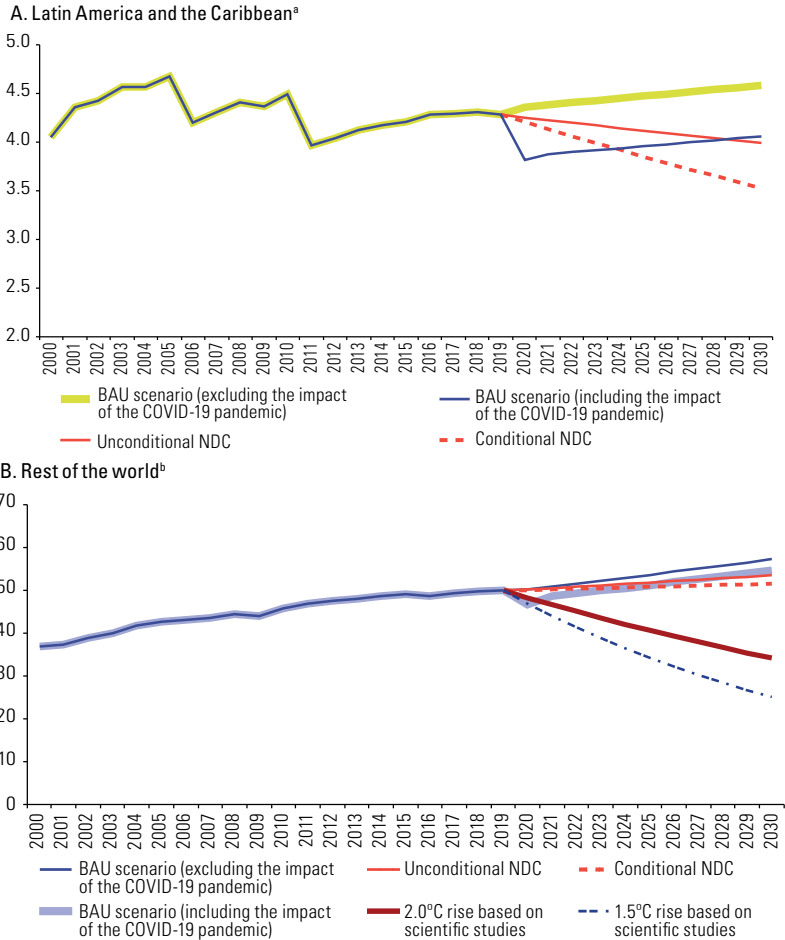
In practice, countries could choose to allocate 1.5% of GDP to eradicating extreme poverty in the first year and progress towards reducing the number of non-extreme poor in subsequent years. This would eliminate poverty in a less “linear” manner than depicted in figure 2 by 2030.

3. The growth rate consistent with preservation of the environment and nationally determined contributions

The growth rate consistent with the planetary balance is determined by the centre-periphery environmental frontier. In line with the Latin American and Caribbean focus of this document, this frontier is constructed distinguishing between two regions: Latin America and the Caribbean, and the rest of the world. In the exercises below, it is assumed that the principle of common but differentiated responsibilities is respected, and that Latin America and the Caribbean only has to meet nationally determined contributions (NDC), while the rest of the world makes the necessary adjustments to achieve the 2°C and 1.5°C targets.

Figure 3 shows the emissions pathways for Latin America and the Caribbean and the world to 2030 in accordance with the various scenarios. To construct the business-as-usual scenario that incorporates the effects of the COVID-19 pandemic, estimates of a 9.1% contraction of GDP for 2020 and 3.7% growth in 2021 are used for Latin America and the Caribbean; for the rest of the world, it is assumed that GDP will fall by 4.9% in 2020 and pick up by 5.4% in 2021. From 2022 to 2030, it is assumed that the economy’s GDP and carbon intensity will maintain similar patterns to those recorded between 1990 and 2019. The scenarios consistent with the unconditional and conditional targets are calculated on the basis of the aggregated commitments of the countries of Latin America and the Caribbean (Samaniego and others, 2019) and the estimates of the *Emissions Gap Report 2019* (UNEP, 2019). As noted above, the percentage reductions for Latin America and the Caribbean reflect a scenario in which GDP is not affected by COVID-19, since the contributions were negotiated before the pandemic.

Figure 3
Latin America and the Caribbean and the rest of the world:
level of emissions in different scenarios, 2000–2030
(Gigatons of CO₂ equivalent)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of J. Gütschow and others, *The PRIMAP-hist national historical emissions time series (1850-2017)*, vol. 2.1, GFZ Data Services; CEPALSTAT database; World Bank, World Development Indicators and Food and Agriculture Organization of the United Nations (FAO), Corporate Database for Substantive Statistical Data (FAOSTAT) [online] <http://www.fao.org/faostat/en/>.

Note: The sources of greenhouse gas emissions are the energy, agriculture and livestock, waste, industrial processes and land-use change and forestry sectors, according to the Intergovernmental Panel on Climate Change (IPCC) classification.

^a Antigua and Barbuda, Argentina, Bahamas, Barbados, Belize, Brazil, Bolivarian Republic of Venezuela, Chile, Colombia, Costa Rica, Cuba, Dominica, Dominican Republic, Ecuador, El Salvador, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Plurinational State of Bolivia, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname, Trinidad and Tobago and Uruguay.

^b Comprises 133 countries.

Given the assumption that Latin America and the Caribbean will only have to meet its conditional commitments while the rest of the world makes the necessary adjustments to achieve the 2°C and 1.5°C targets, the region's emissions would have to fall by 23% in the 2°C and 1.5°C scenarios, both of which have conditional NDCs, with respect to the business-as-usual scenario. For this to happen, emissions in the rest of the world would have to fall by 40% and 60% with respect to the BAU scenario, respectively, if the science-driven targets are to be met.

The dotted red line represents the emissions pathway Latin American and Caribbean countries undertook to follow in their conditional NDCs. That line cuts the trajectory of the post-pandemic trend scenario in 2024. This means that the region has a four-year window of opportunity to redefine its energy, technology and production patterns and decouple emissions from economic growth. Given the impact of the pandemic on GDP, in the next four years the region's emissions could fall below the levels it pledged to achieve in its NDCs, but the necessary changes will have to be made so as not to exceed those levels once the economy returns to its previous levels of GDP growth.

4. The arithmetic of sustainable development: combining the rates of growth required for equality, growth compatible with external balance and the environmentally sustainable rate

Table 1 summarizes the main results of the simple pathway simulation exercises carried out above. The first two rows show the 2020 levels and the targets for 2030 for poverty and GHG emissions. The intersections of the other rows with the poverty and emissions columns show how each variable changes under different scenarios of growth, distribution and investment in the decarbonization of the economy. These scenarios are defined based on the following criteria: (i) GDP growth rates in Latin America and the Caribbean (4.0% and 2.5%); (ii) existence or not of redistribution policies for income transfers; and (iii) the existence or not of investments in the decarbonization of the economy, which could double the historical decarbonization rate.²

² Doubling the historical decarbonization rate, which was -1.9% from 1990 to 2017, would, for example, increase the share of primary energy in the total energy supply matrix from the current 25% to 45%. Thus, accelerating the decarbonization of the economy requires taking action in different areas, such as renewable energy generation, energy efficiency, electromobility and modal shifts, reduction of deforestation, afforestation, sustainable agriculture and livestock, or waste management.

Table 1
Latin America and the Caribbean: estimates and scenarios for growth, equality and ecological and environmental sustainability, 2030

		Poverty (percentages)	Emissions (gigatons of CO ₂ equivalent)	Required ratio between income elasticities of exports and imports
2020 (estimates)		37.3	3.8	
Target for 2030		0	4.0 (unconditional) 3.5 (conditional)	
Scenarios to 2030	Assumptions			
Growth + transfers (basic income)	4.0% GDP growth	2	4.6	1.4
	2.5% GDP growth	10	4.1	0.9
Growth without transfer	4.0% GDP growth	19.8	4.6	1.4
	2.5% GDP growth	24.8	4.1	0.9
Growth + transfers + decarbonization	4.0% GDP growth Basic income Duplication of decarbonization rate of the economy	2	3.9	1.4
	2.5% GDP growth Basic income Duplication of decarbonization rate of the economy	10	3.3	0.9

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

Note: A growth rate of 2.8% for the rest of the world is assumed for the calculation of the elasticity ratio of the external gap. Two growth scenarios are included: one of high annual growth of 4.0% and one of medium annual growth of 2.5%. The scenario excluding transfers assumes a downtrend in the Gini index of 0.8% per year.

The final column of table 1 shows the ratio between the income elasticities of exports and imports required to achieve growth rates of 4.0% and 2.5% with external balance, assuming global growth of 2.8%. The estimated ratios should be compared with those observed in the different subregions of Latin America and the Caribbean. The results of the exercise are as follows:

- In order to achieve poverty reduction targets, high GDP growth rates must be combined with an increase in transfers (from 1.5% of GDP to 3.0% of GDP) between 2021 and 2030. On this basis, an annual growth rate of 4.0% would be the minimum rate needed for equality.
- However, this rate generates emissions above the level established in NDCs. This shows that the growth rate needed for equality (4.0%) exceeds the rate of growth consistent with environmental

preservation (1.2% with business-as-usual progress in technology). The region would have to make major efforts in terms of technical progress and structural change towards decarbonization to bring the two rates into line.

- The growth rate compatible with external balance is lower than the growth rate needed for equality (4.0%) in South America and Mexico. To maintain external balance with a growth rate of 4.0%, the ratio between income elasticities of exports and imports would have to double from 0.7 to 1.4, assuming continued global growth of 2.8%. In some Caribbean countries, the ratio between the elasticities would allow growth of 4.0% maintaining external balance, but high debt levels mean that this calculation underestimates the effort that these subregions would have to make to attract foreign exchange in order to meet the growth targets without hitting the external constraint ceiling.
- In all cases, the growth rate consistent with environmental sustainability (1.2%, assuming that decarbonization follows the trends of the past decade) is lower than the rate of growth with external balance, even in South America, where it is lowest.

These outcomes derive from the use of the averages for Latin American and Caribbean economies, which mask significant differences. A higher percentage of poor requires a greater redistributive effort and higher growth rates of GDP and employment to reduce that percentage.

To conclude, bringing the rates consistent with external balance and environmental sustainability into line with the growth rate needed to systematically reduce inequality will require a leap in genuine competitiveness in the region, as well as a shift in the direction and pace of technical progress, decarbonization and environmental protection. This path represents not only a radical change in the development pattern, which can only be achieved with an integrated package of strategies and policies such as those discussed later in this document, but also a major political economy challenge, as well as the challenge of forging social compacts.

III. Scenarios for a new development pattern

Achieving a sustainable development process in all three of its dimensions requires a coordinated policy effort that, taken as a whole, represents a big push for sustainability. These policies act upon multiple variables whose non-linear interactions make it very difficult to foresee policy outcomes without the help of mathematical models. This chapter presents a number of different scenario-based simulations using various types of economic models.

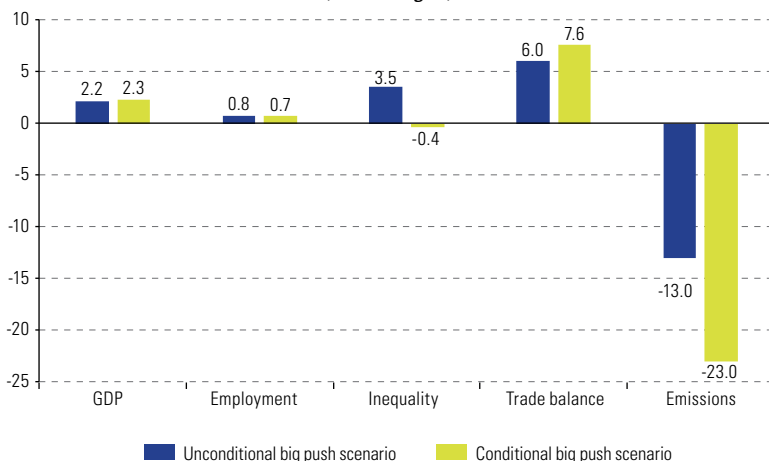
A. Sustainable development tools and policy packages: the E3ME model

E3ME is a hybrid macroeconomic non-equilibrium simulation model of global environmental, energy and economic systems that can be used to derive estimates of different policies' impacts on these three systems. It produces annual results relating to the main energy, environmental and economic variables. This model covers 61 countries, territories and regions, including Argentina, Brazil, Colombia and Mexico as individual countries and the rest of Latin America and the Caribbean in the aggregate (Cambridge Econometrics, 2019).³ It uses a detailed sectoral breakdown that includes 43 sectors for each of the world regions other than Europe, including Latin America and the Caribbean.

³ The countries and territories represented in the aggregate for Latin America and the Caribbean are: Bolivarian Republic of Venezuela, Chile, Costa Rica, Cuba, Ecuador, El Salvador, Guatemala, Guyana, Haiti, Honduras, Nicaragua, Panama, Paraguay, Peru, Plurinational State of Bolivia, Puerto Rico, Suriname, Trinidad and Tobago, and Uruguay.

These simulations look in particular at the effects of big push policies on some key economic, social and environmental variables. To this end, scenarios are defined according to the policies that can be adopted in Latin America and the Caribbean and the existence or not of international cooperation, as detailed in the main text. In particular, the trend scenario, in which everything remains the same, was estimated with and without the impact of the COVID-19 pandemic, in order to identify its effects on the model's main variables. The results shown in figure 4 are presented as percentage differences from a trend scenario that includes the impact of the pandemic.

Figure 4
Latin America and the Caribbean: effects of big push policies
on the main variables of the model relative to the COVID-19
scenario in different international contexts, 2030
(Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of E3ME model simulations

Note: The unconditional big push scenario represents the outcome of a situation in which environmental policies are applied to enable the countries of Latin America and the Caribbean to fulfil their unconditional NDCs in the absence of a global cooperation agreement for the mitigation of emissions. The conditional scenario represents the outcome of a situation in which a global environmental agreement is reached that enables the countries of the region to fulfil their conditional NDCs and the countries of the rest of the world to fulfil their NDCs and, in addition, international cooperation for mitigation is in place.

Environmental policies that enable emission reduction targets to be met generate benefits in several dimensions. First, policies designed to help the region's economies recover from the impacts

of the COVID-19 pandemic by generating a big push for sustainability would have a positive impact on job creation and GDP growth while also reducing emissions in line with conditional and unconditional NDCs. A combination of these types of policies and a global environmental agreement is the approach that has the greatest effect on emissions while at the same time boosting aggregate world demand.

Under the BAU scenario, the trade deficit tends to deepen owing to the region's low level of structural competitiveness. This trend eases when the region introduces big push policies and, especially, when the rest of the world also makes a commitment to lower emissions. Nonetheless, although these policies do curb this trend, they do not actually reverse it. Hence the pivotal importance of scope industrial and technology policies, as discussed in chapters IV and V.

Income distribution (understood as the ratio between the richest (fifth) and poorest (first) quintile) worsens when, despite strong policies for sustainability, no global agreement on the environment is in place. This underlines the need for social policies, in addition to industrial and environmental policies. In the context of a global environmental agreement, the regressive effect of industrial and environmental policies on income distribution disappears, and a small improvement is seen. Without an environmental agreement, inequality increases by 3.5%, while with such an agreement, inequality falls slightly, by 0.4%.

B. Case studies: Brazil and Chile

1. Brazil: E3ME simulations

Industrially oriented economic recovery policies that set in motion a big push for sustainability can yield significant socioeconomic benefits (Gramkow and Anger-Kraav, 2019). Policies that promote low-emissions investments in manufacturing can help to power a recovery in the short run and to narrow structural divides in the long run.

This baseline scenario, in which Brazil continues to make an increasingly intensive use of fossil fuels, can then be compared with green fiscal reform scenarios under which the country follows an alternative development path involving the introduction of a policy portfolio designed to stimulate low-carbon investment.⁴ These policies

⁴ The impact of COVID-19 is not taken into account, as it is assumed, for the sake of simplicity, that this crisis will not have lasting effects or that those effects will fade over the long term.

include an economy-wide carbon tax in combination with tax exemptions and concessional financing for investments in low-carbon manufacturing technologies. The carbon tax is calibrated so that it will create sufficient fiscal space to offer green fiscal incentives without negatively affecting public accounts. Green fiscal reforms are introduced that establish tax incentives that shift the tax burden onto carbon-intensive technologies and reduce the cost of low-carbon technologies in manufacturing sectors in order to redirect technologies towards an environmentally more sustainable development path. The application of a number of different but aligned fiscal policy tools for promoting sustainability (carbon taxes, tax reductions and concessional financing for green investments) creates an institutional setting that reduces uncertainty and investor risks.

Since the green fiscal reforms are designed to trigger a new cycle of investment in low-carbon technologies, investment is the fastest-growing component of GDP, with investment climbing by as much as 1.16% in 2030 over its baseline level. GDP growth outstrips baseline GDP growth by 0.42%, while the country's total CO₂ emissions fall by up to 14.5% by 2030.

These green fiscal reforms also have different effects on the various sectors' foreign trade activity. The relative share of exports of manufactured goods expands, especially in the case of mid-level technologies (up by 0.9%). Exports of high-technology manufactures also rise (up by 0.3%) as the economy becomes more capital-intensive and accumulates production and technological capacities that boost its competitiveness in more complex products. Total imports decline by 0.1%, with the steepest reduction being brought about by a downswing in the use of imported fossil fuels (especially coal), which plummet by 41%.

The simulation exercise indicates that policies with high sustainability impact not only have positive effects on GDP, trade balance, employment and the environment, but can also contribute to a process of structural change. Value added, though it rises in all manufacturing sectors, does so the most in low-technology and intermediate-technology industries. Big push policies may thus provide a path towards reindustrializing Brazil.

2. Chile: ECOGEM-Chile simulations

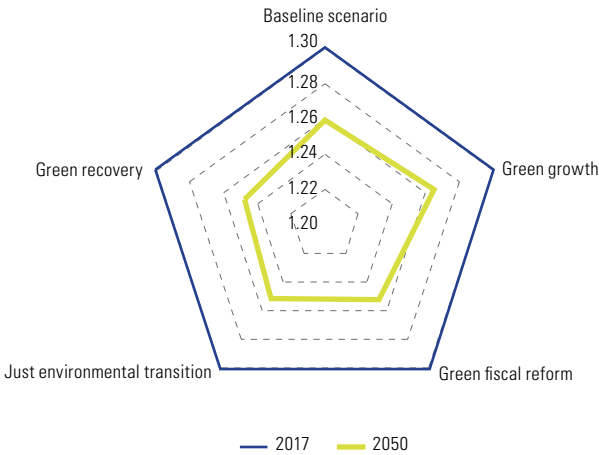
This study complements that conducted for Brazil, as it includes an additional international dimension (carbon emissions trading) and it incorporates gender inequality issues (de Miguel and others, 2011). The simulations use the social accounting matrix for 2013, which contains 111 economic sectors and pollutant emissions factors based on the 2013 Pollutant Release and Transfer Register. The period under analysis extends up to 2050, and the 2020 updates of Chile's NDC is taken into account so that unconditional and conditional emissions reduction targets can be distinguished from one another. This distinction makes it possible to estimate the percentage of tradable emissions certificates that are available on the international market.

Four alternative scenarios were simulated: (i) green growth: the tax on carbon emissions is raised from US\$ 5 to US\$ 50 per ton of carbon from 2020 onward, and the revenue allows for more public savings to be made available for investment in the economy; (ii) green fiscal reform: the tax on carbon emissions is raised from US\$ 5 to US\$ 50 per ton of carbon from 2020 onward and VAT is lowered by an amount equivalent to the revenues from that tax; (iii) a just environmental transition: tax on carbon emissions is raised from US\$ 5 to US\$ 50 per ton of carbon from 2020 onward and the revenues are used for the implementation of social transfer policies (domestic social justice). Emissions permits exceeding Chile's unconditional NDC are sold (international justice); and (iv) green recovery: in a green fiscal reform scenario in the context of COVID-19, external savings representing 6.5% of GDP are used (equal to the amount of pension fund management company (AFP) withdrawals authorized in August 2020), but these funds are replenished over the long term.

The impacts of the model on growth rates are generally very small; however, the green growth scenario is the one that generates the most positive effects. A sizeable reduction (between 32% and 34%) in carbon emissions by 2050 relative to the baseline is seen in all four scenarios. This attests to the effectiveness of an environmental tax and means that the region's carbon intensity would be approximately 35% less than today by 2030 and around 52% less by 2050. These results would have significant co-benefits because of the impacts that

these pollutants have on local mortality and morbidity rates, whose economic effects are not embedded in these results but which are generally higher among the most vulnerable population groups. Income inequality relative to the baseline would decline only under the just transition scenario, thereby demonstrating the importance of the role played by social policy, but it would still be quite stark. Gender inequality, on the other hand, diminishes by the end of the period under analysis, without any major differences being seen in that regard across the various policy scenarios. The outcome for women under the green growth scenario is less positive, however, and it would therefore be important to introduce complementary policies to promote gender equality (see figure 5).

Figure 5
Chile: gender inequality as measured by the ratio between men’s and women’s income levels, 2017 and 2050



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of Ministry of Social Development and Family, 2017 National Socioeconomic Survey [online] http://observatorio.ministeriodesarrollosocial.gob.cl/casen-multidimensional/casen/casen_2017.php; and simulation scenarios.

Note: Gender income inequality is calculated on the basis of the ratio between men’s and women’s average incomes from their main occupation.

In sum, no very marked differences are seen in the extent to which the growth rate diverges from the baseline in any of the scenarios involving a tax on carbon dioxide emissions. The just transition scenario has a considerable distributional impact, but income inequality

nevertheless remains high, and environmental policies are therefore not enough to bring about that transition. Achieving this will call for the types of social and international cooperation policies proposed in chapter V.

C. Economic growth with innovation: the greening of the economy as an opportunity for building technological and productive capacities

This section focuses on an evolutionary agent-based model (ABM) that sets out the conditions required for an economy to transition from a reliance on fossil fuels to a renewable energy base while continuing to grow and to keep its external sector in equilibrium. The model builds on Ciarli and others (2019) by adding an energy sector and a centre-periphery dynamic that reflects international technological asymmetries. Technological innovation and diffusion are core components of the model, in which firms and consumers are both heterogeneous. The economic system is in a perpetual state of flux as innovations are created and spread, with shifts in market shares and firms' capabilities having strong implications for labour demand and income distribution.

The economy of the periphery is made up of the following sectors: a final goods sector that is divided into 10 industries; a capital goods sector populated by a fixed number of heterogeneous firms producing capital goods of different vintages for both the energy sector (green capital goods) and the final goods sector (regular capital goods); an energy sector made up of a single firm producing energy from fossil fuels and renewable energy based on green capital goods; a consumer sector for final goods; and a financial sector that manages financial flows between households and businesses. The periphery has an endowment of commodities that can be either exported or used as an input for the production of fossil-fuel-based energy, while renewable energy is produced using green capital goods and renewable natural resources.

The key concern in this model is the impact of a sharp rise in domestic investment in renewables (to replace oil) on growth, emissions (proxied by the amount of oil burned to produce energy) and income distribution. The increase in investment in renewables stems from the shock generated by policies aimed at driving a big push for sustainability (the big push scenario), as discussed in previous sections.

The model shows the significance of the balance of payments constraint in the environmental policy scenario. It is assumed that the external constraint gradually decreases (due to an exogenous rise in demand for exports from the periphery) and the share of renewable energy in total energy consumption increases. But beyond a certain level of exports, further increases in exports no longer have the effect of promoting the energy transition. This is because, in a low-investment economy, the multiplier effect is weak and therefore does not result in a steep upturn in the demand for renewable energy or for the capital goods used to produce it. More voluminous reserves of foreign exchange do not boost this demand per se. Conversely, the investment drive under the big push scenario ensures that a rapidly expanding domestic economy can use all the added foreign exchange to pay for imported capital goods. At the same time, higher investment stimulates national capacities and skills to produce competitive green capital goods that can be used to generate renewable energy.

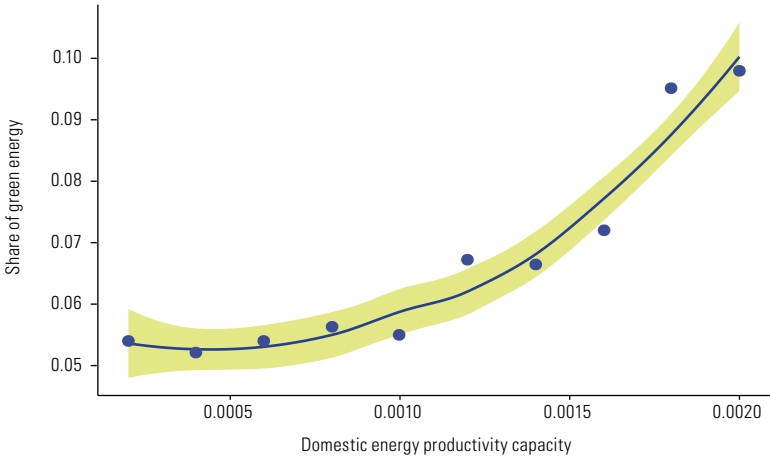
Another exercise carried out with the model was to simulate the impact of a policy of boosting R&D efforts in the capital goods production sector to produce energy from renewable sources. This greater technological effort (associated with an industrial and technological policy geared towards this sector) is reflected in an increase in energy productivity achieved through new capital goods. Figure 6 shows how the share of renewable energy in total energy consumption increases as the country grows its capabilities to generate innovations in capital goods used in renewable energy production.

As expected, under the big push scenario the share of green energy is greater than it is under the BAU scenario. In both scenarios this share increases at an accelerating rate in step with the capacity parameter (i.e. with the adoption of policies to encourage technical change and learning). Technology policies have a very important role in strengthening the impacts of renewable energy investment policies.

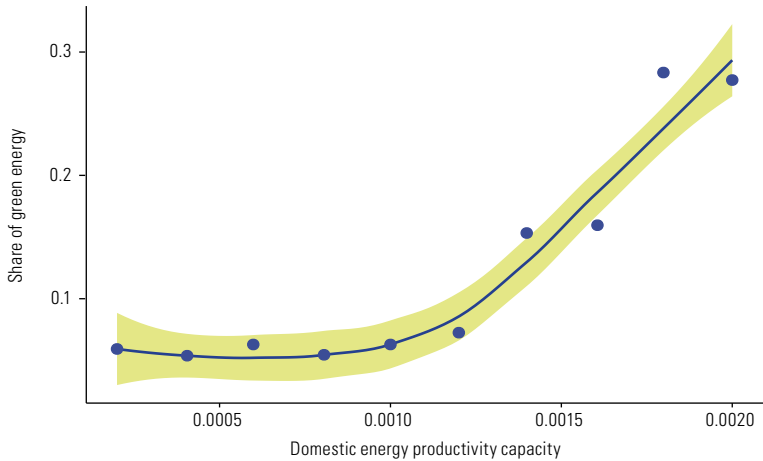
In other words, a policy aimed at improving the technological capabilities of domestic producers of capital goods for the green energy sector will have a larger impact on both the share of investment and the share of renewable energy under the big push scenario than under the BAU scenario.

Figure 6
Latin America and the Caribbean: share of renewable energy in total energy consumption as national technological capabilities increase

A. Business-as-usual scenario



B. Big push scenario



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

D. Conclusions

A number of quantitative exercises have been presented here in an effort to gauge the impact that differing scenarios based on different policy mixes would have on growth, distribution and emissions. In all scenarios, environmental policies can have positive effects on GDP, employment and the balance of trade. The results on income distribution are ambiguous, depending on the specific policy mix used. All the outcomes underscore the need to coordinate macroeconomic, social, technological, industrial and international trade policies in order to transform the region's development pattern in ways that will narrow the existing environmental, social and sustainability gaps, as argued throughout this document.

IV. Sectors that drive sustainable development

As previous chapters have indicated, a progressive structural shift is required for Latin America and the Caribbean to overcome the limitations imposed by its development style. Knowledge-intensive sectors with higher rates of demand and employment growth must form a larger part of the production structure. This must be achieved while preserving the quality of natural resources, the environment and the services they provide. These changes call for a coordinated set of policies, summarized by ECLAC as a big push for sustainability.

This big push for sustainability needs to be based on the coordination of technological and industrial, fiscal, financial, environmental, social and regulatory policies. It must aim to establish a new structure of incentives for investment, for the creation of higher-productivity jobs and for the development of production chains. At the same time, it should result in a smaller environmental footprint and in the restoration or better maintenance of the productive capacity of the natural heritage, including its environmental or ecosystemic services.

The processes and products capable of contributing to a big push are not developed in isolation, but within systems whereby each innovation creates problems that need resolving and new solutions that bring new and more complex processes in their wake (Freeman, 2008).

This chapter analyses the structure, behaviour and performance (i.e. the industrial organization model) of relevant sectors with a view to closing external, environmental and social gaps in the region.

Seven sectoral systems were selected that could form the core of policies for a big push for sustainability, and where there is ample scope to generate better-quality jobs, pursue innovation, incorporate technological progress, diversify exports, adapt to and mitigate the effects of climate change and pursue regional cooperation efforts. This selection of sectors is meant as a guide on the basis of which each country, in accordance with its characteristics and priorities, can determine the activities it is to concentrate on, the combinations between them, the approach taken to implementing development policies and the way other sectors are incorporated into the logic of progressive structural change and the big push for sustainability.

A. The energy transition: non-conventional renewable energies

1. The primary generation and electricity mixes

Non-conventional renewable energies (biomass, solar, wind, geothermal and biogas) accounted for 5% of total primary energy consumption in Latin America and the Caribbean in 2018, while the world average was 4%.⁵ In sectoral terms, transport is the largest final energy consumer in the region: 99% of the energy it uses comes from fossil fuels. The share of non-conventional renewable energies in the region's electricity production increased from about 4% in 2010 to about 12% in 2018, which represents average annual growth of 23.6% over the period (BP, 2019). Total hydropower generation decreased by 15% between 2000 and 2017, while generation from fossil fuels increased by 7.5%. Generally speaking, the transition to non-conventional renewable energy is a process that is just beginning in the region.

⁵ The concept of primary energy refers to the different energy sources as obtained in nature, whether directly (hydraulic, wind and solar energy and that produced from wood and other plant fuels) or after an extraction process (e.g. oil, coal, geothermal energy). The total primary energy supply is defined as energy production plus imports minus exports minus international strategic reserves, and plus or minus changes in stocks. Final energy consumption is the total energy consumed by final users such as households, industry and agriculture. It is the energy that reaches the final consumer, excluding wastage and energy used by the energy sector itself.

2. The future of energy demand: the role of electricity

Rapid growth in demand amid concerns about energy security and increasing climate impacts is an opportunity for the countries of the region to reshape their energy mix. Given the trend towards electrification of the residential, industrial and transport sectors, the most efficient way is to focus efforts on the main supplier of this input: the electricity sector. ECLAC has analysed the complementarity of electrical systems and the use of renewable energies in the region in three scenarios: (i) a baseline scenario, where the penetration of renewable energies is based on national energy plans and there is little integration of transmission between countries to meet the demand projected for the region by 2032; (ii) a scenario which incorporates a high proportion of renewable energy (80%, including large-scale hydropower) but maintains the same interconnections as in the baseline scenario (RE); and (iii) another scenario with high penetration of renewables and a high level of interconnection (RE+INT).

The main results in terms of the level of penetration of renewable sources are:

- Baseline scenario: energy planning by countries in the region (2018–2032), with renewables (solar, geothermal, mini hydro, biomass and ocean (0% in 2018), not including large-scale hydropower) increasing their total share of electricity generation from 12.7% to 24.6%.
- RE scenario: renewables (excluding hydropower) increase their share of the total from 12.7% to 41.1%.
- RE+INT scenario: renewables (excluding hydropower) increase their share of the total from 12.7% to 39.5%.

The necessary investment in new electricity generating capacity to meet the region's demand between 2019 and 2032 in the baseline scenario is US\$ 852 billion, a figure that falls to US\$ 817 billion and US\$ 811 billion in the RE and RE+INT scenarios, respectively. In the RE+INT scenario, achieving a 39.5% penetration of variable renewable sources, with their corresponding infrastructure and maintenance, would require annual investments of close to 1% of the region's GDP from 2019 to 2032, which is less than in the baseline scenario.⁶

⁶ Variable renewable sources, such as wind and solar energy, are fluctuating in nature and not always available; i.e. they are not constant over time.

In addition to the energy security and environmental benefits, the development of a sustainable electricity infrastructure to promote regional interconnection based on renewable energy is an opportunity to create approximately 7 million new skilled and unskilled jobs in the region by 2030, based on the deployment of solar and wind power and biomass technologies. Moreover, if the renewable energy capital goods industry were located in Latin America and the Caribbean, just the manufacture of the necessary solar panels and wind turbines would create almost 1 million new jobs. Overall, investment in renewable technologies is an opportunity to achieve rapid recovery in the post-pandemic period.

According to the RE+INT scenario, increased generation of electricity from variable renewable sources would allow the region's economies to grow at a rate closer to that required to meet social goals. It would also help to ease or even avoid the external constraint if a growing share of the production chains for generation based on renewables were located in the region. Lastly, governance of the energy transition involves strengthening public management capacity—and especially human capital—to design, manage and monitor policy instruments with a view to maximizing the social benefits from the use of new sources. The future of the energy transition will thus depend on the ability and willingness of the State to address problems, create the necessary momentum for change, encourage investment and secure the support and commitment of society.

B. Sustainable mobility and urban space

The high degree of urbanization in the region (80% of the population lives in urban areas) has exponentially increased mobility needs and exposed housing deficits and the lack of urban planning.

Access to safe, efficient and sustainable modes of transport is essential for economic development and human well-being. In Latin America and the Caribbean, although an average of 68% of travel is by public transport and the region has developed rapid transit bus systems, expanded metro systems and improved other forms of mobility, the investment bias towards private transport has led to higher congestion, accident rates, energy consumption and emissions of air

pollutants, with substantial adverse effects on mortality, morbidity, productivity and well-being. Although the rate of motorization is still low, at around 200 vehicles per 1,000 inhabitants, it is growing rapidly. The expansion of the vehicle fleet explains why the transport sector consumed 38% of final energy in 2018 (almost all of this coming from fossil fuels). The sector's GHG emissions relative to GDP are 2.2 times as high as in Europe, which means there is ample scope to increase carbon efficiency.

The expansion of electromobility around the world, particularly in public transport, has been driven by various incentives aimed at developing industry and boosting the competitiveness of each country's brands, reducing oil dependency and combating urban pollution and climate change. In 2019, China accounted for 9% of the manufacture and 98% of registrations of electric buses. As initial costs and the prices of essential components such as batteries come down, electric vehicles will become increasingly competitive. Indeed, in many cases, the total cost of ownership (TCO) of electric buses is already about 20% cheaper than for their conventional diesel equivalents (World Bank, 2019).

Electromobility offers an extraordinary opportunity for the region's automotive industry, with multiple social and environmental benefits. The region has advantages that should be exploited: the fact that trams and trolleybuses were the predominant mode of transport in the past and that extensive systems of rapid bus transport exist today; the large fleet of conventional buses to be replaced; experience in the manufacture of automobiles and autoparts in countries such as Brazil, Mexico and Argentina; the large reserves of lithium and copper; and the existence of large areas well equipped for solar and wind energy, which would allow the sustainable production of hydrogen at very low costs. It is also important to consider the potential of converting from diesel to electric buses, as a way of bringing electromobility into the regional market, reducing the cost of investment (50% less than buying a new electric bus), promoting the circular economy and increasing local jobs.

The electrification and digitization of transport and clean energy supply create a virtuous circle, which has to be supported by adequate spatial structure in cities. Spread-out cities require their inhabitants to make longer journeys that involve greater costs in time and fuel use. The housing deficit in the region —around 40%— highlights the

need to promote the use of green building materials and systems, as well as to implement strategies aimed at upgrading, rebuilding and expanding existing buildings and facilitating virtuous interactions between habitability and mobility.

Mobility and sustainable urban construction bring great environmental benefits and create opportunities for national production development. Getting a local industry off the ground means creating a regional urban market that ensures predictable demand, initial incentives, harmonization of regulatory and technical requirements, and standardization agreements to allow the necessary scale to be achieved by integrating different countries into the production chain. Public policies implemented to this end must also consider the social function of public services and their externalities, regearing investment in favour of the majority of the population and establishing those services with a smaller environmental footprint.

C. The digital revolution for sustainability

The development and adoption of digital solutions are influenced by structural factors (Cimoli and Correa, 2010; ECLAC, 2016). Digital development that does not respect human rights in the digital environment (digital rights) and is not guided by principles of inclusion and sustainability can reinforce patterns of social exclusion and unsustainable methods of resource exploitation and production, while exacerbating their negative environmental impacts. The net effect will then depend on the linkage between business strategies and policy actions aimed at steering digitization towards sustainable development.

Although 66.7% of the inhabitants of Latin America and the Caribbean used the Internet in 2019, access to connectivity is extremely dependent on household income level, which conditions access to teleworking, tele-education or remote health services, as well as other goods and services. Taking into account the progress and limitations of digitization in the region, ECLAC (2020b) suggests advancing in the following policy areas with a view to consolidating digitization as an instrument for sustainable development.

- (i) Advance towards a welfare state with digital development and inclusion. In the post-COVID-19 world, social welfare will

not be possible without digital transformation. The new digital governance model must promote equality through inclusive digital transformation, encourage the digitization of businesses and protect data privacy and security. It must also protect economic, social and labour rights, prevent the use of digital technologies from increasing precarious working conditions, and ensure that social protection systems and their benefits are provided through digital technologies in an efficient manner and according to criteria of accessibility and ease of use.

- (ii) Universal access for an inclusive digital society. The region's countries would have to invest an average of about 1% of GDP per year to ensure access for unconnected households, although with large differences between them. To progress towards this objective, demand subsidies could be used to help lower-income households afford telecommunications services and the basket of access devices. What is essential, though, is to coordinate public-private actions tailored to each country that meet socioeconomic, geographical, age and gender criteria. A regulatory sandbox can also be implemented, with operators being allowed to directly manage some of the resources to be provided by universal access funds or other funds set up to expand telecommunications services on a mass scale, using them to cover the costs of providing services to lower-income households. As regards access to devices, temporary reductions could be made in import duties and sales taxes such as VAT on devices specified by the regulator, as well as public-private partnerships fostered with suppliers and manufacturers to produce them at low cost in the region and improve supply conditions.
- (iii) Building an advanced digital infrastructure. The countries of the region need to deploy infrastructure that provides quality broadband access and allows digital solutions to be used to meet the structural challenges of production, inclusion and environmental sustainability. To this end, there is an urgent need to expedite the deployment of 5G technologies and the Internet of Things by defining the network expansion model and its financing; update regulations that optimize network use; harmonize, liberalize and allocate the electromagnetic spectrum;

- develop fibre optic backbones; and adopt regulations for the installation and operation of high-performance data centres that cover issues of security, service continuity and energy efficiency in line with international parameters.
- (iv) Strengthening regional digital cooperation. The architecture of regional digital cooperation lacks an institutional framework for discussing and designing common policies, rules and standards. In this context, the Digital Agenda for Latin America and the Caribbean (eLAC2020) is a space for determining regional principles and priorities. It encompasses 33 countries of the region and representatives of the private sector, civil society and the science and technology community. On the basis of the agreements established in the Agenda, ECLAC is supporting the design of strategies relating to the deployment and ownership of digitization. These include moving towards a regional digital market that would increase trade and strengthen the digital economy through incentives, regulatory consistency, digital infrastructure integration (including 5G networks), reduction of barriers to e-commerce, promotion of digital innovations and ventures (particularly in micro-, small and medium-sized enterprises), design of tax regimes for the digital economy, universal broadband Internet access, data protection and digital security, and competition policies.

D. The health-care manufacturing industry

Health-related industries (the pharmaceutical and medical device and equipment industries and related research and development activities) are of strategic importance in developed countries. On the production side, they generate high-quality jobs with productive linkages and drive technical progress because of their strong emphasis on research and development and their considerable knowledge externalities. By contrast, in Latin America and the Caribbean, with few exceptions, the level of development and technological sophistication of this industry is low and, therefore, it is highly dependent on the production of multinational companies and on imports from countries outside the region.

The pharmaceutical industry in the region has concentrated on the formulation and production of low-cost generic drugs. The supply of innovative medicines remains in the hands of international companies,

which tend to manufacture mainly in global centres. At the same time, increased imports of innovative biopharmaceuticals have resulted in a persistent widening of the trade deficit.

The situation of the medical device and equipment industry is not much different from that of the pharmaceutical industry, and its development is conditioned by its form of participation in global value chains. Most countries in the region are net importers of products from high-income countries and export little. In this context, they supply a small part of their domestic demand with technologically unsophisticated products. Costa Rica, the Dominican Republic and Mexico are exceptions to this, as they have become production centres for multinational companies supplying mainly the United States market. Although these countries run a trade surplus, intraregional trade is minimal.

The COVID-19 crisis has shown the excessive dependence of the region on imports of essential medical products to combat the pandemic. This vulnerability turned critical when unilateral supply disruptions were imposed by several international suppliers during the first half of 2020 (ECLAC, 2020a).

Most health-related research and development in the region takes place in universities and public laboratories. The region's larger countries have hubs of high-quality basic research, with good productivity indicators in terms of publications, and there is an incipient trend towards the creation of start-ups that aim to bring research results to the market. However, this is a limited process, since the absence of a technological business base thwarts the possibility of scaling up production as occurs in highly developed countries.

The crisis caused by the pandemic has left some lessons. First, it has exposed weaknesses in health systems and supply chains for key public-health inputs and equipment. Second, it has revealed the response capacity and coordination of the public and private sectors to address and resolve supply shortfalls in very short periods of time. And third, it has laid the foundation for rethinking the development of the health-care manufacturing industry from a national and regional perspective. The chapter sets forth measures to take advantage of the spaces available for pursuing innovation policies in this industry, as well as actions to strengthen regional collaboration, particularly with regard to the joint production and purchase of medicines and medical devices in health emergencies.

E. The bioeconomy: sustainable development based on biological resources and natural ecosystems

When it comes to benefiting from the potential of the bioeconomy, the region's greatest strength lies in its abundance of undervalued biological resources and natural ecosystems. The bioeconomy seeks to reduce dependence on fossil resources and promote the intensive production and use of knowledge about biological resources, processes and principles for the sustainable supply of goods and services. It offers a route to structural change by providing options for agricultural and rural development, the generation of value chains and the creation of quality green jobs and new opportunities for agriculture, particularly in the field of low-emissions agriculture.

The bioeconomy can contribute to diversifying the productive structure and increasing value aggregation in a sustainable way; for example, on the basis of a transition to agroecology, the development of value chains and diversified systems of crops native to the region, and livestock production that is low in GHG emissions. New production methods combining digital technologies and those derived from progress in the biological sciences are areas with bioeconomy potential in the region.

The potential of the bioeconomy has become evident in the COVID-19 pandemic. Many of the “winning” sectors are related to the bioeconomy, such as agriculture, agroindustry and food production in general. Other winners are sectors involved in applying biotechnology, particularly in the field of health, because of their role in developing vaccines and designing methods for characterizing SARS-CoV-2 and for diagnosing and treating the disease.

Many of the institutions and policies geared towards the agricultural sector in the region have been weakened by fiscal constraints, which contrasts with the need to manage increasing pressures due to growing demand for food, the depletion of natural resources that support agricultural production, the demand for more sustainable production and the impact of climate change.

In order to reorder priorities and implement new policies and alternative ways of managing natural, human and financial resources, ECLAC proposes to strengthen the following linkages: between

the bioeconomy and the sustainable use and management of biodiversity; between agroecology and nature-based solutions within the framework of the bioeconomy; and between new technologies and traditional knowledge.

Tapping into the expansion of global markets of biology-based goods and services and the potential of the bioeconomy in the post-COVID-19 context requires knowledge of the biological resources available, related scientific and technological capabilities, market potential and consumer acceptance of new products. The development of an inclusive, sustainable and competitive bioeconomy involves dealing with obstacles such as the lack of appropriate regulatory frameworks, insufficient coordination of technical capabilities, restrictions on market entry by small enterprises and the lack of funds to foster the creation of innovative businesses (Rodríguez, Rodrigues and Sotomayor, 2019). To resolve these limitations, actions are needed in the areas of policy and regulation, research and development, innovation and support for entrepreneurship, exploitation of biological resources in a way that adds value, and market access and development. In particular, a considerable effort is needed in R&D and in innovation, especially with a view to increasing the value added and complexity of production based on biological resources.

The regulatory environment is essential to the development of the bioeconomy; for example, through the development of regulatory frameworks, particularly in areas where the progress of knowledge and the application of new technologies is more rapid; the building of capacities to comply with regulations in target markets for bioeconomy products; harmonization between conventional products and similar bioproducts; and harmonization of criteria for classifying new products related to the bioeconomy, such as functional foods and superfoods, biopharmaceuticals, agricultural bioinputs and industrial enzymes.

F. Developing the circular economy

The world needs to drastically reduce use of materials and generation of waste. The aim of the circular economy is to preserve the value and utility of materials and products for as long as possible, helping to reduce material and energy requirements and the generation of waste.

This requires changing the production model and product design, and promoting proper management of waste, including prevention, reuse, recycling, energy recovery and final disposal.

The region generates around 1 kg of solid household waste per capita per day, which is less than in the developed countries, but higher than the world average. Organic waste still represents over 50% of the total. Waste collection coverage averages 85% in urban areas but is significantly lower in rural areas. Three quarters of waste is deposited in sanitary landfills, although open dumps, illegal dumps and micro-waste sites still exist, and the infrastructure is insufficient to keep pace with the speed at which waste is generated. Plastic waste continues to grow despite increasing regulations and bans in the region. The Caribbean Sea is the second most polluted with plastics in the world and the health effects of microplastics are a growing concern.

Sanitary waste—which contains a high proportion of hazardous material and non-recyclable plastic—has increased significantly owing to the COVID-19 pandemic, triggering alerts about the importance of hospital and health-care infrastructure and waste management, including traceability. Meanwhile, waste electrical and electronic equipment (WEEE) continues to grow as income levels increase and only one fifth of this waste worldwide is collected and dealt with properly, despite containing valuable metal components. Lead batteries, among other hazardous waste, have a great impact on the environment and health, but are also a valuable source of secondary raw materials, owing to their metal content.

Recycling rates are very low in Latin America and the Caribbean, and limited to a few products, such as paper and cardboard, scrap metal, some plastics and glass. Great opportunity therefore exists to develop activities related to the circular economy on the basis of local production chains and, in particular, the waste management and recycling sector. The significant multiplier effects on employment and direct and indirect carry-over effects of the waste and recycling sector lead to the conclusion that, if it were developed into a key sector in the region's economies and had a municipal waste recycling rate equivalent to that of Germany, it could contribute to the green economic revival: almost 450,000 stable jobs would be created and the region's GDP would increase by 0.35%.

To develop the circular economy and reduce waste generation as much as possible, a comprehensive vision is needed that leads to changes in public policies and in management, investment and financing systems throughout the life cycle of products. Industrial policies need to be accompanied by standards on the efficient use, compatibility and recyclability of inputs, including restrictions on highly toxic or low-reusability substances. Several countries in the region have or are enacting Extended Producer Responsibility (EPR) laws and are regulating or banning the use of plastic bags, particularly single-use ones. These are notable advances in the right direction. Consumers must also be made aware of this issue, for which it is important to promote eco-labelling systems, update consumer legislation and encourage the sharing of appliances and products, and green public procurement. To make new business viable, it is important to foster innovation and training, to align fiscal policy with sustainable production and consumption objectives, applying the polluter pays principle, and to forge regional and subregional partnerships to increase the scale and impact of new activities, and of common actions or regulations.

Without forgetting the necessary and urgent investments, the shortfall of infrastructure for waste management must be addressed by promoting circularity and seeking to convert waste into resources. Strengthening waste collection and sorting systems and increasing recycling, reuse and remanufacturing rates in areas where informal work is significant is also a way to provide decent, formal work for grassroots collectors and recyclers, among other parties, thus contributing to recovery with equality and sustainability.

G. Sustainable recovery in the tourism sector

Tourism is one of the sectors that has suffered the most from the pandemic. Since April 2020, international and domestic tourist arrivals have almost come to a standstill, strongly affecting the economy and employment, not only in the Caribbean, but also in many Latin American cities and communities. Tourism accounts for half of all service exports in Latin America and the Caribbean, as well as a significant proportion of GDP and employment.

The countries of the region are very heterogeneous in terms of the relative importance of domestic versus inbound tourism. In

the Caribbean, most economies are almost entirely dependent on foreign visitors. In contrast, domestic visitors account for almost three quarters of the total in Mexico, while in some South American countries (Brazil, Argentina, Chile and Peru, in descending order) this share is over 50%. The drop in tourism will produce a sharp fall in GDP and employment in the countries of the Caribbean (by about 8 and 9 percentage points, respectively), with more moderate effects in the rest of the region.

As countries take measures to mitigate the economic and social impact of the pandemic on tourism, opportunities are opened up to prepare and expedite the sector's economic recovery, which should be supported by increased diversification and environmental and social sustainability (Mulder and others, 2020). As this is one of the most severely affected activities and one that employs vulnerable population groups, such as youth and women, the sector needs specific mitigation and support measures. These initiatives can be classified in five categories: protection of workers; support for business survival, particularly micro-, small and medium-sized enterprises (MSMEs), throughout the tourism value chain; facilitation of recovery in the sector in the short term; strengthening its medium-term sustainability and resilience; and promoting regional and subregional cooperation.

These measures must not only address the survival of the sector, but also ensure that it is prepared to contribute to economic recovery once the crisis is over and that it is resilient to future shocks. This crisis holds out an opportunity to increase the contribution of tourism to the achievement of the SDGs of the 2030 Agenda for Sustainable Development; in particular SDG 8 (decent work and economic growth), SDG 13 (climate action), SDG 14 (life below water) and SDG 15 (life on land).

H. Conclusions

The analyses of industrial organization presented in this chapter highlight some central features of the production structure of Latin American and Caribbean countries. First, the chapter shows that the countries of the region have advanced to differing degrees with some industries or services that are crucial to the three dimensions of sustainability. While there are sectors where productive activities are fully established and growing very strongly, such as non-conventional

renewable energy sources and the digital economy, there are others where progress is incipient, such as electromobility, the circular economy and sustainable tourism. For this reason, the corresponding sections stress the need to develop these sectors rapidly in order to take advantage of their potential.

Second, the chapter highlights the importance of accumulated capabilities when it comes to responding to the new conditions arising from technological change and, in the shorter term, from the COVID-19 pandemic. As shown in the analysis of the health-care manufacturing industry, the fastest and most effective responses were those that arose from business capabilities built up over time, in some cases starting in the decades when the import substitution industrialization strategy prevailed. In other cases, such as digitization, capacities likewise crucial to the effectiveness of the response were built up in a shorter time frame, but one also measurable in decades.

Third, the success stories analysed combined business strategies with public policy decisions. Government action, under the name of industrial policy, competitiveness policy or some other term, was essential for the establishment of regulatory and, in many cases, incentive systems that made investment and human and corporate capacity-building processes viable. In industries such as carmaking, current capabilities would be sufficient for effective progress towards new technological patterns, such as electromobility, if they were combined with appropriate public policies, several of which should be adopted not only at the national level, but also at the local or municipal level. In some cases, such as the production of electric vehicles, the scope of action should be extended to the regional level to take advantage of economies of scale and synergies between countries.

Fourth, the capabilities developed in companies, private and public universities and sectoral government agencies —i.e. in the crucial components of national innovation systems— played an important role in knowledge transfer and even innovation, as can be seen in the technological dynamics of low-carbon agriculture and other activities linked to the bioeconomy, one of the areas where most progress has been made in innovation.

Finally, for the purposes of policy design and implementation, it is important to bear in mind that there are strong interrelationships

and synergies between the sectors analysed; for example, between digitization, the move towards non-conventional renewable energy sources and the promotion of electromobility to replace fossil-fuelled public and private urban transport. The relevant policies should take into account the need to go beyond the traditional sectoral definitions, which have become increasingly vague, to encompass broader production systems, which are strongly determined by their technological dimension.

In summary, the message is clear: cooperation and the creation of synergies between State policies, the strategies of firms in the private or public sector and social and community initiatives must form the heart of any production development capable of bringing about progressive structural change likely to narrow the external, environmental and social gaps. All this requires enabling strategies and policies to ensure an environment of high output growth, productivity and employment, as well as improvements in income distribution and equality, which are discussed in the next chapter.

V. Policies for transformative recovery: growth, equality and sustainability

A. Policies for a change of era

The pandemic has turned a spotlight on structural problems that the Latin America and the Caribbean region has been facing for decades: sluggish growth, a heterogeneous and poorly diversified production structure, high levels of informality and lack of protection, social inequalities and global asymmetries. The region is on the cusp of a change of era that will involve uncertain, lengthy and complex processes of structural change that will revolutionize the technological base and ways of producing, distributing, inhabiting, consuming, accumulating, thinking and living together.

Facing this epochal change requires public policies to induce and foster structural change, as markets often do not give the signals that lead to progressive structural change and do not solve coordination problems when the viability of an investment depends on complementary investments. Hence the proposal set forth in this document for a big push for sustainability, which will make it possible to link up policies and coordinate investments, based on social, sectoral and environmental objectives, policies and targets.

The countries of the region have long experience with policies and instruments; the task now is to turn these into a coherent set, give them a new direction and implement them effectively. The challenge is to harmonize policies aimed at closing the external, social and environmental gaps with a view to forging new development pattern and fulfilling the 2030 Agenda for Sustainable Development.

As a complement to policies aimed at fostering the seven sectors proposed as crucial to sustainability, chapter IV sets out framework conditions and cross-cutting policies that not only underpin these sectoral actions, but also provide in-depth coverage of other areas that are fundamental to achieving sustainable development.

B. Responses to the economic and social emergency generated by the pandemic

A bridge needs to be built between economic recovery in the short term and the structural shift towards sustainability and equality. Among its proposals for mitigating the effects of the pandemic, ECLAC affords particular importance to an emergency basic income, an anti-hunger grant, co-financing of firms' payrolls, investments to universalize broadband internet access and increased investment in health and its infrastructure.⁷ However, there are additional bridges between the short- and medium-term approaches that should be included among the public-spending priorities for economic recovery.

Lockdowns have shown the importance of high-quality Internet access; water and sanitation infrastructure; upgrading of neighbourhoods, homes and buildings; renovation of infrastructure for public transport and active mobility; and emerging employment programmes for the restoration of natural systems. Along with investment for recovery, there is also an opportunity to move forward in gaining regulatory approval for sectoral production alternatives to replace products that have high carbon emissions and a large environmental and social footprint, stimulate private investment and provide spaces to expand the social and solidarity-based economy, under a rationale of densification and democratization of the production fabric.

C. Medium- and long-term policies

1. Taxation and financing

Changing the development path through an active fiscal policy requires bolstering tax collection and changing the historic situation whereby the region's tax revenues have been insufficient to finance the level of

⁷ See *COVID-19 Special Reports* published from April 2020 [online] <https://www.cepal.org/en/temas/covid-19>.

public spending needed for sustainable development. The tax system must nurture a fairer, more egalitarian and sustainable society and economy, through taxes that redistribute income and wealth while also altering consumption and production patterns.

Although there is a wide diversity of realities in the region, the tax burden in the countries is low, even compared with other countries in the world with similar levels of development (ECLAC, 2020c). Whereas taxes levied on the consumption of goods and services, which are fundamentally regressive, generate 50% of total tax revenue in the region, compared to 32% in OECD, revenue from direct taxation is low, particularly in the case of personal income tax.

Reliance on revenues from taxes levied on the exploitation of non-renewable natural resources slows structural change and reinforces lock-in in economic dynamics. Reliance on this type of income makes the fiscal accounts in many countries highly sensitive to exogenous factors (such as variations in prices or in international demand), which limits the scope for maintaining an active countercyclical fiscal policy.

Given the inadequacies of the tax systems to finance development and reduce inequalities, it is essential to establish an agenda of reforms that will underpin the active fiscal policies needed for sustainable development. This agenda should end opportunities for tax evasion and avoidance since, in some countries, tax systems collect less than half the amount that theoretically ought to be generated by personal and corporate income taxes. At the same time, another drain on resources arises from illicit financial flows resulting from misinvoicing in international goods trade, which suggests potential abuses of the transfer-pricing rules that lie at the heart of international income taxation (ECLAC, 2020c).

To make the tax system more progressive it is essential to consolidate personal and corporate income tax, while reviewing the use of fiscal incentives and tax expenditures and retargeting those that do not serve development objectives (ECLAC/Oxfam, 2019). The scope of capital and property taxes as tools to mobilize resources and reduce inequality also needs to be expanded. As economic activities become increasingly formalized, the scope of social contributions can be expanded to make health-care and pension systems more sustainable.

National authorities should also seek ways to exploit alternative tax bases, such as the digital economy. Corrective taxes, such as those concerning the environment, and those related to public health, are important not only for changing behaviour and consumption patterns but also for mobilizing funds.

In a situation like the present, implementing a heterodox fiscal policy involving deficit spending, low interest rates and a higher ratio of public debt is unavoidable. For highly indebted middle-income economies or those with increasingly burdensome debt services, such as those of the small island developing States of the Caribbean and other countries in the region, it is essential to reduce the burden of foreign debt. The lack of diversification among the Caribbean economies, the weakness of their public finances and the regular destruction of infrastructure owing to their vulnerability to extreme climate phenomena form a vicious circle that needs to be broken and then transformed. To this end, ECLAC reiterates the need to implement its Debt for Climate Adaptation Swap Initiative.

It is necessary to draw on public funding sources to mobilize private financing, particularly through multilateral or national development banks, to complement the mobilization of national public resources. The financial sector is key to shifting relative returns towards sustainable investments and it must adjust to the reality of climate change to internalize climate risk, applying a social price to carbon, using different discount rates, diversifying guarantees for this type of project, and establishing technological or minimum floors and operating techniques for certain types of projects in terms of emissions; and excluding investments with high carbon emissions even if they are profitable (Bárcena and others, 2020).

In this universe, where the leading actors are national and international development banks and multilateral climate funds, increasing contributions must come from the private commercial banks and the bond market, which is now covering a growing portion of climate financing in the region (Samaniego and Schneider, 2019). The Climate Bonds Standard (CBS) which involves voluntary certification in line with these principles, enabling investors to examine a bond for its environmental impact and have it certified by a third party is a complementary instrument (World Bank/IFC, 2016; ECLAC, 2017c).

The transition to sustainability requires stronger environmental- and climate-risk management in the financial system and among central banks, avoiding overexposure to those risks, and encouraging sustainable investments. To this end, it is possible to use differentiated discount rates and to charge the social cost of pollutants and other damage, as well as to make exposure to climate risk transparent. A precautionary measure adopted in the international financial system has been to set green- or climate-finance targets.

2. Internalization of environmental externalities

The shift in relative returns towards investments for sustainability requires the gradual elimination of illegitimate advantages or savings in the production system, which are harmful to nature or health. This can be done by regulating polluting discharges with a view to their minimization or elimination, or by taxing environmental and health hazards. The policy instruments that contribute to this objective include:

- (i) Introduce environmental taxes or adjust existing ones to shift the profitability of production and consumption patterns towards alternatives with a smaller environmental footprint and make resource use more efficient. The use of taxation as a tool to internalize and alter the relative profitability of an investment is complementary to other systems for correcting externalities, such as the regulation of emissions and the mandating of energy-efficiency requirements. Taxes on carbon and other negative externalities should not be designed as one-off changes, but instead they should rise progressively through time. This would enable them to send a more powerful signal of direction with less political friction.
- (ii) Gradually eliminate unjustified tax incentives and perverse subsidies. Prominent among these —given their magnitude and relevance— are inefficient and socially regressive subsidies on fossil fuels. These subsidies benefit high- and middle-income sectors and power groups, such as those in energy-intensive industries and their distributors. Thus, they have distorted markets to the detriment of renewable energies and energy efficiency and more sustainable development. The elimination of these subsidies should be complemented by compensation for individuals in low-income sectors insofar as they are directly or indirectly affected.

- (iii) Include sustainability in the evaluation of investment. This measure means developing and implementing methodologies for investment evaluation that recognize environmental advantages, particularly in the case of public investment (Bárcena and others, 2020). These include the use of lower and differentiated discount rates to benefit projects that have environmental advantages, the introduction of a social value for carbon and other environmental and health damage into public investment assessment systems, and the specification of individual environmental footprints in the technical specifications for public works and concessions.
- (iv) Promote regulatory innovation. The internalization of externalities through regulation can shift the relative returns of declining production patterns towards emerging sectors. Accordingly, regulatory frameworks need to be designed that support production in the new activities, a gradual increase in the requirements for domestic components in emerging value chains, tenders that allow producers to gain access to financing, and certainty in the demand for alternative production. The more competitive market mechanisms and private- and social-sector initiatives that can be incorporated into policies, the less incentive there will be to capture rents by abusing market power.
- (v) Measuring development and well-being, not just market transactions. Despite the fact that it is not a good instrument for measuring the shift of the growth model towards more sustainable development with equality, GDP continues to be used as a central measure of progress. The growth of monetary transactions is a measurement that does not reflect increased well-being, nor the ecological value of protecting biodiversity, and in which prices subsume all other values. The United Nations, as the world's statistical authority, should establish a methodology and set an effective date for moving from the current metric to a better official criterion, and adapt regular reports to reflect this change. This task would be undertaken in cooperation with other broad-scope statistical offices, such as the Statistical Office of the European Union (Eurostat) and the national statistical offices and institutes of the region, with the coordination of the Statistical Conference of the Americas.

3. Industrial policies for sustainable development

Industrial policies should aim to undertake public investments and support private investments, along with social and solidarity-based ones, in the sectors that drive progressive structural change. The possibility of moving towards inclusive and sustainable economies depends largely on the opportunities associated with disruptive changes in the new technological cycle, in areas such as new advanced manufacturing (sometimes referred to as Industry 4.0), transport and logistics, energy efficiency, digital services and social innovation. The absence of industrial policies in a context of the accelerating fourth industrial revolution and post-globalization will increase the production and technological gaps with the consequent adverse effects on the external gap (Cimoli and others, 2017). The economic effects of the pandemic have opened spaces for mission-oriented policies aimed at industrial transformation and productive resilience.

The transformation of production requires interventions not only in terms of investment policies, foreign trade, science, technology and innovation, training and skill development, and MSMEs, but also in infrastructure, transport and energy policies, in both urban and rural areas (Padilla, 2017). Long maturity periods are needed to bring about these change processes, so industrial policies must combine the medium-term commitment to an economy that builds in greater knowledge, innovation capacity and sustainability, with the implementation of initiatives to support leveraging of the potential of certain production chains, services and technological platforms in the short run.

MSMEs, both private firms and those in the social sector, are major job-creators, but they face serious problems of productivity and competitiveness (Dini and Stumpo, 2019). Therefore, a large proportion of MSMEs need to be supported through industrial policies focused on innovation, dissemination of new knowledge and production linkages, by integrating them into value chains, consolidating partnering networks and strengthening clusters.

These policies should form part of general industrial development strategies, which, in turn, should incorporate measures consistent with the needs of private and social sector MSMEs. Horizontal approaches (which do not discriminate by agent, sector or territory and which have

predominated in policy formulation thus far) should focus on general-interest enabling measures and be supplemented by specific measures to build capacities in priority production chains and territories. The governance of these policies needs to have a local dimension and, at the same time, guarantee a space for regional action.

The experiences of the region's countries highlight the progress and shortcomings of its industrial policies (Peres and Primi, 2019). Despite the fact that, as discussed in chapter II, Latin American and Caribbean economies and societies are not tending towards closing the three gaps, they have, nonetheless, made progress in the following aspects of industrial policy: (i) an appropriate policymaking process involving all stakeholders is more effective than trying to copy best practices from developed countries and regions; (ii) policy formulation and implementation are learning processes in which there are no predetermined paths —instead, experimentation is at the heart of effective dynamics; (iii) policies and programmes should have a small set of explicit, measurable objectives (quantitative goals); (iv) there is a better understanding of the length of the learning period, which is much longer than most policies and certainly longer than a government's four-to-six year term of office; and (v) a policy is only real if its implementation is backed by financial and human resources.

Despite these conceptual advances, some of the usual problems that bedevil the implementation of industrial development policies persist: (i) the failure to rank objectives, which are presented as list of priorities without clear trade-offs between them, which hinders policy implementation; (ii) the weakness of the institutions in charge of implementation and their separation from the entities that formulate the plans lead to the dilution of responsibilities; and (iii) outcome evaluation is not a common practice and, when it is done, its recommendations are seldom used to reformulate policy design and management. To help overcome these problems, institution-building must be part of the industrial policy itself, as it is essential for its implementation.

4. A new welfare and social protection regime

Social policies should not be envisaged as compensatory mechanisms. The main objective of social policy is to achieve the greatest possible well-being among individuals and communities, along with its

respective benefits in terms of productivity, capabilities and resilience. The region's welfare regimes are not sufficiently redistributive and there are high levels of inequality within a culture of privilege. As shown in chapter II, the right combination of industrial, social and fiscal policies would make it possible to significantly reduce inequality and achieve poverty-free societies over the course of a decade. The idea that inequality and poverty, and the culture of privilege that sustains them, are normal phenomena must therefore be resisted.

A non-negotiable stance against inequality and poverty is essential for making government measures more redistributive, particularly with regard to public finances, while supporting a shift towards more inclusive structural change. This also implies reporting on inequality in society, both before and after fiscal effects, and denouncing negative distributive effects of tax privileges, the orientation of investment and, particularly public spending. It also means combating all forms of discrimination, especially those based on gender or ethno-racial status, in order to move from a culture of privilege to one of equality and efficiency.

To strengthen, renew and expand the welfare state and ease the transition towards a new development pattern, universal social policies are needed that are based on rights rather than on participation in formal employment; and labour rights must be upheld. The goal is to change the economic and social structure through affirmative actions in favour of individuals and groups that suffer various types of inequality, discrimination and exclusion (ECLAC, 2019a).

An important means of universalization consists in extending the payment of direct cash transfers to the population, especially in the extreme phases of the life cycle (early childhood and old age), and to move towards providing a universal basic income as an additional pillar of the welfare regime and the social protection system, in keeping with the characteristics of each country. The crisis unleashed by the COVID-19 pandemic underscores the importance of ensuring social security for all and guaranteeing both access to, and the quality of, public services such as digital connectivity, drinking water, transportation, air quality and health.

Universal social protection must redistribute and ensure universal access to education and health care, and guarantee incomes for those

who lose their jobs in the process of the green or digital transition. It can also have a multiplier effect on aggregate demand. Further, it helps to address disasters (before, during and after they occur), which have a greater impact on the poorest and most vulnerable populations. Welfare regimes and social protection systems need to be adapted to the challenge posed by the intensification of human mobility (regular and irregular migrations, displaced persons, refugees and asylum-seekers) and the need to build a social protection framework that is consistent with this reality from the human-rights and human-security perspective.

The pension system is a central component of social protection. In general, contributory pensions still have limited coverage and low replacement rates and, consequently, the amounts they pay are insufficient to provide the social recognition and economic security which they were originally designed to guarantee. Pension systems are also one of the key sources of social concern and conflict in several of the region's countries.

Social protection policies increase the population's resilience to disasters associated with natural phenomena and should be included in climate-change mitigation and adaptation and disaster-risk management strategies. These policies are essential to support sectors that suffer from what ECLAC has referred to as a dual asymmetry, since the populations in question contribute minimally to global warming while suffering severe damage from the cumulative effect of emissions from more developed nations and higher-income sectors in their own countries.

The pandemic has highlighted the shortcomings and inequalities that pervade the population's exercise of the right to health and to quality education. The chapter outlines measures for making progress on these issues and, in particular, notes that the lack of access to digital connectivity for nearly one third of the region's population prevents many from accessing new forms of education and medicine, thus widening the historical gaps in both fields.

Substantive gender equality is a cross-cutting issue in all policies and initiatives that pursue development with equality. Care work, which is performed above all by women, is essential to all activities in any society. Counting the time invested in care work and recognizing its value at market prices would make it possible to measure its direct

contribution to economic growth and acknowledge its importance. It is a matter of moving towards a defeminized public care system while guaranteeing labour rights and decent work to all persons involved in the care economy.

The COVID-19 health crisis has highlighted the unjust social organization of care activities in the region, where they are treated as an externality rather than a component of development. The health crisis and population ageing demand that the care economy be viewed as a crucial component of a welfare state. Care must become a universal public good, and the role played by women in these tasks must be recognized and revalued.

Replacing the development model with one that is both dynamic and economically, socially, and environmentally sustainable requires a population endowed with a greater understanding of the social and environmental footprints of the current development style, and of the implications of major investment decisions and their effects on climate change and biodiversity, as set forth in the Regional Agreement on Access to Information, Public Participation and Justice in Environmental Matters in Latin America and the Caribbean (Escazú Agreement). As noted earlier, epochal shifts entail transformations in thinking, values, and social subjectivity. This cannot happen without spaces for participation and the material conditions and incentives to underpin changes in lifestyles, resources, knowledge and willingness to change.

5. From the strengthening of regional integration to a renewed multilateralism

The coordination and harmonization of policies in the regional space benefits national action by making it possible to learn about and evaluate good practices and innovative policies. This can expedite the transition towards sustainability and avoid competition between sectoral investments based on exploiting advantages that are harmful to the environment, health or labour conditions. Regional action also strengthens the values of global multilateralism that recognize the asymmetries existing between the developed and the developing countries, in order to strengthen international cooperation based on the principle of common but differentiated responsibilities.

The content of the most modern trade agreements increasingly recognizes the links that exist between environmental problems, international trade and foreign direct investment. Nonetheless, the rationale of most trade agreements remains at odds with the type of actions and instruments that are needed to address climate change and other environmental pressures with the requisite vigour and celerity. Progress must be made in implementing the climate change provisions in trade agreements, which, despite their greater dissemination thanks to the 2030 Agenda and the Paris Agreement, are still expressed only in terms of “best efforts”:

In this context, the proposal to establish a “climate waiver” that would exempt certain measures taken by governments to address climate change from being challenged at WTO should be negotiated regionally. A WTO climate waiver in the framework of North-South discussions would facilitate the implementation of environmental industrial policy within the margins allowed by trade agreements, such as fiscal stimuli and other forms of pro-sustainability support for industry, in the context of a growing “green” international trade in which the region is falling behind. It is also important to move towards new models for resolving investment disputes that better protect the right of States to regulate in the public interest, including the protection of the environment and health.

In the multilateral domain, a key issue is the financing for development agenda, which is pursuing a reform to achieve a better global financial architecture that channels resources committed to development cooperation —the commitment of 0.7% of GDP which very few countries fulfil, as well as the funds committed to ensure the proper functioning of the Paris Agreement. Intellectual property rights need to be made more flexible in sectors such as pharmaceuticals and digital and environmental technologies. These are important in the health emergency and for the shift towards more sustainable production with a smaller environmental footprint.

D. Public policies and social-consensus-building: the role of the State

The big push for sustainability provides an opportunity to build a new style of development based on a new equation between the State, the market, society and the environment, which is, in essence, the key

aspiration of the 2030 Agenda for Sustainable Development. Equality and sustainability can only be placed at the centre of the development pattern if social compacts are constructed to make this possible, because development is ultimately a political issue.

Politics must be restored as an instrument of change, as a mechanism to deliberate, dissent and agree, and to generate public goods and lasting compacts. A new social contract and a sustainable, egalitarian and equalling type of development will be viable and lasting if societies build the compacts that make them possible. Since 2014, with the publication of *Compacts for Equality: Towards a Sustainable Future*, ECLAC has highlighted the need for basic compacts that provide the backbone of a renewed perspective on development. In the context of the pandemic and its effects, ECLAC reiterates the relevance and urgency of this proposal.

The change in the development pattern resulting from the combination of enabling, cross-cutting and sectoral policies proposed in this document may, in the medium term, enhance the relative importance of sectors that are pillars of the big push for sustainability. This would make it possible, by 2030, to achieve a sustained path towards closing external, environmental and social gaps; transform, densify and democratize the production fabric, gearing it towards knowledge- and innovation-intensive activities; reduce structural heterogeneity and reduce the weight of the primary sector in the economy; ensure decent work; end poverty; and build egalitarian societies among social groups and between women and men, with the highest possible levels of well-being and free from discrimination.

The means by which social compacts will be built and adopted will depend on each country's institutional culture, and on the values and practices that have guided and given meaning to the work of its citizens. Compacts should lay the foundations for constructing a welfare state which, among other objectives, ensures redistributive taxation, increased productivity, better provision of public goods and services, sustainable management of natural resources, and increased and more diversified investment. Compacts must have political leadership to convene the most wide-ranging and diverse participation of social actors —usually expressed through voting and participation in political and social organizations— while at the same

time committing the effective action of democratic institutions, the government and parliaments. Achieving broad representation and social legitimacy will oblige actors to fulfil what has been agreed upon, facilitating subsequent coexistence, as well as the resolution of redistributive conflicts that will inevitably arise. Ideally, broad social and political coalitions should coalesce around these social agreements. Young people, in particular, will need to play an important role, calling conventional wisdom into question and placing their demand for intergenerational justice on the table.

This is the type of society that epochal change demands and which, if coalitions are built and the necessary compacts are forged, is more than ever within reach. Responding to the civilizational crossroads in which the region finds itself is a shared and urgent task.


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This document argues that Latin America and the Caribbean is in a position to move towards a “big push for sustainability” through a combination of economic, industrial, social and environmental policies capable of driving a recovery with equality and sustainability and relaunching development in the region.

The document has five chapters. The first studies the three crises (slow growth, growing inequality and the environmental emergency) affecting economies and societies around the world and those of Latin America and the Caribbean. The second presents a framework for analysing these crises in an integrated manner and measuring their magnitude in the region. The third chapter examines the quantitative impacts on growth, emissions, income distribution and the external sector under different policy scenarios, highlighting the potential of various policy combinations to forge a more dynamic growth path, with lower emissions and greater equality. The fourth identifies seven sectors that can drive sustainable development and proposes policies to foster these sectors. The fifth chapter concludes with an analysis that links up macroeconomic, industrial, social and environmental policies and the role of the State in building consensus for their implementation.

